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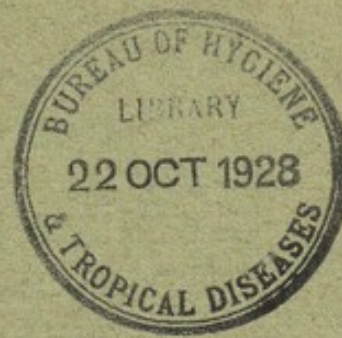
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City of Salford.

ANNUAL REPORT

OF THE

Medical Officer of Health

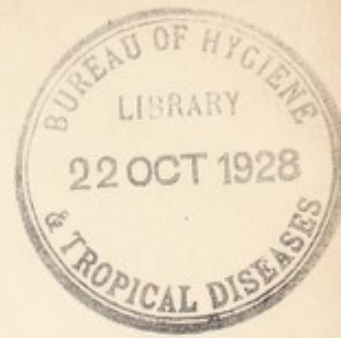
FOR THE YEAR

1927.

BY

H. OSBORNE,


MEDICAL OFFICER OF HEALTH.



City of Salford.

ANNUAL REPORT
OF THE
Medical Officer of Health
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1927-1928.

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(*Mayor*).

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(*Deputy-Mayor*).

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„ DALE, J. P.

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„ SANDS, J.P.

„ STARKEY.

„ WEIR.

Councillor WHITFIELD.

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Mrs. BERRY Representing the Pendleton Co-operative
Industrial Society Limited.

Mrs. CUDDEFORD, J.P. A member of the Maternity and Child
Welfare Sub-Committee.

Miss E. BOWDEN ... Representing the Manchester and Salford
Women Citizens' Association.

STAFF.

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Resident Medical Officer, Nab Top Tuberculosis Sanatorium, Marple ..	}	H. M. FLEMING, B.A., M.D., B.A.O., D.P.H.
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City Bacteriologist		G. J. CRAWFORD, B.Sc., M.D., B.A.O., D.P.H.
Veterinary Inspector	}	J. D. WHITEHEAD, F.R.C.V.S., D.V.S.M. (To 1st May, 1927).
		A. ALEXANDER, M.R.C.V.S., D.V.S.M. (From 15th August, 1927.)
Public Analyst		H. H. BAGNALL, B.Sc., F.I.C.
Chief Sanitary Inspector		J. P. CARGILL, M.R.S.I.
Chief Clerk		E. WOOD.

For Staff of the School Medical Department, see page 137.

TO THE HEALTH COMMITTEE OF THE CITY OF SALFORD.

GENTLEMEN,

I have the honour to present my report on the Health of the City and the work of the Public Health Department for the year 1927, and at the same time desire to call your attention to the items referred to in the following paragraphs :—

Death Rate.

The lowest recorded death rate for Salford of 12·4 deaths per thousand of the population (the 1926 death rate) was not maintained during 1927, the rate for that year being 13·9 per thousand. This figure represents roughly the average of the last five years. The actual number of deaths which occurred during the year was 3,440, this being an increase of 358 over the number recorded for 1926. The following table shows the diseases in which the principal increases occurred :—

Disease.	Deaths during 1926.	Deaths during 1927.	Increase.
Influenza	39	118	79
Pneumonia	259	333	74
Tuberculosis (all forms)	372	411	39
Nephritis	52	81	29
Violent deaths (excluding suicide)	82	116	34
Heart disease	248	379	131

Births.

Although the number of deaths increased by 358, the number of births occurring during 1927 showed a decrease of 210 as compared with 1926, the birth rate of 17·3 per thousand of the population being easily the lowest recorded for Salford. The natural increase for the City during the year was only 861. The following table shows the gradual reduction which has taken place in the annual number of births and the birth rate since 1920 :—

Year.	No. of births.	Decrease as compared with previous year.	Birth Rate.
1920	6,441	—	27·3
1921	5,993	448	25·2
1922	5,416	577	22·1
1923	5,047	369	20·9
1924	4,745	302	19·5
1925	4,597	148	18·8
1926	4,511	86	18·2
1927	4,301	210	17·3

Without entering into the question of the desirability or otherwise of an increased population, there is reason to believe that the time is rapidly approaching when the total number of deaths occurring in the city will approximate to or even exceed the total number of births. This state of affairs is probably contributed to by several factors, e.g., later marriages, economic difficulties, the general desire on the part of married people for a higher standard of comfort for themselves and their offspring, and a wider knowledge of methods of contraception.

Infantile Mortality Rate.

Much satisfaction may be derived from the observation that with the reduction in the birth rate walks hand in hand a reduced infantile mortality rate. This rate for the year under review was the lowest ever recorded for the City, namely 81. When we take into consideration the congested state of the City and its unfavourable climate it is remarkable that so great an improvement in the conservation of its child life has been effected. Much still remains to be done if Salford is to approach the average standard of the whole country, but the success which has attended the efforts of the past gives rise to the best of hopes for the future. It is not merely the saving of lives, but the knowledge that through the medium of your Maternity and Child Welfare Scheme the children of the City are being given the best of all advantages, a physically sound start in life, that makes one realise that the expenditure thus incurred is in the best sense productive. The following figures relating to Salford speak for themselves:—

Quinquennium.	Average number of deaths under one year of age per thousand births.
1878-1882	178
1883-1887	184
1888-1892	189
1893-1897	207
1898-1902	199
1903-1907	162
1908-1912	142
1913-1917	128
1918-1922	108
1923-1927	102

Maternity and Child Welfare.

The Maternity and Child Welfare Clinic and Centre accommodation remained in an unsatisfactory state in the Broughton district throughout the year, the remarks contained in my report submitted to the Maternity and Child Welfare Sub-Committee in the year 1925 being still applicable. Apart from the financial aspect the difficulties lying in the way of the acquisition of suitable premises or even a suitable site in Broughton are recognised, but the desirability of establishing at an early date a combined Child Welfare Centre and School Clinic to accommodate the activities now carried on at Teneriffe Street, should always be kept in mind. Much of the educational value of a maternity and child welfare centre is lost if the premises in which it is held are in a condition obviously open to criticism, and I have no hesitation in stating that the work of your Maternity and Child Welfare Department is being seriously impeded in the Broughton district, by the lack of a Centre from which the mothers attending may derive inspiration for the conduct of their homes.

Maternity Home and Babies' Hospital.

During 1927 difficulty was experienced in coping with the applications for admission into the Municipal Maternity Home. In spite of the occasional improvisation of additional accommodation, it was necessary to refuse a number of applications. I am still of the opinion indicated in my last Annual Report that the accommodation at the Home should be increased so as to provide for 15 maternity cases. Such an extension of accommodation would necessitate the use of the whole of the existing

building, with the result that the sick babies would require to be treated in another institution, preferably in a new hospital to be erected in close proximity to the Maternity Home, so as to avoid duplication of the supervisory staff. A suitable site for the purpose in question lies close to hand, and I would suggest that as soon as circumstances permit an attempt should be made to utilise this site for the purpose suggested. The present provision for the treatment of sick babies is 18 beds. Having regard to the excellent results in the treatment of these cases hitherto obtained, I have no hesitation in recommending that this accommodation should be considerably increased, as the beneficial effect of early and suitable treatment for these tiny sufferers from malnutrition, marasmus, and rickets cannot be overestimated. Not only death but years of ill-health may be prevented by a few months of skilled care and attention. In this connection the Special Report and illustrations appearing on pages 283 to 290 may be found of interest.

Midwives and Maternity Homes Act, 1927.

Part II. of this Act came into operation on the 1st January, 1927. This portion of the Act provides for the registration of all maternity homes, a maternity home being defined as—"any premises used or intended to be used for the reception of pregnant women or of women immediately after childbirth," with exceptions in the case of hospitals or public institutions. Registration is subject to the local supervising authority being satisfied that the premises are suitable for the purpose of a maternity home as regards situation, construction,

accommodation, staffing and equipment, and for this purpose inspectors under the Act have been appointed. The number of maternity homes registered in Salford during the year was four; fuller details relating to the registration of maternity homes will be found on page 296.

The experience of the year's working of Part II. of the Act has shown the necessity of such provision, as applications for registration were received in respect of premises or persons unsuitable for the purpose.

Ladywell Sanatorium.

During the year the work required in connection with the electrical re-wiring of the institution, and the installation of wireless apparatus for the tuberculosis patients was completed. The latter provision has proved a boon to these patients.

The construction of the Operating Theatre was virtually completed by the end of the year 1927. The Theatre will be used in connection with the treatment of the following classes of cases:—

(a) scarlet fever involving affections of the ear, nose or throat;

(b) puerperal fever in which complications arise;

and will no doubt prove a decided asset, especially in dealing with cases in which urgent operative treatment is required.

In continuance of the policy decided upon during 1926, whereby 12 additional beds were provided in the

Tuberculosis Wards by the placing of screens midway in the inter-window spaces, 6 more beds were made available, in similar fashion, for the treatment of tuberculosis during 1927. There is reason to believe that satisfactory provision has now been made for the treatment of cases of advanced tuberculosis in Salford.

Public Health Propaganda.

The activities in the form of window displays which were the subject of a special report last year were continued during 1927. Additional subjects were included, notably an exhibit kindly loaned by the Dental Board of the United Kingdom, illustrating by a series of beautifully executed models the effects of various diseases of the teeth, and the value of dental hygiene. Another window display which proved of considerable help to mothers, was one dealing with the prevention of rickets.

A "Health Week" was organised in the city from the 7th to 13th February, 1927, which was conducted on lines similar to those arranged for the "Health Week" of 1925. Lectures, accompanied by film shows, to which the public were admitted free of charge, were given in the Broughton, Pendleton and Salford Town Halls and in the Salford Central Mission Hall. In addition, a special medical film was exhibited to an audience of men only on the afternoon of Sunday, the 13th February, in the Scala Cinema, Pendleton, followed by a lecture and the exhibition of a morality film in the evening to a mixed audience.

Suitable lectures were given and films exhibited to approximately 3,300 schoolchildren at the various

Town Halls. It is estimated that about 5,250 adults attended the meetings held during the week. Apart from that given on the afternoon of Sunday, the 13th February, the whole of the lectures were given by Mr. P. H. Jones, of the British Social Hygiene Council.

Grateful acknowledgment is made to His Worship the Mayor of Salford (Mr. Alderman Rothwell, J.P.), for presiding at the Sunday evening meeting; to Mr. Councillor Emery for permitting the use of the Scala Cinema on Sunday afternoon and evening, and to Dr. R. Gibson for his lecture to the audience of men on the Sunday afternoon.

Smallpox.

Agreements are still in force whereby smallpox patients from certain outside areas are received and treated in the Salford Corporation's Isolation Hospital at Drinkwater Park.

The Drinkwater Park Hospital was opened for the treatment of Smallpox for the following periods during 1927 :—

- (1) 24th January to 22nd February.
- (2) 11th June to 25th July.

On the first occasion the whole of the patients treated came from the Bolton area; on the second occasion the first patient admitted was a visitor to Salford from Monmouthshire, where a violent epidemic of smallpox was raging at the time of his departure. This patient

infected three other inhabitants of the house in which he was staying.

Considering the frequency with which districts surrounding and within a short radius of Salford were infected with Smallpox during 1927, Salford is to be congratulated upon its comparative immunity from this disease.

Nab Top Sanatorium.

The erection of the Open Air School required for the education of the children under treatment at the Nab Top Sanatorium in place of the unsatisfactory arrangements in one of the wards was commenced in the autumn of 1927, and it is anticipated that it will be completed early in 1928.

This provision is very desirable, as hitherto the teacher has had to struggle along under great difficulties, and it is a tribute to her enthusiasm that such happy results have been achieved in the circumstances. Since it is at present impossible to fill our Nab Top Sanatorium with adult cases of Tuberculosis of sufficiently early stage to warrant a prospect of cure, it would seem, from the public health point of view, more profitable to admit an increased number of children with early and somewhat indefinite signs of the disease. Such children, of whom there are large numbers in our City, invariably do well, and it is a justifiable assumption that the open air treatment and health education received at the Sanatorium play their part in warding off consumption in later years.

Bacteriological Laboratory

In January, 1927, the Health Committee took the important step of appointing Dr. G. J. Crawford, B.Sc., M.D., B.A.O., D.P.H., as City Bacteriologist. Up to that date the responsibility for the bacteriological work had been undertaken by a member of the medical staff of the Department in a part-time capacity. The new appointment was decided upon as a result of (a) a general increase in the work of the Laboratory ; (b) the desirability of undertaking the examination in the Municipal Laboratory of Venereal Diseases specimens formerly sent to the Public Health Laboratory, Manchester, and (c) the necessity for providing a certain measure of relief for the medical staff of the Ladywell Sanatorium, who previously had themselves to carry out the bacteriological examinations required in connection with patients in the Sanatorium.

The step thus taken has been justified by the year's experience. It has been possible to conduct special investigations, as well as to considerably increase the number of examinations of milk samples for tuberculosis, in addition to the ordinary routine examinations, and the examination of V.D. specimens. It is hoped, at an early date, to undertake additional work from other authorities.

Improvement Scheme.

During the year one of the groups of houses scheduled in 1919 as an unhealthy area was re-inspected, with a view to framing a housing scheme. The area is in a

ongested part of the Greengate district and consists of the following named properties, viz :—

- 1/9 and 12/38, East Robert Street ;
- 2 and 1/15, East Elizabeth Street ;
- 2, 2a and 6, East York Street ;
- 6, East Philip Street ;
- 1/7, Coade Street ;
- 1/45 and 2/38, Springfield Terrace ;
- 94/96, Bridgewater Street ;
- a plot of vacant land at the rear of 16/32, Springfield Terrace, and 1/5, East Elizabeth Street ;
- also a plot of vacant land at the rear of 1/9, Springfield Terrace and 2, East York Street.

The area consists of 75 houses and the inhabitants number 337, as shown in the census taken in January, 1927. The gross density of these houses on this area equals approximately 80, and the net density 145.

A representation was made to the Health Committee and confirmed by the City Council and a scheme, dated the 7th September, 1927, was prepared under part 2 of the Housing Act, 1925, for the improvement of this area, an application being made to the Minister of Health for an Order confirming such scheme. An inquiry was held in the Salford Town Hall on November 23rd, 1927, by H. A. Chapman, Esq., the Inspector appointed by the Minister of Health, to receive the evidence of any persons interested in the matter. An Order was granted confirming the scheme on the 20th January, 1928, which may be cited as the City of Salford (Springfield Terrace Area) Improvement Scheme, 1927. Land has been bought

in Cromwell Road with a view to the provision of houses for the displaced tenants from this prescribed area, and they will be given the option of tenancy when the erection is completed. It will not be the policy of the Health Committee to re-erect dwelling-houses on this area.

Special Reports.

Attention is called to the following Special Reports :—

- (i) Report upon Atmospheric Pollution, appearing on pages 68 to 84.
- (ii) Report upon work carried out in the Municipal Babies' Hospital, appearing on pages 283 to 290.
- (iii) Historical introduction to the Ladywell Sanatorium Report, appearing on pages 113 to 117.

I have the honour to be, Gentlemen,
Your obedient Servant,
H. OSBORNE,

Medical Officer of Health.

PUBLIC HEALTH DEPARTMENT,
143, REGENT ROAD,
SALFORD,
1927.

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SECTION 1.

Mortality Statistics.

STATISTICAL SUMMARY, 1927.

Area.—The City of Salford has a total area of 5,202 acres.

Population.—Estimated to the middle of the year 247,600

„ (Census, 1921) *234,045

Density.—The Mean Density of the City is equal to 47·60 persons per acre.

Deaths	{	Males 1,766	}	Total	3,440
		Females 1,674			

Annual Rate of Mortality per 1,000—of the Population 13·9

Births	{	Males 2,182	}	Total	4,301
		Females 2,119			

Annual Rate of Births per 1,000 of the Population 17·3

Deaths under one year of age per 1,000 Births..... 81

Number of women dying in consequence of childbirth 16

* Owing to the census having taken place during the holiday season, this figure is low. The Registrar-General estimated the normal resident population at mid-year 1921 to be 239,100.

TABLE M. 3.
DEATHS IN WARDS FOR THE YEAR 1927.

CAUSES OF DEATH.	AT ALL AGES.																
	City.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Waste.
Malaria.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Small-pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	45	..	1	..	15	..	..	1	..	5	2	4	6	3	..	8	..
Scarlet Fever.....	5	1	..	1	..	..	..	..	..	..	1	..	2	..	..	..	..
Whooping Cough	14	..	..	1	1	2	3	..	1	..	..	2	1	2	..	..	1
Diphtheria and Croup	23	..	1	1	1	..	1	2	10	..	..	3	..	1	1	2	..
Chicken Pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	118	9	9	3	14	5	6	7	7	5	14	8	9	6	5	7	4
Erysipelas.....	9	1	..	..	..	1	1	..	..	..	1	1	..	..	1	2	1
Encephalitis Lethargica.....	5	..	..	..	..	..	..	..	1	2	1	..	..	..	..	1	..
Anthrax .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis of Respiratory System	342	24	17	8	33	21	4	8	20	29	32	35	24	22	14	34	17
Tuberc: Meningitis	30	1	3	..	4	2	..	1	1	3	..	3	3	2	2	2	3
Other tuberculous diseases.....	39	..	3	1	6	1	1	1	2	2	2	4	4	5	2	1	4

MORTALITY STATISTICS.

25

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Diabetes	16	..	1	2	..	..	1	2	1	2	..	2	..	1	2	1	1
Rheumatic Fever	29	3	4	2	3	1	..	2	1	1	..	1	2	2	..	4	..
Meningitis	12	1	1	..	2	1	..	2	..	..	..	1	1	1	1	..	1
Cerebro-Spinal Meningitis	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Haemorrhage, etc.	157	22	7	9	9	10	10	8	6	10	8	14	13	8	4	9	10
Polionyelitis	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Arterio Sclerosis	103	9	7	12	11	7	4	4	7	3	10	6	6	4	4	4	5
Heart Disease	379	27	20	12	22	24	18	18	27	30	30	28	20	28	15	37	23
Bronchitis	374	23	30	9	35	23	11	15	19	24	35	37	30	30	11	32	10
Pneumonia (all forms)	333	17	15	5	39	12	15	16	13	36	22	29	24	31	13	35	11
Other Respiratory Diseases	41	1	3	1	5	3	1	2	5	4	3	4	2	3	1	2	1
Diarrhoea and Enteritis	77	2	10	..	16	3	1	3	12	5	5	2	5	5	2	3	3
Ulcer of Stomach and Duodenum	20	..	2	1	..	..	2	2	1	4	1	2	4	1	1	1	..
Appendicitis and Typhlitis	15	1	2	..	..	..	2	1	1	1	1	2	1	..	1	1	..
Cirrhosis of Liver	11	1	1	..	1	1	1	..	..	..	1	1	1	2	..	1	..
Alcoholism .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nephritis, Acute and Chronic	81	3	5	5	10	3	6	2	8	7	6	7	3	4	6	5	1
Puerperal Sepsis	3	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Other Accidents and Diseases of Pregnancy and Parturition	13	2	..	..	1	..	2	..	1	1	1	1	1	1	..	2	..
Congenital Debility and Malformation	74	7	2	1	10	9	2	2	3	5	9	3	4	1	4	9	3
Premature Birth	65	5	6	3	4	3	5	7	5	2	7	2	5	2	2	2	5
Violent Deaths (excluding Suicide)	116	9	6	6	9	4	8	6	7	8	7	7	7	11	4	12	5
Suicide	25	2	3	2	..	..	..	2	4	2	4	3	1	..	1	1	..
Other Defined Diseases	535	45	39	24	44	34	23	19	45	35	31	32	29	39	25	35	36
Ill-defined or Unknown	14	4	..	..	..	1	..	1	2	1	1	..	1	..	1	1	1
Totals	3440	255	221	118	322	184	144	150	227	243	266	272	225	228	138	281	156

TABLE M. 4.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1927.

CAUSES OF DEATH.	NETT DEATHS AT THE SUBJOINED AGES OF " RESIDENTS " WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT.								
	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.
ALL CAUSES—Certified	3431	346	123	93	94	184	442	1021	1128
Uncertified	9	2	..	..	..	..	1	2	4
Malaria .....	..	..	..	..	..	..	..	..	..
Enteric Fever	1	..	..	..	1	..	..	..	..
Small Pox .....	..	..	..	..	..	..	..	..	..
Measles	45	9	17	17	2	..	..	..	..
Scarlet Fever	5	..	1	1	2	..	..	1	..
Whooping Cough	14	5	5	3	..	..	..	..	1
Diphtheria and Croup	23	1	1	4	14	2	..	1	..
Chicken Pox .....	..	..	..	..	..	..	..	..	..
Influenza	118	3	5	2	2	4	15	42	45
Erysipelas	9	1	..	..	..	..	2	3	3
Encephalitis Lethargica	5	..	..	1	1	..	1	2	..
Anthrax .....	..	..	..	..	..	..	..	..	..
Tuberculosis of Respiratory System	342	1	1	1	5	78	148	95	13
Tuberculous Meningitis	30	5	5	5	8	3	3	1	..
Other Tuberculous Diseases	39	6	3	5	2	13	5	4	1
Cancer, malignant disease	314	..	..	..	..	1	33	160	111
Diabetes	16	..	..	..	1	2	..	5	8
Rheumatic Fever	29	..	1	..	8	9	6	2	3
Meningitis	12	1	3	2	1	..	2	1	2
Cerebro-Spinal Meningitis	1	..	..	..	1	..	..	..	..
Cerebral Hæmorrhage, etc.	157	5	..	..	1	..	4	52	95
Poliomyelitis	1	..	..	..	1	..	..	..	..
Arterio Sclerosis	103	..	..	..	..	..	2	25	76
Heart Disease	379	..	..	1	2	8	45	140	185
Bronchitis	374	16	2	1	..	6	17	127	205
Pneumonia (all forms)	333	57	46	25	9	20	53	84	39
Other Respiratory diseases	41	3	..	2	3	5	4	16	8
Diarrhœa and Enteritis	77	50	17	3	..	..	2	3	2
Ulcer of Stomach and Duodenum ..	20	..	..	..	..	..	2	17	1
Appendicitis and Typhlitis	15	..	..	1	4	3	2	4	1
Cirrhosis of Liver	11	..	..	..	..	..	1	8	2
Alcoholism .....	..	..	..	..	..	..	..	..	..
Nephritis Acute and Chronic	81	..	..	3	..	2	16	42	18
Puerperal Sepsis	3	..	..	..	..	..	3	..	..
Other accidents and diseases of Pregnancy and Parturition	13	..	..	..	..	2	11	..	..
Congenital Debility and Malforma- tion	74	68	4	..	1	..	1	..	..
Premature Birth	65	65	..	..	..	..	..	..	..
Violent Deaths, excluding Suicide ..	116	5	5	8	11	8	15	36	28
Suicide	25	..	..	..	..	1	6	12	6
Other Defined Diseases	535	45	6	8	14	17	44	124	277
Diseases ill-defined or unknown ..	14	2	1	..	..	..	..	7	4
Totals	3440	348	123	93	94	184	443	1023	1132

TABLE M. 7.

BIRTHS IN THE CITY OF SALFORD AND IN ITS WARDS, DISTINGUISHING
DEATHS OF LEGITIMATE AND ILLEGITIMATE
INFANTS UNDER ONE YEAR OLD.
FOR THE YEAR 1927.

Ward.	Births.		Percentage of Illegit. Births to total Births.	Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
Albert Park	277	14	5.1	25	1	90	91	71
Charlestown	299	10	3.3	23	1	77	76	100
Claremont	96	1	1.0	4	..	42	42	..
Crescent	462	17	3.7	46	5	100	92	294
Docks	209	8	3.8	24	3	115	104	375
Kersal	208	10	4.8	15	1	72	71	100
Langworthy	195	10	5.1	16	1	82	81	100
Mandley Park	268	11	4.1	21	1	78	78	91
Ordsall Park	354	12	3.4	26	..	73	76	..
Regent	337	11	3.3	25	2	74	71	182
St. Matthias'	348	15	4.3	17	..	49	51	..
St. Paul's	313	9	2.9	25	..	80	82	..
St. Thomas'	257	8	3.1	15	1	58	56	125
Seedley	110	1	.9	12	..	109	110	..
Trinity	377	25	6.6	33	3	88	85	120
Weaste	191	9	4.7	21	1	110	110	111
Totals	4,301	171	4.0	348	20	81	79	117

CORRESPONDING DATA FOR THE CITY FOR THE TEN YEARS 1917-1926.

City	49,919	2,265	4.5	5,418	408	109	105	180
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TABLE M. 8.

SHOWING THE BIRTHS IN THE CITY OF SALFORD, DEATHS OF LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD AND THE PROPORTION OF DEATHS UNDER ONE YEAR OF AGE PER 1000 BIRTHS DURING THE YEARS 1915 TO 1927.

Year.	Births.			Percentage of Il- legitimate Births to Total Births.	Deaths under One Year.			Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Legit.	Illegit.		Total.	Legit.	Illegit.	Total.	Legit.	Illegit.
1915....	5455	5257	198	3.6	733	692	41	134	132	207
1916....	5091	4894	197	3.9	587	544	43	115	112	218
1917....	4452	4234	218	4.9	551	498	53	124	118	243
1918....	4282	4043	239	5.5	478	436	42	111	107	175
1919....	4435	4179	256	5.8	501	466	35	113	111	137
1920....	6441	6170	271	4.2	630	584	46	97	94	169
1921....	5993	5702	291	4.8	641	585	56	107	102	192
1922....	5416	5169	247	4.5	599	564	35	110	109	141
1923....	5047	4841	206	4.1	493	458	35	98	95	170
1924....	4745	4569	176	3.7	579	533	46	122	117	261
1925....	4597	4398	199	4.3	482	452	30	105	103	151
1926....	4511	4349	162	3.6	464	434	30	103	100	185
1927....	4301	4130	171	4.0	348	328	20	81	79	117

TABLE M. 14.

SHOWING THE BIRTH-RATES, ALSO RATES OF MORTALITY FROM ALL CAUSES, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND FROM PHTHISIS, CANCER, NERVOUS DISEASES, HEART DISEASES, BRONCHITIS, PNEUMONIA, AND THE INFANT MORTALITY RATE, DURING THE YEARS 1878 TO 1927.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phtthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1878..	160,277	44.7	27.1	5.4	2.7	0.5	3.5	1.1	3.6	1.8	185	17.9
1879*	165,899	43.0	26.7	4.2	2.9	0.4	3.7	1.2	4.3	1.8	170	15.2
1880..	171,727	41.4	27.9	7.4	2.7	0.4	3.2	0.9	3.4	1.9	197	16.6
1881..	177,760	38.8	22.5	3.0	2.5	0.5	3.1	1.1	3.6	1.6	163	16.4
1882..	179,855	39.7	23.7	4.0	2.4	0.4	3.6	1.1	2.8	1.7	177	16.9
Average 5 years.		41.5	25.6	4.8	2.6	0.4	3.4	1.1	3.5	1.8	178	16.6
1883..	181,951	37.3	23.6	3.4	2.7	0.4	3.1	1.2	3.0	1.7	171	16.1
1884*	184,047	38.8	24.4	4.4	2.6	0.5	2.9	1.1	2.8	1.7	184	16.1
1885..	186,142	37.6	23.0	3.6	2.6	0.5	2.9	1.2	3.0	1.9	174	16.1
1886..	188,238	38.5	24.8	4.1	2.6	0.5	2.8	1.3	3.3	1.8	197	15.3
1887..	190,334	36.6	25.5	4.9	2.3	0.5	3.2	1.3	2.9	2.2	195	15.4
Average 5 years.		37.8	24.3	4.1	2.6	0.5	3.0	1.2	3.0	1.9	184	15.8
1888..	192,429	37.1	24.8	3.9	2.3	0.5	3.0	1.1	3.0	2.1	184	15.2
1889..	194,525	35.9	25.1	5.3	1.9	0.6	2.5	1.3	2.6	1.9	181	16.7
1890*	196,621	36.1	27.7	4.4	2.2	0.5	2.0	1.3	3.4	3.8	198	17.5
1891..	198,775	36.3	26.0	3.4	2.2	0.5	2.2	1.1	3.7	3.0	194	18.1
1892..	200,833	35.8	24.6	4.6	1.9	0.6	2.0	1.2	2.6	2.9	186	16.7
Average 5 years.		36.2	25.6	4.3	2.1	0.5	2.3	1.2	3.1	2.7	189	16.8
1893..	203,015	34.7	24.1	4.2	1.9	0.6	2.0	1.4	2.6	2.3	211	16.2
1894..	205,220	34.3	21.1	3.3	1.8	0.6	2.0	1.1	1.9	2.3	174	17.1
1895..	207,449	35.9	25.6	5.0	1.9	0.6	2.0	1.3	2.6	2.7	229	17.4
1896*	209,703	35.6	23.1	4.2	1.5	0.6	2.3	1.4	2.2	2.7	200	18.1
1897..	211,981	35.2	23.9	5.6	1.8	0.6	2.1	1.3	2.4	2.1	219	18.6
Average 5 years.		35.1	23.6	4.5	1.8	0.6	2.1	1.3	2.3	2.4	207	17.5
1898..	214,284	34.9	22.8	4.2	1.8	0.8	2.2	1.2	2.2	2.2	213	18.6
1899..	216,612	34.1	23.9	4.4	1.8	0.6	2.3	1.4	2.5	2.7	211	18.7
1900..	218,965	33.3	25.3	4.1	1.8	0.6	2.4	1.7	3.2	2.8	208	17.3
1901..	221,212	29.2	21.7	4.2	1.8	0.7	1.9	1.5	2.3	1.9	205	17.9
1902*	222,233	34.0	19.3	2.7	1.7	0.7	2.0	1.5	2.2	2.1	157	18.4
Average 5 years.		33.1	22.6	3.9	1.8	0.7	2.2	1.5	2.5	2.3	199	18.2
1903..	223,260	32.6	19.4	2.9	1.8	0.7	1.9	1.4	2.1	1.9	168	18.1
1904..	224,299	32.4	21.4	4.4	2.0	0.6	1.8	1.7	2.2	1.9	193	21.5
1905..	225,327	31.8	17.7	2.6	1.5	0.6	1.7	1.6	1.8	1.8	148	17.8
1906..	226,367	31.2	19.1	3.3	1.7	0.8	1.7	1.5	2.0	1.8	162	18.6
1907..	227,413	30.6	18.5	2.2	1.7	0.7	1.7	1.6	2.1	2.3	140	17.9
Average 5 years.		31.7	19.2	3.1	1.7	0.7	1.8	1.6	2.0	1.9	162	18.8

TABLE M. 14—continued.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.	
1908*	228,463	31.2	18.7	3.2	1.6	0.7	1.6	1.4	1.9	1.7	153
1909..	229,519	29.5	19.0	2.5	1.5	0.8	1.7	1.4	2.3	2.3	141
1910..	230,579	28.6	16.2	1.8	1.4	0.9	1.6	1.4	1.8	1.7	131
1911..	231,641	27.4	17.4	2.5	1.6	0.9	1.3	1.3	1.8	1.8	154
1912..	232,726	26.8	17.2	2.2	1.5	1.0	1.4	1.5	2.1	2.0	130
Average 5 years.		28.7	17.7	2.4	1.5	0.9	1.5	1.4	2.0	1.9	142
1913*	233,849	27.0	16.3	1.9	1.4	1.0	1.4	1.8	1.8	1.7	139
1914..	234,975	26.9	17.1	1.9	1.6	1.1	1.4	1.8	1.8	1.8	126
1915..	219,979†	24.8	19.1	2.8	1.7	1.1	1.4	1.6	2.3	1.9	134
1916..	214,229†	21.8	15.8	1.2	1.6	1.0	1.3	1.3	1.9	1.5	115
1917..	211,373†	18.9	16.0	1.6	1.5	1.2	1.4	1.3	2.0	1.4	124
Average 5 years.		24.3	16.8	1.9	1.6	1.0	1.4	1.6	2.0	1.7	128
1918..	209,274†	18.3	18.0	1.0	1.6	1.1	1.2	1.1	2.3	1.9	111
1919..	226,225†	18.8	15.8	0.8	1.2	1.1	1.1	1.1	2.4	1.5	113
1920..	235,239	27.3	13.7	0.9	1.2	1.0	1.0	1.0	1.8	1.1	98
1921*	239,100	25.2	13.9	1.1	1.3	1.0	1.0	1.2	1.7	1.5	106
1922..	240,700	22.1	14.6	1.3	1.3	1.1	0.9	1.1	1.9	1.7	110
Average 5 years.		22.3	15.2	1.0	1.3	1.0	1.0	1.1	2.0	1.5	108
1923..	241,600	20.9	13.5	0.8	1.3	1.2	0.9	1.1	1.6	1.5	98
1924..	243,700	19.5	14.5	1.3	1.2	1.3	0.7	1.0	1.8	1.6	122
1925..	244,700	18.8	13.9	1.0	1.3	1.2	0.8	1.0	1.8	1.3	105
1926..	247,400	18.2	12.4	0.7	1.3	1.3	0.9	1.0	1.6	1.1	103
1927..	247,600	17.3	13.9	0.7	1.4	1.3	1.1	1.5	1.5	1.3	81
Average 5 years.		18.9	13.6	0.9	1.3	1.3	0.9	1.1	1.7	1.4	102

* In the years 1879, 1884, 1890, 1896, 1902, 1908, 1913, 1921 and 1927, the facts are those registered in 53 in of 52 weeks; corrections have therefore been made in calculating the rates.

† Civil population.

SECTION II.

General Work of the Health Department.

Sanitary Circumstances and Sanitary Administration of the District.

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

Salford is situated in the south-east of Lancashire and is partially divided from Manchester by the River Irwell. The older portion of the City lies along the right bank of the river and the ground rises gradually from an elevation of 85 feet above sea level to about 250 feet, the mean elevation being 140 feet.

The area of the City of Salford is 5,202 acres. The subsoil consists principally of clay interspersed with sand and gravel, with occasional patches of red sandstone.

The population is largely industrial; a considerable portion of the City is occupied by cotton factories and engineering works, with collieries on the outskirts.

The principal Docks and a portion of the Manchester Ship Canal are situated in Salford.

There is no special influence of any particular occupation on the public health of the area.

Owing to the industrial character of the City, and the close proximity of a number of other industrial towns, the atmosphere of Salford is heavily smoke polluted. This pollution contains an excessive proportion of tarry substances given off from the burning of raw coal in domestic grates. Generally speaking, the rainfall is excessive and the atmosphere humid. Owing to the pollution of the atmosphere and the excess of cloud, there is a deficiency of sunshine.

The population of Salford avail themselves of the hospital accommodation of both Salford and Manchester.

The voluntary Hospitals are :—

The Salford Royal Hospital.

The Manchester Royal Infirmary.

The Manchester Eye Hospital.

The Manchester and Salford Hospital for Skin Diseases.

The Royal Manchester Children's Hospital, Pendlebury.

The Manchester Northern Hospital.

The Manchester Jewish Hospital.

The Manchester St. Mary's Hospital.

The Manchester Ear Hospital.

The Hospitals provided by the Salford Corporation are as follows :—

Name and Situation of Hospital.	Nature of Accommodation.	Beds Provided.
Nab Top Sanatorium, Marple, Cheshire.	Early Tuberculosis...	120
Maternity Home and Babies' Hospital, Seedley Terrace, Pendleton, Salford.	Maternity Cases	10
	Sick Babies	18
Ladywell Sanatorium, Eccles New Road, Salford.	Infectious Diseases...	224
	Tuberculosis	66
Drinkwater Park Hospital, Prestwich, Lancashire.	Smallpox	40

The Corporation have also made arrangements with the Hospitals named below for the treatment of the under-mentioned diseases :—

Hospital.	Disease.
Salford Royal Hospital	Tonsils and Adenoids in School Children. Venereal Diseases. Surgical Tuberculosis.
The Manchester and Salford Hospital for Skin Diseases.	Tubercular Diseases of the Skin.

Hope Hospital, Pendleton, Salford (900 beds), is provided and maintained by the Salford Board of Guardians.

The amount distributed by way of Poor Law Relief in 1927 in the Salford Union (which includes Pendlebury) was £131,000.

SALFORD LOCAL ACTS AND ORDERS.

The Salford Borough Act, 1857.

The Salford Improvement Act, 1862.

The Salford Improvement Act, 1867.

The Salford Improvement Act, 1870.

The Salford Improvement Act, 1871.

The Salford Tramways and Improvement Act, 1875.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Order Confirmation (No. 8) Act, 1882.

An Order, dated 20th December, 1882, and made by the Local Government Board under the provisions of the Divided Parishes and Poor Law Amendment Act, 1876, as amended and extended by the Poor Law Act, 1879, amalgamating a detached part of the Township of Pendlebury with the Township of Pendleton.

The Salford Corporation Tramways Order, 1885, confirmed by the Tramways Orders Confirmation (No. 2) Act, 1885.

The Salford Corporation Act, 1886.

The Salford Corporation Act, 1891.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1891.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (Housing of Working Classes) Act, 1891.

Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Order Confirmation (No. 12) Act, 1892.

The Salford Improvement Act, 1893.

The Salford Corporation Act, 1897.

The Salford Order, 1898.

An Order, dated 2nd March, 1899, and made by the Local Government Board under the provisions of the Housing of the Working Classes Act, 1890, modifying an improvement scheme relating to the Borough of Salford.

The Salford Corporation Act, 1899.

The Salford Corporation Act, 1900.

The Salford Corporation Act, 1901.

The Salford Corporation Act, 1902.

The Salford Corporation Act, 1903.

Order in Council, dated 27th March, 1905, directing that none but persons duly licensed shall let Lodgings to Seamen in the Borough of Salford.

The Salford Order, 1906.

The Salford Order, 1908.

The Salford Order, 1912.

The Salford (Union of Townships) Order, 1918.

The Salford Corporation Act, 1920.

Confirming Order of Minister of Health, dated 7th April, 1921, under Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, declaring that certain trades be Offensive Trades.

Order in Council, dated 10th August, 1921, approving scheme determining the Wards of the Borough and apportioning the Councillors.

The Salford Order, 1922.

The Salford Order, 1925.

The Salford Corporation Act, 1927.

ACTS OF PARLIAMENT ADOPTED BY THE COUNCIL.

The Baths and Wash-house Acts. Adopted October 4th, 1876.

Infectious Diseases (Notification) Act, 1889. Adopted 5th February, 1920.

The Infectious Disease (Prevention) Act, 1890 (except Sections 14 and 19) and Parts 2, 3, 4 and 5 of the Public Health Acts Amendment Act, 1890. Adopted January 7th, 1891.

The Private Street Works Act, 1892. Adopted April 4th, 1894.

Notification of Births Act, 1907. Adopted January 7th, 1914.

Section 95 of the Public Health Acts Amendment Act, 1907. Order issued by Local Government Board, dated 27th October, 1908, declaring the above section to be in force in the County Borough of Salford.

Public Health Acts Amendment Act, 1907, Section 51.

Public Health Acts Amendment Act, 1907. Order of Local Government Board, dated 28th August, 1909, that on and after 16th October, 1909, Section 47 and Part V. of the Act should be in force in the County Borough of Salford.

Public Health Acts Amendment Act, 1907. Order of Local Government Board, dated 22nd April, 1914, that on and after 3rd June, 1914, Sections 23, 27, 33 and 76 of the Act should be in force in the County Borough of Salford.

SANITARY CIRCUMSTANCES.

Water.—The water supply is obtained from the Manchester Corporation's reservoirs at Longdendale Valley. It is ample in quantity and excellent in quality.

Rivers and Streams.—The question of river pollution is in the hands of the River Irwell Conservancy Committee.

DRAINAGE AND SEWERAGE.

The drains of the District are satisfactory. Salford sewage is conveyed to the Sewage Works at Weaste by a combined system of Sewers. The sewage is treated with Lime and Copperas, after which it is passed through settling tanks and thence through aerating filter-beds and humus tanks. The effluent from the humus tanks is discharged into the Manchester Ship Canal and the residual sludge carried out to sea by steamer.

Scavenging.—The removal and disposal of house refuse is under the authority of the Lighting and Cleansing Committee of the Corporation.

SANITARY INSPECTION OF DISTRICT.

Staff.—The staff employed in this connection consists of the Chief Inspector, a Deputy Chief Inspector, nine Assistant Inspectors, and one Lady Inspector.

The systematic inspection of the City was conducted during the year 1927 on the same lines as in previous years. The result of the inspections may be gathered from a perusal of the "Register of Work Done," which is to be found at the end of this section of the report. It shows that the number of complaints received at the office of the Department was 4,038, as compared with 3,665 received in 1926, also that 8,509 dwelling houses were inspected during the year. The details of each section of the work will be found under the special heading.

During the year six pail closets which were insanitary were converted to water closets. This work of conversion to water closets throughout the City has now been almost completed, and has resulted in 21,907 privy middens and 7,324 pail closets being converted. It is estimated that 34 pail closets and privy middens still remain in the City.

TABLE G. 1.**COMMON LODGING HOUSES, 1927.**

	Wards.				Total.
	Crescent.	St. Paul's.	St. Thomas's.	Trinity.	
Number on Register	7	1	1	6	15
Number added to Register in 1927....	..	..	..	..	..
Number removed from Register in 1927	..	..	..	..	..
Number of Rooms.....	60	6	8	52	126
„ „ Beds	294	25	23	582	924
Average Number occupied each night—Males	170	17	21	488	696
Females .....	..	..	..	..	..
Notices served on Landlords	5	..	..	1	6
„ „ Keepers.....	1	..	..	..	1
Number of Day Inspections	222	32	25	255	534
Night „	24	4	4	16	48

Common Lodging Houses.

There were 15 Common Lodging Houses on the register at the end of the year, including Salford House in Bloom Street; seven are in the Crescent Ward, six in Trinity, one in St. Paul's, and one in St. Thomas' wards. These houses contain 126 rooms, with 924 beds. The average number of beds occupied per night was 696 for males and none for females. Five hundred and thirty-four inspections were made during the day time and 48 at night.

The addresses of and particulars relating to these lodging houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.	Total number of lodgers who could be accom- modated during the year.	Total number of lodgers accom- modated during the year.
7, Bolton Street	5	49	17,885	16,873
31, Bury Street	7	33	12,045	8,547
32/34, Chapel Street	14	88	32,120	14,654
55, Chapel Street	15	85	31,025	27,388
41A, Gravel Lane	5	42	15,330	11,473
"Salford House," Bloom Street...	6	285	104,025	99,234
21, East Ordsall Lane	2	16	5,840	3,643
113, Oldfield Road.....	7	27	9,855	5,176
1 and 1A, Park Place	24	125	45,625	19,869
2, Park Place	13	26	9,490	7,227
3, Park Place	4	43	15,695	10,863
13, Windsor	4	15	5,475	2,983
2, Comus Street	6	42	15,330	12,190
1/5, Travis Court	8	23	8,395	7,756
2, West High Street.....	6	25	9,125	6,225

The total number of lodgers who could be accommodated during the year, in all the houses, was 337,260, and the total number actually accommodated was 254,101, a difference of 83,159.

Of the 924 beds, an average of 696 was occupied each night, leaving an average of 228 beds empty.

The above figures show that although the lodging houses as a whole (excluding the Corporation's own institution—"Salford House") were occupied to only 66 per cent of their full capacity, "Salford House" itself was occupied to the extent of 95 per cent of its total accommodation, and this in spite of the fact that its

charges are about 25 per cent higher than those obtaining in ordinary lodging houses. These figures would appear to bear out the statement made in the special report upon "Salford House" contained in my Report for the year 1926 "that the Institution is appreciated and does meet a very real need."

These Lodging Houses have been kept in good and clean condition during the year, and the Bye-laws have been observed.

Houses Sub-let in Lodgings.

There are 282 houses let in apartments in the City; these contain 1,403 rooms. Twenty-three houses were registered during the year and 50 discontinued.

The registration of these houses gives us power to inspect them at any time. They have been inspected from time to time, and they have received 2,508 inspections in the day time and 42 at night.

Throughout the year the District Inspectors have given much attention to the question of overcrowding as regards many of these houses.

The extreme difficulty of obtaining housing accommodation in Salford has deterred the Committee from taking action for overcrowding.

Seamen's Lodging Houses.

There are 11 Seamen's Lodging Houses in the City, containing 46 rooms and 127 beds. There have been

11 applications for renewals and new licences. Two houses were given up during the year, and two keepers did not apply for renewal of the licence.

The Byelaws in force regulating these houses have been carried out, and the houses generally kept in good and clean condition. Two hundred and seventy-nine visits have been made during the day time and twenty-seven visits during the night time.

The addresses of and particulars relating to these houses are as follows :—

Address.	Accommodation. Sleeping Rooms.	Lodgers.
1, Smith Street.....	4	14
129/131, Trafford Road	4	17
1, Railway Terrace	5	13
69, Monmouth Street	6	12
48, Higson Street	4	10
107/109, Garfield Street	8	16
35, Broadway	3	5
66/68, Monmouth Street	5	10
53, Trafford Road	5	26
31, Gledhill Street.....	1	1
20, Gledhill Street.....	1	3

These houses contain 46 sleeping rooms and can accommodate 127 lodgers.

The keepers of these houses are not required to submit a Return of the number of Seamen sleeping on the premises, but it is the general impression from the visits made by the Inspectors that these houses are not used to the fullest extent. This is no doubt due to the slackness of trade in the shipping business, also to the

increased proportion of American shipping manned by American Crews who, whilst in Port, live and sleep on board.

Workshops.

At the end of the year there were 838 workshops on the register. These have been regularly inspected by the Lady Inspector of Workshops and by the District Inspectors, the Lady Inspector visiting those workshops where females are employed and the District Inspectors visiting those premises where males only are employed.

Two-hundred and four defects were found in the workshops, the particulars being given in Table B. The chief defect was want of cleanliness both in the workshops and bake-houses, which was found in 42 cases and 113 cases respectively. In each case the tenant was cautioned and the defect remedied.

Four workshops were found to be overcrowded, but this condition was remedied without the necessity of notices being served.

In one instance the ventilation was found to be defective. It is found that far more attention is paid by the occupiers to this very important matter than formerly.

Re OUTWORKERS.—The women outworkers' premises are visited by the Lady Inspector of Workshops, and those of the men by the District Inspectors.

During the year 224 visits have been paid.

During this year the Lady Inspector of Workshops has inspected 125 Fish and Chip Restaurants, where women are employed, to ascertain the conditions as to cleanliness and sanitation. As a result of these visits, a number of premises have been found where the yard space has been covered over by roofing or sheds, thereby enclosing the sanitary accommodation and ashbins, and in some cases washboilers and scullery sinks. This is a contravention of the Byelaws of 1923 with respect to "Places where Cooked or Prepared Food, intended for the Food of Man, is Prepared or Manufactured." When these conditions are found they are dealt with under the Byelaws. A number of these have already been altered so as to provide free ventilation.

Factories, Workshops, Workplaces, and Homework.

A.—Inspection.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR
INSPECTORS OF NUISANCES DURING THE YEAR 1927.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecu- tions. (4)
Factories..... (Including Factory Laundries.)	17	1	..
Workshops (Including Workshop Laundries.)	2982	57	..
Workplaces (Other than Outworkers' prem- ises included in Part 3 of this Report.)	321	..	..
Total	3320	58	..

B.—Defects Found.

Premises. (1)	Number of Defects.			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Act—*</i>				
Want of cleanliness	42	41	3	..
Want of ventilation	1	1	..	..
Overcrowding	4	4	..	..
Want of drainage of floors .....	..	..	..	..
Other nuisances	24	24	..	..
Sanitary accommodation { insufficient	4	2	2	..
{ unsuitable or defective ...	14	14	6	..
{ not separate for sexes	1	1	..	..
<i>Offences under the Factory and Workshop Act—</i>				
Illegal occupation of underground bake-house (s. 101)	1	1	..	..
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	113	113	..	..
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report) .....	..	..	..	..
Total	204	201	11	..

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

C.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107										OUTWORK IN UN- WHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.							
	Lists received from Employers.					Prosecutions.					Number of Inspections of Outworkers' premises.	(14)	(15)	(16)	(17)	(18)	(19)				
	Sending twice in the year.		Sending once in the year.		Lists.	Con- tractors.	Work- men.	Number of Addresses of Outworkers received from other Authorities.	Number of Addresses of Outworkers forwarded to other Authorities.	Notices served on Occupiers as to keeping or sending lists.								Failing to keep lists.	Failing to permit inspection of lists.	Failing to send lists.	
	Lists.	Con- tractors.	Work- men.	Con- tractors.																	Work- men.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)			
Wearing Apparel—																					
1. Making, &c.	36	30	96	3	.	4	248	70	.	.	.	216	.	.	.	.	.	.
2. Cleaning and washing			
Lace, lace curtains and nets..			
Artificial flowers			
Nets, other than wire nets...			
Tents			
Sacks	6	..	..	..	..	6	..	..	..	..	..	..
Furniture and upholstery			
Fur pulling			
Feather sorting	4	..	..	..	..	..	..	..	..	..	..	..
Umbrellas, &c.			
Carding, &c., of buttons, &c..			
Paper bags and boxes.....			
Basket making.....			
Brush making	2	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..
Racquet and tennis balls			
Stuffed toys			
File making			
Electro plate			
Cables and chains			
Cart gear			
Locks, latches and keys			
Anchors and grapnels			
Pea picking			
	90	90	98	3	3	4	958	70	..	..	..	994	..	..	..	..	..	..

D.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Tenement Workshops	8
Domestic Workshops	123
Laundries	15
Workshop Bakehouses.....	236
Other Workshops	466
Total number of Workshops on Register.. ...	848

E.—Other Matters.

Class. (1)	Number. (2)
Matters notified to H.M. Inspector of Factories—	
Failure to affix abstract of the Factory and Workshop Act (s. 133)	14
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5). {	
Notified by H.M. In- spector	14
Reports (of action taken) sent to H.M. Inspector	12*
Other.....	..
Underground Bakehouses (s. 101)—	
Certificates granted during the year .....	..
In use at the end of the year .....	..

* Including reports of action taken in cases notified in previous year.

F.—Additional Sanitation for Retail Bakehouses, Sections 97—102.

Number of such premises in the district, 236.

Note as to their sanitary condition. Ground floor bakehouses—Good.

Action taken as to retail bakehouses in 1927, 2 Notices served.

Action taken.	No. of Defects found.	Notices served.	Legal Pro- ceedings.	Defects remedied.	Remarks.
As to Closets, &c., Sec. 97	
As to Water Cisterns, Sec. 97	
As to Drain Openings, Sec. 97	
As to Limewashing, &c., Sec. 97 ..	113	2	..	113	
As to Sleeping Places, Sec. 100	

Any proceedings under Section 98 as to retail bakehouses sanitarily unfit, Nil.

UNDERGROUND BAKEHOUSES.

Number of such premises in district, 1 certified, but not in use at present.

Number certified by District Council under Section 101 (2) in 1927, Nil.

BAKEHOUSES, 1927.

Registered	225
Added to Register	34
Discontinued	16
Number of Underground Bakehouses Certified by Authority	1 but not at present in use.
Total Number of Ovens	316
Employees—Males	248
Females	426
Notices Served	2

Fertilisers and Feeding Stuffs Act, 1906.

No samples have been taken under this Act, the number of animals involved in this area being almost negligible.

Pharmacy Act, 1868.

No licences have been granted in the City.

Smoke Nuisance.

Particulars as to smoke nuisance caused by firms during the year 1927, and dealt with by the Health Committee :

Nineteen Notices were issued under the Public Health Act.

The decision of the Health Committee arrived at in 1925 to withdraw the concession as to the emission of dense black smoke for three minutes in the half hour as regards manufacturing firms in the City, has been rigidly enforced during the year.

During the year, 3,133 smoke observations have been made as against 2,735 in the year 1926, and 3,261 in the year 1925.

One hundred and forty-two stokers and others were cautioned by the Inspectors for negligence in firing the furnaces under their charge, at the same time 19 firms were reported to and dealt with by the Health Committee, also 20 cautionary Notices were issued to firms with a table of smoke observations taken from their chimneys.

Several chimneys have been raised during the year in connection with small workshops.

Classes for stokers were again formed at the Royal Technical College during the summer months, consisting of a course of about 12 lectures in connection with smoke abatement. These lectures had an average attendance of 20 men from various firms in the City, and I am of opinion that the classes are yielding good results.

TABLE SHOWING THE NUMBER OF HALF-HOURLY OBSERVATIONS
TAKEN DURING THE YEAR 1927.

Minutes of Black Smoke emitted in half-an-hour.	No. of Observations taken.	Percentage to Total.
No Black Smoke	2,260	72·1
One Minute	854	27·3
Two Minutes	6	00·2
Three Minutes.....	1	00·0
Over Three Minutes.....	12	00·4
Total Observations.....	3,133	100·0

Manure Receptacles, and Removal of Manure and other Offensive Matter.

The Byelaws with respect to receptacles for manure and the weekly removal of manure, filth, or other offensive or noxious matter, which came into operation towards the end of 1909, have been enforced during the

past year, and special attention has been paid to stable yards where manure quickly accumulates and where no receptacle is provided.

The Byelaws as regards the regular removal of manure have been well observed.

Canal Boats Acts.

Number of canal boats inspected	175
Number of canal boats conforming to Acts	172
Number of canal boats with one or more infringements ..	3
Total number of infringements	5
Registration .....	..
Absence of certificates	3
Dilapidation of certificate.....	..
Marking .....	..
Overcrowding .....	..
Separation of sexes .....	..
Cleanliness .....	..
Ventilation .....	..
Ventilators obstructed .....	..
Painting	1
Provision of water vessel .....	..
Water vessels broken.....	..
Removal of bilge water .....	..
Boats defective and leaking	1
Dilapidation .....	..
Stoves defective .....	..
Stove pipes defective .....	..
Pumps defective .....	..
Admittance of Inspector .....	..
Notification of infectious disease .....	..
Certificates not identifying owners .....	..
Loading manure without tight bulkheads .....	..
Number of notices served	1

Detention of boats for cleansing and disinfection :
None.

Legal proceedings taken : None.

Number of boats on register: Not a Registration Authority.

Canal boats registered to carry	815
Men found on the boats	307
Women found on the boats	52
Children under 12 years found on the boats	43

Drainage Inspection.

The testing and examination of all existing drainage is carried out by this Department. Two Inspectors and four labourers are kept continually at work examining drainage, and the following table gives the detailed results of their labours:—

Number of tests made	683
„ applications from householders	8
„ houses affected by the tests	844
„ notices and reports issued	318
„ notices and reports complied with	316
„ drain inlets opened and cleared	2,399

INSANITARY CONDITIONS FOUND.

Defects.

Number of drains wholly and partly choked	780
„ drains defectively constructed	267
„ gully traps badly laid	28
„ drains defectively trapped	70
„ waste pipes defectively trapped or connected to drains	11
„ downspouts connected to drains	22
„ soil pipes with leaking joints or defectively ventilated	33
„ defective water closets	82

Total defects 1,293

RECONSTRUCTION OF DRAINS AND THE CONSTRUCTION
OF NEW DRAINS.

Number of tests applied	600
„ houses affected	435
„ passage main drains affected	18

MODE WHEEL AMBULANCE AND
DISINFECTING STATION.

The Ambulance and Disinfecting Station situated in Mode Wheel Road is under the control of the Medical Officer of Health. The Station is used for the following purposes :—

(a) The disinfecting of bedding, clothing, etc., from the homes of persons suffering from infectious disease, by means of high-pressure steam disinfection.

(b) As a Depot for the disinfectors employed in disinfecting houses, schools, and public institutions, in which a case of infectious disease has occurred.

(c) As a station, for the bathing of verminous persons and the disinfection of their clothing.

(d) The bathing of persons suffering from scabies (particularly school children), and the disinfection of their clothing.

(e) The bathing of midwives who have been in contact with cases of puerperal fever, and the disinfection of their clothing and instruments.

(f) As a Garage for the three motor ambulances required to take persons to and from Hospital and

the three motor vans used to collect and deliver bedding, etc., before and after disinfection and in connection with the cleansing of conveniences. The Station is also used as a repair depot for the whole of the motor vehicles used in the Department.

The Staff employed at the Station is as follows:—

Foreman.

Caretaker.

Motor Mechanic.

Four Disinfectors.

Four Drivers.

The following is a summary of the work done at the Mode Wheel Disinfecting Station during 1927:—

AMBULANCES.			
	Salford Cases.	Out-District Cases.	Total Cases.
Number of journeys removing patients to Hospital.....	1,297	296	1,593
Number of journeys removing patients from Hospital to their homes.....	151	6	157
Number of houses visited by ambulances removing bedding for disinfection.	754	43	797
VANS.			
Number of houses visited by vans returning bedding after disinfection	1,749	170	1,919

In addition, 654 journeys to Hospital for purposes other than removal of patients were made by motor vehicles, and 38 journeys were made for the purpose of taking home children after operative treatment for tonsils and adenoids. 368 journeys were made in connection with the treatment of children suffering from scabies.

DISINFECTIONS.

Number of houses disinfected	1,986
„ rooms disinfected	4,814
„ bundles of clothing and bedding disinfected..	5,019
„ books disinfected	254
„ schools disinfected	4
„ hospitals disinfected	34
„ ships disinfected	6

BATHING AND DISINFECTION OF CLOTHING.

Midwives	40
Smallpox convalescents	4
„ contacts	14
Verminous children	81
„ adults	21
Children suffering from scabies	1,042

During the year 1927 a new “Austin” Ambulance and a new “Morris” 12 cwt. van were purchased and brought into use in place of one of the existing Ambulances and one of the existing vans.

The new Ambulance has proved of decided advantage not only in regard to the comfort of patients but from the point of view of running costs. The van, being of considerably greater capacity than that which it replaced, has reduced the number of journeys required in connection with the delivery of bedding.

Sanitary Conveniences.

There are 22 conveniences in the City, under the control of the Health Committee, namely :—

SITUATION.	MALES.				FEMALES.		
	Urinal Stalls	Water Closets	Wash Basins	Attendant	Water Closets	Wash Basins	Attendant
Trinity Market	6	3	3	1	3	3	1
Trafford Road (Eccles New Road corner)	15	4	4	1	..	..	..
Trafford Road (Ordsall Park) ..	12	4	6	1	..	..	..
Church Street (near the corner of Broad Street).....	10	2	3	1	3	3	1
Cross Lane .....	..	..	..	..	4	4	1
Oldfield Road (Corner of Chapel Street)	6	..	..	..	..	..	..
Liverpool Street	4	..	..	..	..	..	..
Bolton Road (Junction of Claremont Road)	4	..	..	..	..	..	..
Broughton Road.....	16	..	..	..	..	..	..
Windsor Bridge	6	..	..	..	..	..	..
Blucher Street.....	8	..	..	..	..	..	..
Stevenson Street.....	3	..	..	..	..	..	..
Park Lane	5	..	..	..	..	..	..
Broad Street	3	..	..	..	..	..	..
Greengate Arch.....	6	..	..	..	..	..	..
Eccles New Road.....	6	..	..	..	..	..	..
Broughton Bridge	8	..	..	..	..	..	..
Frederick Road.....	4	..	..	..	..	..	..
Moor Lane	6	..	..	..	..	..	..
Cross Lane	5	..	..	..	..	..	..
Albert Park	6	..	..	..	..	..	..

New conveniences for males and females have been erected in Church Street, Pendleton, near the corner of Broad Street. A ten stalled urinal is fixed and two water closets for the use of males and in the female section there are three water closets.

In addition three wash basins are provided for males and three for females.

TABLE G. 2.

NEW HOUSES ERECTED AND HOUSES DEMOLISHED IN 1927.

Wards.	Houses erected.	Houses demolished.
Kersal	40	.. —
Albert Park	—	.. —
Mandley Park	19	.. —
St. Matthias'	—	.. —
Trinity	—	.. —
Crescent	—	.. —
Regent	—	.. —
Ordsall Park	—	.. —
Docks	—	.. —
Charlestown	—	.. —
St. Thomas'	—	.. —
St. Paul's	—	.. —
Langworthy	—	.. —
Seedley	24	.. —
Weaste	126	.. —
Claremont	38	.. —
	—	.. —
	247	.. —

Of these, 59 have been erected under Housing Schemes of the Corporation. The remaining 188 have been built by private enterprise.

Increase of Rent and Mortgage Interest (Restrictions) Act, 1920.

During the year one application under the above Act was received for a Certificate as to the house being either not reasonably fit for habitation or not in a reasonable state of repair. In this case a Certificate was granted.

Certificates as to Housing Conditions.

Under the terms of the circular letter issued by the City Treasurer, with reference to the issue by the Medical Officer of Health of certificates to the effect that certain families were not living under sanitary conditions, 221 applications have been made and in 179 cases certificates were issued.

A considerable amount of the time of the Sanitary Inspectors was occupied during 1927 in investigating applications for the issue of these certificates, as it is necessary in each case to measure up the existing accommodation in order to find the cubic capacity of the air space available.

TABLE G. 3.

Cases heard before Magistrates, 1927.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
or selling milk not of the nature, substance and quality of the article demanded, being deficient of fat.	4	1 fined £5. 1 „ £3. 1 „ £2. 1 „ £1.	£ s. d. 11 0 0
or selling Raspberry and Gooseberry Jam as made from freshly gathered whole fruit, which was found to be made from fruit pulp coloured with an aniline dye.	1	Fined £20 and £2 2s. costs.	20 6 0
or selling extract of meat and malt wine not of the nature, substance and quality of the article demanded.	1	Fined £5 and £21 costs.	5 0 0
or selling unlabelled margarine.	3	1 fined £2. 2 „ £1.	4 0 0
or selling tea containing 12 % of dust, of which 6 % consisted of chalk, sand and silicious matter and 8.0 grains per lb. of iron filings.	1	Fined £5.	5 0 0
or offering for sale certain meat which was unsound and unfit for the food of man.	1	Fined.	10 0 0
or not giving the prescribed notice, under the Anthrax Order, 1910, that he had under his charge a diseased animal, viz., a cow affected with Anthrax.	1	Fined.	2 0 0
or removing a diseased cow.	1	Withdrawn.	—
or cutting the skin of the same carcase to cause effusion of blood.	1	Withdrawn.	—
or carrying on a Maternity Home without being registered.	1	Fined.	5 0 0
or failing to comply with a Notice under the Streets, Buildings and Sanitary Requirements of the Corporation to properly pave a yard surface.	1	Fined.	5 0 0
Carried forward	16		£67 0 0

CASES HEARD BEFORE MAGISTRATES, 1927—*Continued.*

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
Brought forward	16		£ s. d. £67 0 0
For failing to comply with a Notice to abate a Nuisance arising from the kitchen fire-range and chimney flue being defective, causing smoke to back into the room.	1	Fined and order made to abate the nuisance.	0 10 0
For failing to comply with an order to abate the same nuisance.	1	Adjourned 4 weeks from December 16th.	—
For failing to comply with Notices to abate nuisances arising from defective roofs.	3	1 fined £2 and order to abate made. 1 fined £2 and £1 ls. costs; order to abate made. 1 fined £1 and 5s. costs.	5 0 0
For failing to comply with a Notice to abate a nuisance arising from defective drains.	1	Fined and order to abate made.	2 0 0
For contravening Section 73 of the P.H. Act, 1925, by distributing certain toys from a cart used for the collection of rags, bones, etc.	3	2 fined £1 each. 1 „ 10s.	2 10 0
TOTAL	25		£77 0 0

REGISTER OF WORK DONE—*Continued.*

Disinfection—Houses Disinfected	1986
House Drains .. {	
Repaired	184
Reconstructed	679
Trapped	248
Downspouts disconnected from	2
Blockages removed	2229
Eaves, Gutters, & Downspouts, Passages and Yards	
Blockages removed	116
Inlets opened	1818
Water Closets .. {	
New, provided	9
Ventilated	—
Ash Receptacles {	
New, provided	1218
Bricked up or demolished	352
Limewashed ... {	
Dwelling-houses	1
Lodging houses	25
" Sub-let	136
" Seamen's	15
Bakehouses	339
Workshops	91
Workshops (Domestic)	26
Outworker's premises	14
Laundries	6
Newly Licensed Common Lodging-houses	15
" " Seamen's	11
Newly Registered .. {	
Lodging-houses Sub-let	23
Workshops	64
" (Domestic)	88
Bakehouses	23
Second-hand Goods Stores	17
Ice Cream Shops	107
Accumulations Removed {	
Manure and Refuse	66
Stagnant Water	—
Smoke Nuisance {	
Observations taken	3133
Notices served	19
Cautionary Notices served	20
Passages and Yards	
Flagged	1
Repaired	262
Drained	—
Bundles of Infected Bedding and Clothing {	
Stoved	5019
Destroyed	92
Animals removed from improper situations	1
Overcrowding of dwellings abated	6
Houses repaired by owners, after notice	4363
Canal Boats painted	1
" defective	—
" repaired	1

Housing Conditions.

YEAR ENDED 31ST DECEMBER, 1927.

GENERAL STATISTICS.

Area (acres)	5202
Population (1927)	247600
Number of Inhabited Houses (1927-1928, April).....about	50600
Number of families or separate occupiers (1927)	—
Rateable Value (1927-1928, April).....	£1372249
Sum represented by a penny rate (Estimate).....	£5306

HOUSING.

Number of new houses erected during the year :—

(a) Total.....	247
(b) As part of a municipal housing scheme	59

1. Unfit dwelling-houses.

Inspection—

(1) Total number of dwelling-houses inspected for housing defects (under Public Health Acts)	8509
2) Number of dwelling-houses which were inspected and recorded under the Housing Consolidated Regulations, 1925.....	15312
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation.	Nil.
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation.....	4849

2. Remedy of defects without service of formal Notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers.....	1980
--	------

3. Action under Statutory Powers.

(A) Proceedings under Section 3 of the Housing Act, 1925 ...	Nil.
(1) Number of dwelling-houses in respect of which Notices were served requiring repairs	Nil.
(2) Number of dwelling-houses which were rendered fit :—	
(a) By owners	Nil.
(b) By Local Authority in default of owners	Nil.
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	Nil.

HOUSING CONDITIONS—*Continued.*

(B) Proceedings under Public Health Acts.

(1) Number of dwelling-houses in respect of which Notices were served requiring defects to be remedied	2784
(2) Number of dwelling-houses in which defects were remedied :—	
(a) By owners.....	2383
(b) By Local Authority in default of owners	Nil.

(C) Proceedings under Sections 11, 14 and 15 of the Housing, Act, 1925.

(1) Number of representations made with a view to the making of Closing Orders.....	Nil.
(2) Number of dwelling-houses in respect of which Closing Orders were made	Nil
(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit..	Nil.
(4) Number of dwelling-houses in respect of which Demolition Orders were made	Nil.
(5) Number of dwelling-houses demolished in pursuance of Demolition Orders	Nil.

Housing, Town Planning, &c., Act.

HOUSE-TO-HOUSE INSPECTIONS UNDER THE HOUSING CONSOLIDATED REGULATIONS, 1925.

Six wards, namely : Docks, Weaste, Seedley, Langworthy, St. Paul's and St. Thomas', were examined during 1926 and 1927 in accordance with the above-named Regulations, the total number of houses examined being 15,312.

It is interesting to note that of these only 202 had less than four rooms and all but 22 were provided with a separate water closet.

The only important defect found was that of insufficiency of light and ventilation in 554 houses, but, as some of the property examined includes a portion of the older parts of the City, this is to be expected.

Full details will be found in the following table :—

	WARDS.					
	Docks.	Weaste.	Seed- ley.	Lang- worthy.	St. Paul's.	St. Thomas.
Number of houses inspected	2758	2592	2103	2510	2493	2856
Number of dwellings with 1 room .....	..	..	..	..	..	1
" " 2 rooms .....	..	..	2	1	12	47
" " 3 rooms .....	..	12	2	20	47	57
" " 4 rooms	102	717	319	1078	1481	1591
" " 5 rooms	330	331	283	409	178	311
" " 6 rooms	1853	822	615	678	650	631
" " over 6 rooms	472	710	882	324	125	218
Closet Accommodation :—Water Closet	2758	2591	2102	2510	2493	2845
Pail Closet .....	..	1	..	..	..	1
Privy Midden .....	..	..	1	..	..	1
Number of houses with closet accommodation in common with other dwellings .....	..	..	..	..	..	20
Ash Accommodation :—Metallic Receptacle	2757	2583	2091	2510	2493	2856
Tub	1	..	..	..	..	1
Ashpit .....	..	4	12	..	..	16
Unsatisfactory .....	..	..	..	..	..	..
In Common .....	..	..	..	..	..	..
No accommodation .....	..	..	..	..	..	..
Defects :—Insufficient light and ventilation	1	28	1	12	122	390
Defective drainage .....	..	..	..	..	..	..
No drainage .....	..	..	..	..	..	..
Serious dilapidation .....	..	..	..	..	..	..
Back-to-back houses .....	..	..	..	..	..	..
Houses unfit for habitation .....	..	..	..	..	..	..
Number of representations made to Local Authority with a view to making closing orders .....	..	..	..	..	..	..
Number of closing orders made .....	..	..	..	..	..	..
Number of dwelling-houses put into fit state for human habitation after making closing orders .....	..	..	..	..	..	..
Defects remedied without closing orders .....	..	..	..	..	..	..

SECTION II_A.

Atmospheric Pollution.

1. Domestic Fuel.

In previous reports* it has been steadfastly maintained that much the most serious pollution of our atmosphere arises from domestic smoke, and that for health reasons, and especially in view of the rawness and dampness of our local climate, the only satisfactory solution of the problem seems to be the substitution of solid smokeless fuel (coke, coalite, etc.) for raw coal, at the same time retaining in our homes the open form of firegrate.

This contention has received considerable criticism, one objection being that hitherto the available supplies of carbonised fuels, including gas coke, were a mere fraction of national domestic requirements, and also, with respect to gas coke, that difficulties of ignition and maintenance of such fires were practically insuperable.

In answer to the latter objection, the writer published in his Annual Report for 1925, plan, elevation, and section of an all-firebrick grate—the “Salford” Grate, specially designed for burning dry coke. Such grates have been installed throughout the Health Department (where there are now over forty) and also in our Hospitals and

*See Annual Reports of the Medical Officer of Health for Salford—1923, 1924, 1925, and 1926.

Municipal Lodging House. Owing to this provision, we were able to abandon raw coal some years ago in favour of coke and other smokeless fuel, thus setting an example and at the same time effecting a real economy, for it was found by comparative experiments that, for equivalent heating, the cost of the dry coke fires was but half that of the coal fires.

The view was taken that until such time as the production of free burning carbonised fuel had been sufficiently developed, more of the available dry gas coke should find its way into the domestic grates of our congested areas. Happily there are now signs that the country is realising the need for the carbonisation of raw coal, and it is gratifying to note how rapidly the output of such fuel is increasing. As an instance, the Barnsley Works has a nominal weekly output of over 1,000 tons of "Coalite" smokeless fuel, and it is expected that the present plant will soon be doubled. This product (coalite) has been given quite an extensive trial in our Health Department during the last few years. We have found it very free burning, giving a most satisfactory fire, and it does not burn away so quickly in our solid firebrick grates as in the ordinary iron barred grates with bottom draught. The only drawbacks in the past were (1) the difficulty of obtaining a regular supply of this fuel, and (2) the rather high price. Considerable progress has been made in the way of overcoming these difficulties, as firstly it is understood that a big extension of the plant is in prospect, and secondly, from our own experience, we find that for equivalent heating coalite is now no dearer than house coal.

As regards gas coke, much more of this material ought to find its way into domestic grates than is the case at present. The trouble is that much of the gas coke now produced in this country is of poor quality and contains a large percentage of water, which, though highly remunerative to the producer, is unnecessary. Such waterlogged coke is very difficult to ignite, and some gas companies are now supplying fire grates with gas jet attachment for the purpose of starting the fire. Contrivances of this sort would be unnecessary if more attention were directed to the production of a water-free coke such as "Vertical Dry Coke," which being produced in vertical retorts requires no quenching. It is quite possible that in years to come coke will take precedence of gas for domestic use and that the present order "gas for domestic use and coke for industrial use" will be largely reversed.

As indicated in previous Reports, a good quality vertical dry coke, such as is at present produced in limited quantities in our local gas works, is an ideal fuel for all-firebrick grates, and, as previously noted,* beautiful glowing fires can be lighted and maintained with the minimum of trouble at half the cost of house coal.

For several winters comparative experiments with various solid fuels have been carried out within the premises of the Health Department at Regent Road, on the lines indicated in Section IIA of my Annual Report for 1925. Whilst it is not claimed that these experiments are scientifically precise, it is held that they are sufficiently practical to afford some useful indication

* See Annual Report for 1925.

of the relative heating value of certain fuels when burned in the open domestic grate. It may be as well to recapitulate the lines on which the experiments are carried out. The comparative tests are carried out in two rooms "A" and "B," of similar size and shape, and having identical all-firebrick grates. For one week coal would be burned in room "A" and coke in room "B." The following week the arrangement is reversed, so that coke is burned in room "A" and coal in room "B" and so on, thus tending to equalise the conditions of the experiment. Thermometers in similar positions in each room (but not in the direct line of radiation from the fire) record the room temperature, which is taken at intervals during the day. The tests are carried out on weekdays from Monday to Friday, the fires being lighted each morning about 7 a.m. and allowed to die out after 5 p.m. The amount of fuel supplied to each room is weighed in the morning, and the amount remaining in the scuttle in the evening is also weighed and deducted from the original weight of the supply, thus giving the net consumption for the day. The cinders are retained and added to next day's fire.

The following tables show the results of five different series of comparative experiments:—

TABLE I.—*VERTICAL RETORT COKE *versus* *HOUSE COAL.

Average of 36 observations carried out during November and December, 1925, and January and February, 1926.

VERTICAL COKE.		HOUSE COAL.	
Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.	Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.
58.9°	14.8 lbs.	58.6°	21.8 lbs.

* The above fuels were sampled from the load in the usual way, and the samples were forwarded for examination to the West Ham Testing Laboratory, whence it was reported as follows:—

The nett calorific value of the *Vertical Coke* as received, was 13,151 B.T.U.'s.

„ „ „ *House Coal* as received, was 13,494 B.T.U.'s.

The percentage ash content of the *Vertical Coke* as received, was 7.24.

„ „ „ *House Coal* as received, was 4.36.

The percentage volatile matter content of the *Vertical Coke* as received, was 1.97

„ „ „ „ *House Coal* as received, was 31.34.

TABLE II.—VERTICAL RETORT COKE *versus* WELSH STEAM COAL.

Average of 42 observations carried out during January, February and March, 1927.

VERTICAL COKE.		WELSH STEAM COAL.	
Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.	Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.
58.8°	15.0 lbs.	58.7°	18.9 lbs.

TABLE III.—VERTICAL RETORT COKE *versus* SMOKELESS FUEL "L."

Average of 19 observations carried out during March and April, 1927.

VERTICAL COKE.		SMOKELESS FUEL "L."	
Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.	Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.
60.4°	13.9 lbs.	60.5°	17.6 lbs.

TABLE IV.—†VERTICAL RETORT COKE *versus* †SMOKELESS FUEL "C."

VERTICAL COKE.		SMOKELESS FUEL "C."	
Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.	Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.
59.9°	15.9 lbs.	59.0°	17.1 lbs.

TABLE V.—†SMOKELESS FUEL "C" *versus* †HOUSE COAL.

Average of 22 observations carried out during January and February, 1928.

SMOKELESS FUEL "C."		HOUSE COAL.	
Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.	Average Temperature of Room (Fahrenheit).	Average daily weight of fuel consumed.
60.9°	15.5 lbs.	61.2°	21.6 lbs.

† The above fuels were sampled from the load in the usual way and the samples were forwarded for examination to the West Ham Testing Laboratory, whence it was reported as follows:—

The nett *calorific value* of the *Vertical Coke* as received, was 11,557 B.T.U.'s.

" " " *Smokeless Fuel "C"* as received, was 11,963 B.T.U.'s.

" " " *House Coal* as received was 12,849 B.T.U.'s.

The percentage *Ash Content* of the *Vertical Coke* as received, was 9.01.

" " " *Smokeless Fuel "C"* as received, was 7.19.

" " " *House Coal* as received, was 7.89.

The percentage *Volatile Matter Content* of the *Vertical Coke* as received was 1.99.

" " " " *Smokeless Fuel "C"* as received, was 7.56

" " " " *House Coal* as received, was 31.06.

The above results may alternately be summarised as follows:—

100 lbs. of Vertical Coke	gave approximately the same room heating as	108 lbs. of Smokeless Fuel "C."
100 lbs. " " " "	" " " "	the same room heating as
100 lbs. " " " "	" " " "	127 lbs. of Smokeless Fuel "L."
100 lbs. " " " "	" " " "	the same room heating as
100 lbs. " " " "	" " " "	126 lbs. of Welsh Steam Coal.
100 lbs. " " " "	" " " "	the same room heating as
100 lbs. " " " "	" " " "	147 lbs. of House Coal.
100 lbs. of Smokeless Fuel "C"	" " " "	the same room heating as
		139 lbs. of House Coal.

Broadly speaking then, as tested in the open grate, Vertical Retort Coke has, weight for weight, a 50 per cent greater heating efficiency than house coal, and a slightly higher efficiency than smokeless fuel "C" (a low temperature carbonisation product).

In other words, the heating efficiency is in inverse proportion to the volatile content, much of which passes up the chimney unburned. The volatile content of the house coal was approximately 32 per cent, that of low temperature carbonised fuel 8 per cent, and that of vertical gas coke 2 per cent. Owing to its relatively high percentage of volatile matter, the low temperature carbonised fuel is practically as easy to ignite as coal, and will burn in any ordinary type of grate. Vertical coke is rather more difficult to ignite (requiring more chips) and is most successful in an all-firebrick grate. But at present prices the vertical coke is easily the most economical, the chief drawback being the limited supply available. However, as the necessity for renewal of gas plant arises, it is to be hoped that the old horizontal retorts will be replaced by plant (such as the modern vertical retorts) capable of turning out dry comparatively free burning coke.

2. Amount and Character of Local Pollution.

An estimate of the amount and character of the atmospheric pollution in any particular locality may be obtained by means of the "deposit gauge." By means of this instrument (practically a large funnel and bottle), the amount of rain and atmospheric impurity which falls upon a measured area in the course of a month is

collected and can then be measured and analysed. An increasing number of local authorities are investigating local pollution by means of the deposit gauge. London and Glasgow have for many years been taking such observations in different stations within each city.

In Salford, deposit gauges are installed in Peel Park, Regent Square and Ladywell Sanatorium. In addition, there is a fourth deposit gauge at the Corporation's Tuberculosis Sanatorium at Nab Top, Marple.

By means of the gauge then, we estimate the *amount and the character* of the pollution, and from the health point of view the latter is just as important as the former. Again, the nature of the pollution as revealed by chemical analysis gives us an indication of the source ; for instance, an excessive proportion of tar and soot in the total solids would, generally speaking, point to a preponderance of *domestic* smoke pollution, as in domestic fires these products are given off in relative abundance ; on the other hand, inorganic ash is relatively much more abundant in industrial smoke.

Deposit gauge figures are collected from all the local authorities throughout the country who are carrying out this work by the Department of Scientific and Industrial Research, and a report is issued thereon.

A table is appended herewith (Table VI.) setting forth the deposit figures for Salford's various stations

and comparing them with the most recent figures available for two other Lancashire towns, namely, Liverpool and Southport.

TABLE VI.—ATMOSPHERIC DEPOSIT IN SALFORD, MARPLE, LIVERPOOL AND SOUTHPORT.

*Station.	Mean monthly atmospheric deposit, expressed as metric tons per square kilometre.		
	Tar and soot.	Other solids chiefly ash.	Total deposit.
Salford Peel Park (5 years' average)	4.03	9.75	13.78
„ Regent Square (4 years' average)	5.17	8.23	13.40
„ Ladywell Sanatorium (3 years' average) . . .	2.98	7.01	9.99
Marple, Nab Top Sanatorium (4 years' average) .	1.75	3.34	5.09
Liverpool (5 years' average)	4.25	15.94	20.19
Southport (5 years' average)	0.82	3.71	4.53

Thus, over an equal area—

Liverpool receives slightly **over five times** as much soot as **Southport** (Hesketh Park).

Salford (Peel Park) receives slightly **under five times** as much soot as **Southport** (Hesketh Park).

Salford (Regent Square) receives slightly **over six times** as much soot as **Southport** (Hesketh Park).

Salford (Ladywell Sanatorium) receives slightly **under four times** as much soot as **Southport** (Hesketh Park).

Marple (Nab Top Sanatorium) receives slightly **over twice** as much soot as **Southport** (Hesketh Park).

It will be noted that whereas the total amount of solid matter deposited from the atmosphere in Liverpool exceeds that deposited in Regent Square, Salford, by 50 per cent, yet the amount of tar and soot deposited

*Salford and Marple figures are computed up to December 31st, 1927. Liverpool and Southport figures (the most recently available) are computed up to March 31st, 1927.

in Regent Square exceeds that deposited in Liverpool by 20 per cent. The inference is that the pollution in Salford is more largely that from domestic fires; for, as previously pointed out, domestic fires give off relatively much more tar and soot than industrial furnaces, the latter contributing relatively more mineral matter in the form of fine ash and grit.

Again, it is interesting to compare the atmospheric deposit figures for Marple and Southport; we note that whilst the Southport deposit contains slightly more mineral matter (ash), yet the tar and soot is only half that of Marple, a likely explanation of Marple's relative "sootiness" being that it is sufficiently near the Manchester group of towns to receive the drift of domestic "fume."

3. Strength of Sunlight.*

Atmospheric pollution must necessarily impede the penetration of sunlight. In Salford, where the climatic conditions in themselves result in a marked diminution of sunlight as compared with more favoured areas, we can ill afford the further restriction of our limited supply by an additional curtain in the form of a smoke pall.

It is now generally accepted that sunlight exerts a profound influence upon health.

Hitherto, the relative amount of sunlight received over the middle of the city and over the outlying parts

*The term "Sunlight" includes all the light received from the sky, even on a cloudy day, and should not be confused with "Sunshine"—(the direct rays of the sun).

has been a matter for conjecture, and it was felt desirable that some measurement of their relation should be obtained. To this end, test bottles containing an acidulated solution of Potassium Iodide have been daily exposed for the past two years at four stations belonging to the Corporation, namely: (1) Regent Road, Salford; (2) Nab Top Sanatorium, Marple, Cheshire; (3) Ladywell Sanatorium, Salford; and (4) Drinkwater Park Hospital, Prestwich. Regent Road, of course, represents the densely populated central area, and Ladywell the westerly outskirts of the city; Drinkwater Park is about 4 miles to the north-west, and Nab Top, Marple, about 10 miles to the south-east.

The Potassium Iodide solution in the test bottles gradually turns brown on exposure, owing to the liberation of free iodine by the active light rays, and the amount of iodine thus liberated may be taken as a measure of the amount of sunlight received. Fresh bottles of the solution are daily exposed in each of the four stations, and the amount of iodine liberated in each is easily and accurately estimated.

The results are set forth in the accompanying tables, the figures given representing the actual amount of iodine (milligrammes) liberated.

TABLE VII.—AMOUNT OF SUNLIGHT RECEIVED IN SALFORD, MARPLE & PRESTWICH.

	Regent Road, Salford.		Nab Top Sanatorium, Marple.		Ladywell Sanatorium, Salford.		Drinkwater Park, Prestwich.	
	Year 1926.	Year 1927.	Year 1926.	Year 1927.	Year 1926.	Year 1927.	Year 1926.	Year 1927.
January	37.4	41.2	74.1	54.2	47.6	56.7	41.8	53.5
February	55.1	68.5	82.1	76.3	81.6	71.6	86.8	66.7
March	128.2	159.6	146.7	184.7	135.1	184.9	149.3	176.3
April	98.9	148.7	122.1	178.0	113.1	174.8	113.3	202.3
May	225.0	188.6	242.1	216.2	240.3	231.1	243.4	277.1
June	199.9	179.4	218.7	202.4	225.2	233.1	242.3	260.3
July	245.8	208.0	230.4	275.6	210.1	246.8	225.4	267.2
August	219.3	178.6	243.0	159.1	229.5	207.7	248.0	200.7
September	198.8	118.7	179.4	112.6	171.6	138.9	183.2	125.4
October	127.3	65.5	126.3	73.0	113.9	72.5	129.3	75.6
November.....	43.5	68.4	47.3	78.0	50.1	79.7	39.9	79.2
December	34.5	42.0	34.4	68.4	36.8	47.3	44.5	61.8
First quarter of year	220.7	269.3	302.9	315.2	264.3	313.2	277.9	296.5
Second quarter of year ..	523.8	516.7	582.9	596.6	578.6	639.0	599.0	739.7
Third quarter of year....	663.9	505.3	652.8	547.3	611.2	593.4	656.6	593.3
Fourth quarter of year...	205.3	175.9	208.0	219.4	200.8	199.5	213.7	216.6
First half of year.....	744.5	786.0	885.8	911.8	842.9	952.2	876.9	1036.2
Second half of year.....	869.2	681.2	860.8	766.7	812.0	792.9	870.3	809.9
Whole of year	1613.7	1467.2	1746.6	1688.5	1654.9	1745.1	1747.2	1846.1
Two years together.....	3080.9		3435.1		3400.0		3593.3	

TABLE VII.—AMOUNT OF SUNLIGHT RECEIVED IN SALFORD MARPLE AND PRESTWICH, EXPRESSED IN *Relative* FASHION.

A = Highest amount of sunlight received.
 B = Next highest amount of sunlight received.
 C = Third highest amount of sunlight received.
 D = Lowest amount of sunlight received.

	Regent Road, Salford.		Nab Top Sanatorium, Marple.		Ladywell Sanatorium, Salford.		Drinkwater Park, Prestwich.	
	Year 1926.	Year 1927.	Year 1926.	Year 1927.	Year 1926.	Year 1927.	Year 1926.	Year 1927.
January	D	D	A	B	B	A	C	C
February	D	C	B	A	C	B	A	D
March	D	D	B	B	C	A	A	C
April	D	D	A	B	C	C	B	A
May	D	D	B	C	C	B	A	A
June	D	D	C	C	B	B	A	A
July	A	D	B	A	D	C	C	B
August	D	B	B	C	C	D	A	A
September	A	C	C	D	D	A	B	B
October	B	D	C	B	D	C	A	A
November	C	D	B	C	A	A	D	B
December	C	D	D	A	B	C	A	B
First quarter of year	D	D	A	A	C	B	B	C
Second quarter of year...	D	D	B	C	C	B	A	A
Third quarter of year ...	A	D	C	C	D	A	B	B
Fourth quarter of year ..	C	D	B	A	D	C	A	B
First half of year	D	D	A	C	C	B	B	A
Second half of year	B	D	C	C	D	B	A	A
Whole year	D	D	B	C	C	B	A	A
Two years together	D		B		C		A	

Inferences from the above results :—

A consideration of the figures for the whole of the two years yields the information that the difference in the amount of light received at the central and outlying stations is not of such magnitude as might have been supposed.

Generally speaking, Drinkwater Park, Prestwich, receives the most sunlight and Regent Road the least, the difference in favour of Drinkwater Park being over 16 per cent for the two years. Taking the years separately, Drinkwater Park received 8 per cent more light than Regent Road in 1926, and 24 per cent more light in 1927.

However, in the month of January for both years, the sunlight figure for Drinkwater Park is relatively low, which may possibly be explained by the fact that winter fog tends to hang about the River Irwell, on the bank of which Drinkwater Park is situated.

A noteworthy feature with respect to Regent Road is that in the months of July and September, 1926, the sunlight figure actually exceeded that of the other three stations, the coal shortage and corresponding freedom from domestic smoke being partly responsible for this unusual state of affairs.

Summarising the figures for the two years then :—

Drinkwater Park, Prestwich, received the most light, being 16 per cent better than Regent Road.

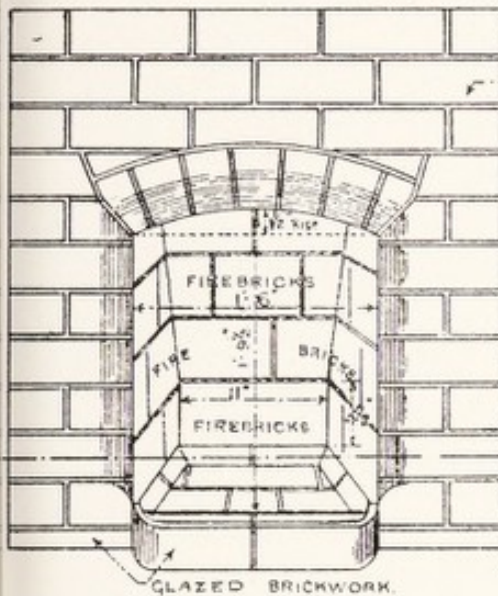
Nab Top, Marple, received the next highest amount of light, being 11 per cent better than Regent Road.

Ladywell Sanatorium received the third highest amount of light, being 10 per cent better than Regent Road.

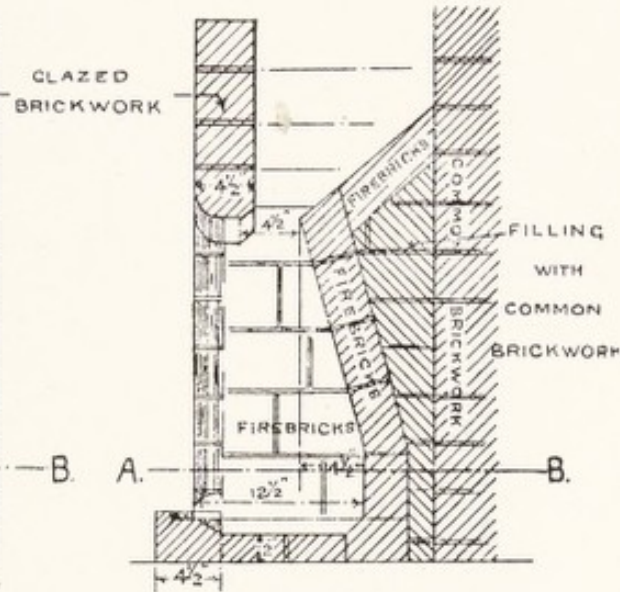
These results, although to some extent unexpected, are interesting, and observations will be continued on the same lines at the four stations concerned.

Slow Combustion Fireplace.

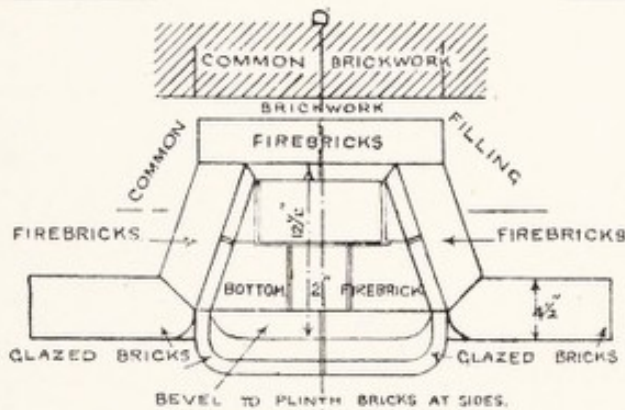
Constructed entirely with Glazed and Fire Brick.



ELEVATION



SECTION C.D.



PLAN A.B.

— SCALE $\frac{3}{4}$ " INCH TO 1 FOOT —

The "Salford" Coke Fire.



SECTION III.

Infectious Diseases.

PREVALENCE OF AND CONTROL OVER
INFECTIOUS DISEASE.

The number of notifications of notifiable infectious diseases shows an increase for 1927, the total number of cases notified being 2,740, this being an increase of 89 as compared with 1926.

There were comparatively large increases in the following diseases :—

Disease.	Increase over 1926.
Acute Primary Pneumonia	102
Acute Influenzal Pneumonia	59
Pulmonary Tuberculosis	41
Non-pulmonary Tuberculosis	25

The principal decreases were as follows :—

Disease.	Decrease from 1926.
Scarlet Fever	89
Diphtheria	26

As regards Scarlet Fever, there is no doubt that the present-day type is much milder than that of former years.

Details of the number of cases of infectious disease notified are given in Tables 1 and 2 (pages 102, 103 and 104).

The usual methods, described in previous reports, for the prevention of the spread of these diseases were continued. School teachers are encouraged to report, in addition, cases of non-notifiable disease, which are at once investigated by the School Medical Officers.

Supplies of Diphtheria Antitoxin are kept by the department and are available, free of charge, immediately to any Medical Practitioner who applies for the same.

There were 158 cases of Influenzal-Pneumonia notified ; 118 deaths occurred from Influenza during the year.

Two cases of Malaria were notified.

The Salford Corporation have an Infectious Diseases Hospital (Ladywell Sanatorium) to which cases which cannot be isolated at home are removed for treatment (including advanced cases of Tuberculosis in males). The Sanitary Staff of the Department carry out disinfection of the premises where cases of infectious disease have occurred.

The Corporation have a Special Disinfecting Station at Mode Wheel, where a considerable number of verminous persons, principally children, are dealt with every year.

INFECTIOUS DISEASES.

87

NOTIFIABLE DISEASES.	Cases notified in Whole District.							Total Cases notified in each Ward.																		
	At All Ages.	At Ages—Years.						Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordsall Park.	Regent.	St. Matthias.	St. Paul's.	St. Thomas.	Seedley.	Trinity.	Waste.	Cases removed to Hospital.		
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.																		65 and upwards.	
Small-pox	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Diphtheria (including Membranous croup) ..	507	6	135	289	50	22	5	13	15	10	41	24	17	30	59	42	60	42	22	30	31	41	30	484		
Erysipelas.....	120	2	1	5	13	40	45	4	6	2	13	8	6	6	6	10	12	7	9	15	2	9	5	44		
Scarlet fever	631	5	158	388	57	21	2	45	64	18	64	19	44	37	36	42	26	38	59	51	21	53	14	554		
Typhus fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	1	..	..	..	..	8
Enteric fever	9	..	..	2	4	3	..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..
Continued fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..
Puerperal fever	7	..	..	1	6	..	..	2	..	1	1	..	..	..	3	4	3	4	1	..	..	2	2	5
Puerperal Pyrexia ..	27	..	..	8	19	..	..	2	3	..	1	2	..	..	..	..	..	..	..	..	..	..	..	8
Cholera .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Meningitis ..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	4
Acute-Poliomyelitis ..	5	..	2	2	..	1	..	..	..	1	1	2	..	..	1	1	..	..	..	..	..	..	..	2
Anthrax	4	..	2	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Glanders .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
tum	48	48	..	..	..	..	..	3	4	1	8	..	2	2	9	3	6	2	1	4	..	2	1	588
Pulmonary tuberculosis ..	573	3	4	45	148	221	140	12	32	8	103	23	14	26	28	42	59	45	42	27	18	48	24	..		
Other forms of tuberculosis ..	148	15	34	39	37	16	6	1	5	12	4	6	4	3	7	14	9	12	14	14	4	15	9	12		
Malaria	2	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..
Dysentery.....	2	..	..	..	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Primary Pneumonia	465	..	..	..	..	..	..	13	5	3	116	24	7	19	19	16	29	72	36	24	15	45	22	8
Influenzal Pneumonia ..	158	..	..	..	..	..	..	7	7	1	17	22	4	20	12	4	9	8	19	14	4	7	3	1
Encephalitis Leth.	17	..	6	..	4	5	2	..	3	..	1	..	1	..	..	2	2	3	1	..	2	..	2	5
Acute Polio Encephalitis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pemphigus Neonatorum ..	16	16	..	..	..	..	..	1	..	..	2	..	..	2	1	2	1	1	..	1	1	2	2	..
Total	2740	95	342	772	324	357	200	27	127	49	391	131	99	146	182	184	217	235	205	180	99	227	115	1724		
Excluding Pneumonia.																										

Excluding Pneumonia.

Year.	†Chicken Pox	Small Pox	Scarlet Pox	Diphtheria	Enteric, Dysentery	Typhus.	Con- tinued.	Puerperal.	Puerperal Pyæmia	Neonatorrhea	Erysipelas	Anthrax	Cerebro-Spinal Meningitis	Acute Poliomyelitis	Ophthalmia Neonatorum	* Measles	Pulmonary.	Non-Pulmonary.	Trench Fever	Malaria	Acute Rheumatism	Encephalitis	Dysentery	Acute Priapism	Influenza	Pneumonia	Epilepsy	Total.
1903.....	..	175	737	335	178	10	1	13	..	..	161	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1600
1904.....	..	57	1043	422	202	7	7	21	..	..	168	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1930
1905.....	..	3	960	363	142	..	1	26	..	..	176	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1677
1906.....	904	432	225	..	1	21	..	..	142	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1725
1907.....	..	8	1044	384	92	..	5	23	..	..	136	..	..	..	..	..	356	..	..	..	..	..	..	..	..	..	..	2048
Average 5 years	..	49	938	387	168	2	4	21	..	..	157	..	..	..	..	..	716	..	..	..	..	..	..	..	..	..	..	1796
1908.....	1341	629	181	..	7	27	..	..	127	..	..	..	..	..	563	..	..	..	..	..	..	..	..	..	..	2875
1909.....	1577	562	138	..	2	26	..	..	182	..	..	..	..	..	581	..	..	..	..	..	..	..	..	..	..	3068
1910.....	909	333	113	..	..	24	..	..	129	..	..	..	..	..	651	..	..	..	..	..	..	..	..	..	..	2159
1911.....	911	375	108	..	1	24	..	..	217	..	..	..	..	..	714	..	..	..	..	..	..	..	..	..	..	2350
1912.....	541	242	76	..	7	26	..	..	181	..	..	..	..	..	1073	..	..	..	..	..	..	..	..	..	..	2206
Average 5 years	1056	428	123	..	3	25	..	..	167	..	..	..	..	..	716	..	..	..	..	..	..	..	..	..	..	2532
1913.....	..	4	1224	336	113	..	1	17	..	..	203	..	..	..	..	..	1206	..	..	..	..	..	..	..	..	..	..	3616
1914.....	..	1	2336	352	63	..	..	20	..	..	248	..	..	..	..	..	1126	..	..	..	..	..	..	..	..	..	..	4471
1915.....	..	1	997	236	84	..	..	23	..	..	172	..	..	..	..	..	816	..	..	..	..	..	..	..	..	..	..	2637
1916.....	..	8	442	204	47	..	..	13	..	..	124	..	..	..	..	..	745	..	..	..	..	..	..	..	..	..	..	3959
1917.....	200	183	40	..	..	2	..	..	91	..	..	..	..	..	3100	..	..	..	..	..	..	..	..	..	..	4401
Average 5 years	..	3	1040	252	69	..	1	15	..	..	167	..	..	..	..	..	2582	..	..	..	..	..	..	..	..	..	..	3817
1918.....	289	148	42	..	..	17	..	..	92	..	..	..	..	..	766	..	..	..	..	..	..	..	..	..	..	2110
1919.....	..	4	663	211	20	..	..	32	..	..	131	..	..	..	..	..	2689	..	..	..	..	..	..	..	..	..	..	5078
1920.....	..	1	1124	334	49	..	1	40	..	..	135	..	..	..	..	..	574	..	..	..	..	..	..	..	..	..	..	2791
1921.....	1746	313	41	..	2	19	..	..	146	..	..	..	..	..	553	..	..	..	..	..	..	..	..	..	..	3425
1922.....	1275	359	37	..	..	25	..	..	141	..	..	..	..	..	510	..	..	..	..	..	..	..	..	..	..	2957
Average 5 years	..	1	1019	273	37	..	1	26	..	..	129	..	..	..	..	..	1727	..	..	..	..	..	..	..	..	..	..	3272
1923.....	868	304	27	..	..	22	..	..	98	..	..	..	..	..	547	..	..	..	..	..	..	..	..	..	..	2268
1924.....	403	286	26	..	..	18	..	..	89	..	..	..	..	..	557	..	..	..	..	..	..	..	..	..	..	2189
1925.....	1145	..	510	376	30	..	..	17	..	..	134	..	..	..	..	..	507	..	..	..	..	..	..	..	..	..	..	2384
1926.....	720	533	10	..	..	20	..	..	140	..	..	..	..	..	532	..	..	..	..	..	..	..	..	..	..	2651
1927.....	..	1	631	507	9	..	..	7	..	..	120	..	..	..	..	..	573	..	..	..	..	..	..	..	..	..	..	2740
Average 5 years (excluding Chicken Pox)	1145	1	626	401	20	..	..	17	20	20	116	1	4	2	54	..	543	123	..	..	2	1	1	1	362	123	..	3607

*Measles notifiable in Salford 1916 to 1919. †Chicken Pox notifiable in Salford, January 22nd to December 31st, 1925.

VENEREAL DISEASES.

The arrangements for the provision of a Venereal Diseases Clinic have been made with the Salford Royal Hospital, where beds for the provision of in-patient treatment are also provided.

Particulars of the Staff, times of Clinics and the facilities available for irrigation of cases of Gonorrhœa during the intervals between the Clinics are as follows :—

Staff of Salford Royal Hospital (Venereal Disease Section).

Dr. R. Gibson.

Mr. J. D. Macalpine.

Clinical Assistants—

Dr. J. Ghosh.

Dr. W. Elwood.

Pathologist—

Dr. C. E. Jenkins.

The Clinics held are as follows :—

Skin Department—

Monday, 12 noon .. Men, Women and Children.

Wednesday, 6 p.m. .. Women and Children.

Wednesday, 7 p.m. .. Men.

Genito-Urinary Clinic—

Tuesday, 12 noon.

Friday, 6 p.m.

The days and hours for irrigation of cases of Gonorrhœa during the intervals between the Clinics are as follows :—

Males : Monday and Tuesday, 4-30 to 6-30 p.m. ;
Saturday, 10-30 a.m. to 12-30 p.m.

Females : Daily (except Sunday), 8 to 9 a.m.

The following table shows the number of cases treated, and the total attendances at the Clinic during 1927 :—

		Soft			
	Syphilis.	Chancre.	Gonorrhœa.		
Salford Cases treated	405	..	..	..	505
Out-District Cases treated	164	..	..	..	300
Total Cases treated	569	..	..	..	805
Total Attendances	4803	..	..	..	10337

Below are given miscellaneous particulars regarding the operation of the scheme :—

1. Fourteen Medical Practitioners in the City are qualified to receive Salvarsan substitutes.

2. Novarsenobillon has been supplied to one Salford Practitioner as follows :—

·15	— doses.
·3	— doses.
·45	30 doses.
·6	20 doses.
·75	— doses.
·9	20 doses.

Of the 100 doses supplied to all Practitioners, 30 have been supplied to the Medical Officers for His Majesty's Prison, Strangeways, Manchester.

One hundred and fifteen Tests were made for the Wasserman reaction for Salford Medical Practitioners.

Fourteen Specimens were sent for Microscopical examination by Salford Medical Practitioners.

It has not been found necessary to take any action under the Venereal Diseases Act, 1917.

[illegible]

VENEREAL DISEASES—Continued.

	Syphilis.		Soft Chancre.		Gonorrhoea.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
4. Number of cases transferred to other Treatment Centres after treatment for	1	..	..	..	..	..	..	..	1	..
5. Number of cases discharged after completion of treatment and observation for.....	12	10	..	..	11	4	88	52	111	66
6. Number of cases which, at the end of the year under report were under treatment or observation for	177	100	..	..	340	19	13	3	530	122
Total—Items 3, 4, 5 and 6.....	353	216	..	..	702	103	128	65	1183	384
7. Out-patient attendances— (a) For individual attention by the Medical Officer	3002	1801	..	..	4293	163	223	206	7518	2170
(b) For intermediate treatment, <i>e.g.</i> , irrigation, dressings, etc. ....	..	..	..	..	4709	1172	..	..	4709	1172
Total Attendances	3002	1801	..	..	9002	1335	223	206	12227	3342
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from	325	34	..	..	260	4	..	..	585	38
For detection of										For Wassermann Reaction.
		Spirochetes.		Gonococci.		Other Organisms.				
										</

The Salvarsan substitutes used in the treatment of Syphilis are Neokharsivan, and Stabilarsan.

Amount and kind of treatment usually administered to a case of Syphilis of each of the types usually dealt with at a Treatment Centre :—

First Course—	Grammes of Neokharsivan.							
Weekly injections of Neokharsivan and Mercury (Males).	.45	.6	.75	.75	.9	.9	.9	.9
	Hg.	Hg.	Hg.	Hg.	Hg.	Hg.	Hg.	Hg.

If case is seen in pre-positive Wasserman stage further treatment may not be necessary, but if Lysis is delayed, or if there is a Wasserman positive when seen, then further intra-venous injections of Neokharsivan and Mercury are continued. The first of the second series of courses is given six weeks after first course ends, and the interval is increased by two weeks each time. The whole course lasts nearly two years.

Nature of tests applied in deciding as to discharge of patients :—

Repeated blood tests at three monthly intervals over two years after all treatment has been discontinued, in addition to absence of clinical signs and symptoms. Final test (Blood Test) after provocative intra-venous injection.

TABLE SHOWING THE BACTERIOLOGICAL EXAMINATIONS CARRIED OUT DURING 1927.

Venereal Diseases.						
	Wasserman Reaction.		Spirochoetæ.		Gonococcus.	
	Total.	+	Total.	+	Total.	+
University Laboratory	955	219	..	..	9	..
Municipal Laboratory (from 1st Nov., 1927)	168	36	..	..	41	1
Total ..	1123	255	..	..	50	1

TUBERCULOSIS.

Dispensary.

The Tuberculosis Dispensary is situate at Nos. 135 and 137, Regent Road, Salford. There are no branch dispensaries or visiting stations. The staff consists of two Medical Officers, four Health Visitors and three Clerks.

(a) Patients referred for Examination.

Six hundred and sixty-nine patients (including non-pulmonary cases) were referred to the Tuberculosis Officers for examination by general practitioners during 1927. It is to be regretted that, in many cases, primary notifications of tuberculosis are received when the disease is in such an advanced state that no treatment can be of lasting value. It is only by the co-operation of the general practitioners in this connection that your Tuberculosis Officers can deal with cases in their earliest and, therefore, most curable stages. All sputum examinations desired by Medical Practitioners are made at the Municipal Bacteriological Laboratory. One thousand, three hundred and one specimens of sputum were examined last year.

(b) Routine Procedure.

When a patient is notified to this Department by a general practitioner as suffering from tuberculosis in any form whatever, the home of such patient is immediately visited by one of the Health Visitors. Precautions as to the likelihood of the spread of infection, the advisability of separate sleeping accommodation, etc., are advised, and efforts are made to secure the attendance at the dispensary of all contacts residing in the same house.

Six hundred and twenty-three contacts were examined last year.

It happens not infrequently that a diagnosis cannot be made on first examination of a patient at the dispensary, and in all such cases the patients are re-invited to attend the dispensary periodically until a definite diagnosis is made, when they are either placed under treatment or observation or discharged.

In some cases of advanced disease where removal to an Institution for treatment is impracticable, and adequate nursing is impossible under the patient's home conditions, arrangements are made with the District Nursing Association, and the patients are visited daily (in some cases twice daily) in their homes by a trained nurse. In the case of patients in extreme poverty and recommended by the Tuberculosis Officers as being suitable for the granting of extra nourishments, arrangements are made with milk dealers in the City for milk and eggs to be supplied each day.

The usual type of cases receiving these nourishments are (*a*) patients who have received an adequate course of sanatorium treatment and whose medical condition is such that, with the grant of extra nourishment, they may be expected to maintain or recover full working capacity ; and (*b*) patients in whose cases ultimate arrest of the disease may reasonably be anticipated, and who are waiting for admission to a sanatorium.

(c) X-Ray Examinations.

X-Ray examinations are now made at the dispensary in large numbers, and this method of examination is found

to be an invaluable aid, not only for purposes of diagnosis but in obtaining information as to the real extent of the disease in the lungs of the patient. It is also of great value in determining the results of treatment. Eight hundred and fifty-eight cases were examined by X-Rays last year.

(d) Insured Persons.

Insured patients not in need of Institutional treatment are usually placed on domiciliary treatment, that is to say, they are treated by their own doctors whilst residing at home, and records of progress are furnished every three months by the attending medical practitioners. These patients are examined from time to time by one of the Tuberculosis Officers.

(e) Effects of Dispensary Treatment.

The effects of dispensary treatment depends chiefly upon the degree of acuteness of disease in each individual case, the home conditions, the facilities for obtaining suitable food, and the general habits of the patient. Acute cases do not do well as a rule, but the bulk of the patients attending are cases of chronic disease, whose condition appears to keep stationary for long periods.

INSTITUTIONAL TREATMENT.

(a) Nab Top and Ladywell Sanatoria.

The residential institutions in connection with the Tuberculosis scheme are :—

(a) Nab Top Sanatorium, Marple.

(b) Ladywell Sanatorium, Salford.

There are 120 beds available at the Nab Top Sanatorium, Marple, for the treatment of Salford patients. These beds are occupied principally by observation, early, and intermediate cases of pulmonary tuberculosis. Occasionally, however, cases of surgical tuberculosis are admitted for treatment.

At the Ladywell Sanatorium, there are 66 beds set apart for the treatment of tuberculosis. Many cases are being admitted to the Ladywell Sanatorium for purposes of observation as to temperature; subsequently, on becoming afebrile, they are transferred to the Nab Top Sanatorium, Marple, for open-air sanatorium treatment.

Advanced cases are isolated in the Ladywell Sanatorium; such isolation is undoubtedly of great value in lessening the danger of massive infections in the homes, but is detracted from, by the difficulty of keeping the patients in hospital indefinitely.

(b) Treatment of School Children.

Cases of definite, or suspected, pulmonary or other forms of tuberculosis in children are always referred by the School Medical Officers to the Tuberculosis Officers for examination. Many of these cases are sent to Nab Top Sanatorium for treatment or observation. A school under the control of an efficient teacher has been established at the Nab Top Sanatorium in order that the child patients may not suffer educationally during their period of treatment. Delicate or pre-tubercular children definitely without signs of lung disease are referred to the School Medical Department for open-air school treatment.

(c) Treatment of Tuberculous Skin Diseases.

Special arrangements have been made with the Manchester and Salford Hospital for Skin Diseases for the treatment of lupus and other tuberculous skin diseases, and a large number of cases were approved for artificial sunlight treatment. There is no doubt that this form of treatment has very considerable beneficial effect in the treatment of tuberculous skin disease, recovery being much more rapid than in cases treated by local applications only. The number of visits paid by patients for artificial sunlight treatment during the year was six hundred and eighty. The total number of tuberculous skin cases treated was sixty-five, and the total number of attendances at the Skin Hospital, one thousand three hundred and sixty-seven.

(d) Treatment of Surgical Tuberculosis.

Cases of surgical tuberculosis after approval by the Tuberculosis Officer, are treated when necessary at the Salford Royal Hospital. Two patients were admitted for in-patient treatment during 1927. At the request of the Surgeons at the Salford Royal Hospital a number of cases of surgical tuberculosis have been sent to the the Open Air Sanatorium at Marple for varying periods after immobilisation, where necessary, of the affected part. These cases have derived very considerable benefit from their stay at the Sanatorium.

GENERAL REMARKS.

The powers contained in the Salford Corporation Act, 1920, and the Public Health Act, 1925, for the compulsory removal to hospital of persons suffering from pulmonary

tuberculosis, have not been utilised up to the present time.

No action has been taken under the Public Health (Prevention of Tuberculosis) Regulations, 1925, in connection with tuberculous employees in the milk trade.

The X-Ray apparatus in use is now considered inadequate, especially having regard to the developments in X-Ray photography which have taken place of recent years. It is highly desirable, in the interests of the patients themselves, that an up-to-date X-Ray apparatus should be installed in the near future.

TABLE 1.

SUMMARY OF WORK DONE AT THE TUBERCULOSIS
DISPENSARY IN 1927.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults.		Children		Adults.		Children		Adults.		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A. New cases examined during the year—												
(a) Definitely tuberculous	214	129	16	13	15	13	11	11	229	142	27	24
(b) Doubtfully tuberculous	—	—	—	—	—	—	—	—	48	23	11	5
(c) Non-tuberculous..	—	—	—	—	—	—	—	—	143	133	55	51
B. Contacts examined during the year—												
(a) Definitely tuberculous	1	—	3	1	—	—	1	—	1	—	4	1
(b) Doubtfully tuberculous	—	—	—	—	—	—	—	—	—	2	7	4
(c) Non-tuberculous..	—	—	—	—	—	—	—	—	80	166	188	170
C. Cases written off Dispensary Register as—												
(a) Cured	29	30	3	1	3	2	1	—	32	32	4	1
(b) Diagnosis not confirmed or non-tuberculous	—	—	—	—	—	—	—	—	638	666	292	282
D. Number of persons on Dispensary Register on December 31st—												
(a) Diagnosis completed	963	895	118	73	41	39	31	32	1004	934	149	105
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	129	143	51	62
1. No. of persons on Dispensary Register on January 1st.... 3365												
4. Died during the year (Dispensary cases) 250												
2. No. of patients transferred from other areas and "lost sight of" cases returned.... 8												
5. No. of observation cases under A (b) and B (b) in which period of observation exceeded 2 months 45												
3. No. of patients transferred to other areas and cases "lost sight of" 113*												

* Including 28 "not desiring public medical treatment."

TABLE 1—*continued.*

6. No. of attendances at Dispensary (including contacts)	6088	11. No. of other visits by Tuberculosis Officers to homes ...	9
7. No. of attendances of non-pulmonary cases at Orthopaedic Out-Stations for treatment or supervision ...	Nil.	12. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes....	8234
8. No. of attendances at General Hospitals, or other Institutions approved for the purpose, of patients for—		13. No. of—	
(a) "Light" treatment	680	(a) Specimens of sputum, &c., examined	1301
(b) Other special forms of treatment	687	(b) X-Ray examinations made in connection with Dispensary work.....	858
9. No. of patients to whom Dental Treatment was given at or in connection with the Dispensary	Nil.	14. No. of insured persons on Dispensary Register on December 31st	1373
10. No. of consultations with medical practitioners—		15. No. of insured persons under Domiciliary treatment on December 31st	304
(a) At homes of applicants ...	93	16. No. of reports received during the year in respect of insured persons—	
(b) Otherwise	576	(a) Form G.P. 17	122
		(b) Form G.P. 36	58

TABLE 2.

SHOWING PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH
IN FATAL CASES OF PHTHISIS.

		Number.	Per-centage
Not notified before death	70	..	20·47
Notified within three months of death	82	..	23·98
„ from three months to one year before death..	83	..	24·27
„ from one year to two years before death....	45	..	13·15
Over two years	62	..	18·13

Total number of deaths, 342.

Ratio of non-notified cases to total fatal cases, 70—342.

TABLE 3.

NEW CASES AND MORTALITY DURING 1927

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0	1	2	7	8	..	1	8	3
1	2	2	19	15	1	1	9	9
5	12	10	11	9	1	2	3	2
10	12	11	6	13	2	..	2	3
15	35	25	11	12	13	17	5	5
20	48	40	8	6	23	25	4	2
25	64	41	3	4	31	41	1	4
35	71	45	6	3	48	28	3	..
45	70	23	..	3	41	16	1	2
55	33	14	1	2	25	13	1	1
65 and upwards.....	8	4	..	1	11	2	..	1
Totals	356	217	72	76	196	146	37	32

TABLE 4.

— OCCUPATIONS OF THE 573 CASES OF PULMONARY
TUBERCULOSIS NOTIFIED.

MALES.

1. Joiners, House Decorators and Building Trades ..	7	18. Printers and Bookbinders	3
2. Carters, Hawkers, and Car Drivers	10	19. Publicans	2
3. Labourers and Navvies	95	20. Shop Assistants	1
4. Railway Workers	7	21. Employees in Cotton Mills	6
5. Timekeepers	2	22. Painters	4
6. Firemen	1	23. Metal Workers	6
7. Clerks & Warehousemen	28	24. No Occupation	18
8. Packers	5	25. Electricians	2
9. Blacksmiths	1	26. Plumbers	2
10. Makers of Wearing Apparel	15	27. Storekeepers	2
11. Colliers	5	28. Dyers and Bleachers....	8
12. Tramcar Conductors	1	29. Motor Drivers	2
13. Mechanics and Engineers	29	30. Grocers	1
14. Children under 5	3	31. Insurance Agents	1
15. Scholars	29	32. Errand Boys	1
16. Commercial Travellers ..	2	33. Porters	6
17. Seamen	6	34. Bakers	3
		35. Other Various Occupa- tions	38
		Total	*352

FEMALES.

1. Mill Workers	14	12. Shop Assistants	4
2. Warehouse Workers	1	13. Waitresses	1
3. Housewives	77	14. Teachers	2
4. Charwomen and Laun- dresses	10	15. Children under 5	4
5. Makers of Wearing Apparel	24	16. Scholars	23
6. Clerks and Typists	7	17. Dyers and Bleachers....	2
7. Box Makers	3	18. No Occupation	15
8. Domestic Servants	13	19. Other Various Occupa- tions	12
9. Packers	1		
10. Toffee Workers	3		
11. Nurses	1	Total	217

* 1 Male could not be traced and 3 had left the district.

TABLE 5.

INSPECTORS' REPORT ON THE DURATION OF THE DISEASE IN CASES
VISITED AT THE TIME OF NOTIFICATION.

When Notified.	
Under six months	140
Over 6 months to 1 year.....	160
„ 1 year to 18 months.....	72
„ 18 months to 2 years	12
„ 2 years to 3 years	28
„ 3 years	54
No Time Stated	96
	562*

* Three persons could not be traced, five notifications were marked "Not to be visited," and three had left the district.

The School Medical Officers notified 6 new cases on Form "B" as suffering from Tuberculosis:—

2 Cases Pulmonary Tuberculosis.

4 Cases Other Forms of Tuberculosis.

During the year 1927, 185 notifications of non-pulmonary tuberculosis have been received. 37 of these are re-notifications of cases already on the books, and 148 are new cases.

The new cases of non-pulmonary tuberculosis notified are classified in the following table :—

	Glands.	Bones.	Abdo- men.	Skin.	Men- inges.	Other forms.	Totals
Under 10 years ...	11	9	15	3	22	9	69
10 to 20 years	12	4	6	7	7	6	42
20 „ 30 „	1	3	2	4	..	4	14
30 „ 40 „	1	1	1	4	3	3	13
Over 40 „ .....	..	2	2	3	1	2	10
Totals	25	19	26	21	33	24	148

Nab Top Sanatorium—Annual Report.

RESIDENT STAFF.—Resident Medical Officer, Matron, Home Sister, two Ward Sisters, eleven Nurses, Cook, Laundress, seventeen Maids and Lodge Porter.

NON-RESIDENT STAFF. — Engineer, Porter, two Gardeners, and Labourer.

ACCOMMODATION.—There is accommodation for 120 patients (62 adult males, 42 adult females, 8 male children, and 8 female children).

TYPE OF CASE TREATED.—The Sanatorium is used for the treatment of early and intermediate cases of Phthisis.

A few advanced cases who show good resistance to the disease are also treated. A number of "observation" cases are admitted.

LINES OF TREATMENT.—The treatment adopted is chiefly Hygienic—open air, rest and graduated exercise.

On admission, patients, after a period of rest in bed, are put on walking exercise, the distance being gradually increased. Afterwards this is supplemented by light ward work. Those who show a satisfactory resistance are then placed on graduated work, beginning with light gardening work and rising to heavier work such as grass cutting and lawn rolling, wheelbarrow work

and digging. Walking exercise is taken round two fields, the circumference of that reserved for women being one-quarter mile, and that for men one-third of a mile. The Hygienic treatment is supplemented, when necessary, by drug treatment. Suitable cases are treated by tuberculin.

FARM.—A poultry farm maintained on the premises supplies many of the eggs required for consumption. Most of the vegetables used in this Institution are also grown in the grounds of the Sanatorium.

RECREATION.—The dining hall is set apart for the use of patients every Saturday evening after supper, where whist and other card games are indulged in. A wireless set is in daily use, each bed being provided with a pair of ear phones. There is also a loud speaker in the dining hall. Concerts are arranged about once a month from October to April, given by outside talent, and on many occasions during the winter plays have been staged.

There is also a large bowling green and clock golf green for the men, and a bowling and croquet green for the women.

CANTEEN.—A canteen has been established in the grounds wherein are sold those articles likely to be used in everyday life.

EDUCATION.—The Resident Medical Officer at frequent intervals delivers lectures to the patients on such subjects as "Pulmonary Tuberculosis," "Rules of Health" and "The Care of the Mouth and Teeth." It is hoped that,

on leaving, patients may carry out the instructions given in these lectures and thus minimise the spread of infection in their own homes.

A school, under the guidance of a competent teacher, has been established for patients under 16 years of age. This has been a boon to those children whose state of health has not permitted them to attend the ordinary school at home. No child is allowed to attend school unless certified physically fit by the Resident Medical Officer.

A new school building, capable of accommodating 50 children, is at present in course of erection. The building will also, it is hoped, house an X-ray apparatus. This new school will be opened early in 1928.

Appended is a table showing the number of admissions, etc., and the number of patient days during the year 1927.

TABLE A—(Nab Top Sanatorium.)

SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF 'PATIENT-DAYS' DURING THE YEAR 1927.

	Total Adults.		Children under 16.			Totals.		
	Males.	Females	Males.	Females	Both.	Males.	Females	Both.
Number of Patients admitted in 1926 who remained in Sanatorium for some part of 1927	51	19	12	16	28	63	35	98
Number of "Patient-days" in 1927 for patients admitted in 1926 and who remained in Sanatorium for some part of 1927	3999	1635	1192	1392	2584	5191	3087	8278
New admissions 1927	168	100	33	17	50	201	117	318
Discharges 1927	197	113	27	28	55	224	141	365
Number of "Patient-days" for persons admitted during 1927	14170	7675	3308	2533	5901	17538	10208	27746
Number of "patient-days" for 1927	18169	9370	4560	3925	8485	22729	13295	36024
Average number of patients in Sanatorium each day during 1927	48	26	12	11	23	60	37	97

NOTE.—The term "Patient-days" represents the product of the number of patients and the number of days spent by these patients in the Sanatorium.

TABLE B.

PATIENTS DISCHARGED FROM NAB TOP 1927.

	Disease Apparently Arrested.	Much Improved.	Improved.	Stationary.	Worse.	Death.	Total.
Net Males	25	34	74	45	18	1	197
Net Females	14	24	41	28	6	..	113
Net Children	3	7	9	8	..	..	27
Gale Children	3	10	10	5	..	..	28
Total	45	75	134	86	24	1	365

LADYWELL SANATORIUM.

TABLE SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER
OF "PATIENT DAYS" FOR 1927.

TUBERCULOSIS CASES.

	Males.	Females.	Totals.
Total Number of Admissions during 1927.....	160	110	270
Number of Persons Admitted prior to 1927 who remained in Hospital for some part of 1927	18	8	26
Total Number of Discharges and Deaths during 1927	146	101	247
Patients in Hospital on the 31st December, 1927.....	32	17	49
Number of "Patient Days" for Persons Admitted during 1927...	9221	7384	16605
Number of "Patient Days" (in 1927) for Persons Admitted prior to 1927 who remained in Hospital for some part of 1927.....	1915	490	2405
Total Number of "Patient Days" for 1927	11136	7874	19010
Average Number of Patients in Hospital each day during 1927...	30.51	21.57	52.08

Ladywell Sanatorium—Report.

(a) HISTORY OF THE INSTITUTION.

Having regard to the possibility of a future extension of the Ladywell Sanatorium, in order to provide additional accommodation for cases of infectious diseases occurring amongst the populations of a number of areas within a short radius of Salford, with the authorities of which arrangements have been in operation for many years, I have considered it desirable to include in this report a brief outline of the history of the Institution.

The Sanatorium was opened in June, 1892, and the original accommodation provided consisted of:—

- (a) *Two Isolation Blocks (B1 and B2) each designed to contain 20 beds.
- (b) Three Pavilions (C1, C2 and C3) each designed to contain 48 beds.

The total accommodation provided, therefore, consisted of 184 beds. The Isolation Blocks, B1 and B2, the former of which has since been converted into a Nurses' Home were provided for the following purposes:—

- (a) For the purpose of isolating ill defined cases.
- (b) For the treatment of patients when only one or two were suffering from the same disease.
- (c) For the treatment away from the adjoining wards of delirious or otherwise objectionable patients.

* See plan at end of volume.

- (d) For the use of persons willing to pay for separate accommodation in the Hospital.

The Pavilions (blocks C1, C2 and C3) each comprise two wards for the treatment of acute cases, containing 6 beds in each ward, and two wards for the treatment of convalescent cases, containing 18 beds in each ward.

The Institution was provided with what was then regarded as the most efficient heating and cooking equipment.

A special block for administrative purposes was provided, which, in addition to accommodation for the senior members of the Staff, contained the Nurses' Home, including 33 bedrooms for nurses. The accommodation for the domestics was provided in the separate kitchen and stores block.

Upon completion, the Sanatorium was regarded as one of the most up-to-date and best equipped Institutions of its kind in the country.

In the year 1895, the Corporation first entered upon the policy of concluding formal agreements for the reception and treatment of cases of infectious disease from other areas. In 1898 this policy was extended and continued until November, 1921, when the Corporation decided not to renew their existing agreements with outside authorities, but to inform such authorities that they would be prepared to treat cases from their areas until further notice, subject to the necessary accommodation being available.

In the year 1898, the accommodation at the Sanatorium was allocated as follows :—

Two blocks for isolation cases (B1 and B2).

One block for enteric fever cases } C1, C2 and C3.
Two blocks for scarlet fever cases }

One temporary block for measles cases.

In this year the Corporation prepared a scheme for the erection of two new blocks for the treatment of enteric fever and scarlet fever convalescents, the block for the former to contain 32 beds and that for the latter to contain 48 beds. The scheme also provided for an extension of the administration block in order to provide accommodation for additional staff rendered necessary by the extension of the Sanatorium. This scheme was approved by the Local Government Board in the following year (1899), and the blocks in question, blocks C4 and C5, came into use in January, 1902.

In 1918, as part of the scheme for the treatment of tuberculosis, it was decided to set apart 48 beds for the treatment of advanced cases of this disease occurring amongst Salford residents. The block devoted to this purpose was block C4, 24 beds being assigned to male patients and 24 to female patients.

The accommodation provided, therefore, in 1918 was as follows :—

Ordinary cases of infectious diseases	216
Advanced tuberculosis	48

Owing to the fact that the beds for tuberculous patients were almost continually occupied, and to the introduction of the eight hour day for nurses, an increase in the staff became necessary, with the result that the staff accommodation became totally inadequate. This problem was dealt with by a scheme approved in 1922 and completed in 1925, whereby block B1 was converted into a Nurses' Home, and an addition to the kitchen and stores block was made in order to accommodate the domestics.

The year 1925 was an important year in the history of the Sanatorium, as in addition to the alterations referred to a new system of central heating and hot water supply was installed throughout the Institution, and modern laundry machinery and electrical cooking equipment were provided.

During the years 1926 and 1927, eighteen additional beds for the treatment of tuberculosis were installed, 12 being for male patients and 6 for female patients, these being provided by placing wooden screens midway in eighteen of the inter-window spaces, the beds being placed immediately adjacent to and on either side of the screens.

In 1927 the Corporation decided upon the erection of an operating theatre, to jut out from the West side of block B2 in order to provide principally for the operative treatment of nasal or aural affections incidental to scarlet fever and of patients suffering from puerperal fever. The erection of the theatre was almost completed by the end of 1927.

It has occasionally happened that during epidemics the accommodation has been insufficient to meet the demands made upon it. This last occurred during 1927, when for about a fortnight the Resident Medical Officer was unable to accept cases from the out-districts.

While the Institution is quite large enough for the requirements of Salford alone, I would point out that in view of the increase in the population of the out-districts from which cases are at present received, which may be expected in the comparatively near future, it would appear that the existing accommodation will not always be sufficient to meet the situation.

Land is available for the erection of additional blocks both on the east side of the existing blocks, and at the south west corner, but the question of the desirability or otherwise of undertaking new obligations in this connection in order to meet the needs of other authorities, is, of course, a matter for the City Council.

(b) REPORT FOR THE YEAR 1927.

At the beginning of the year there were 179 cases remaining in hospital; these with the 1,717 cases admitted during the year make a total of 1,896 cases under treatment. Of these 1,503 were discharged, 128 died, and 265 were in hospital at the end of the year. The number of cases treated viz., 1896, compares with 1,866 in 1926 and with 1,743, the average of the cases

treated for the five years ended December 31st, 1926,
The cases treated were as follows:—

Scarlet Fever	756
Diphtheria	501
Enteric Fever.....	7
Measles	22
Erysipelas	50
Puerperal Fever.....	21
Tuberculosis	296
Other Diseases	198
Mixed Infections	45

The number of cases from Out-Districts was 323, as compared with 274 in 1926.

The daily average number of patients in 1927 was 204·5; the highest number being 289 on November 3rd and the lowest 165 on April 2nd. 1,717 patients were admitted during the year, as compared with 1,681 in 1926 and with 1,555·4 the average of the five years ended December 31st, 1926. The following summary shows the diagnosis of the cases before admission and after observation in hospital:—

	Diagnosis before admission.		Diagnosis after observation.
Scarlet Fever	744	..	679
Diphtheria.....	573	..	448
Enteric Fever	15	..	6
Measles	6	..	22
Erysipelas	55	..	46
Puerperal Fever	19	..	19

Cerebro-Spinal Fever...	6	..	2	} "Other Diseases."
Encephalitis Lethargica.	6	..	3	
Chicken-Pox	—	..	3	
Miscellaneous Diseases .	23	..	186	
Mixed Infections	—	..	35	

Details of the alterations in diagnosis will be found in table 5, page 136. A tabulation of the cases classified as "other diseases" will be found on page 130.

In addition, 217 cases of advanced tuberculosis were admitted.

MIXED INFECTIONS.—Twenty-nine of the patients admitted were found to be suffering from two distinct diseases (infectious or otherwise), as follows:—

Scarlet Fever and Diphtheria	11
Scarlet Fever and Chicken-Pox	2
Scarlet Fever and Encephalitis Lethargica....	1
Scarlet Fever and Acute Anter. Poliomyelitis.	1
Scarlet Fever and Pott's Disease	1
Scarlet Fever and Transverse Myelitis	1
Scarlet Fever and Broncho-Pneumonia	1
Scarlet Fever and Ischio-rectal abscess	1
Diphtheria and Measles	4
Diphtheria and Broncho-Pneumonia	2
Diphtheria and Epilepsy	1
Diphtheria and Burns	1
Erysipelas and Chicken-Pox	1
Tonsillitis and Pulmonary Tuberculosis.....	1

In addition to these, there were six patients, who were incubating another disease, as follows :—

Scarlet Fever incubating Measles	2
Scarlet Fever incubating Chicken-Pox	1
Diphtheria incubating Measles	2
Diphtheria incubating Chicken-Pox	1

DEATHS FROM MIXED INFECTIONS.—In this group, the concurrent affections directly or partially caused a fatal termination in three cases, as follows :—

Scarlet Fever and Encephalitis Lethargica.
 Diphtheria and Measles.
 Broncho-Pneumonia, Empyema and Nasal
 Diphtheria.

The average stay in hospital for all mixed infection cases discharged in 1927 was 55·9 days ; for those that died 18·7 days.

CROSS INFECTION.—The above cases of mixed infection, including those incubating another disease, and cases admitted under a wrong diagnosis, in which the actual disease could only be ascertained after a time, gave rise to secondary infections in the wards. Every effort was made, as before, to prevent cross infection by careful examination of new patients before admission to the ward, the usual methods of bed-isolation, the employment of the Dick and Schick tests and the immunisation, active and passive, of susceptibles. A special effort was commenced in 1927, in view of the frequent occurrence of scarlet fever amongst diphtheria patients, of trying to control this disease, by testing, by means of the Dick

test, every case of diphtheria and immunising the susceptibles with Scarlet fever prophylactic. Three doses of 500, 2,000 and 8,000 skin test doses were given at weekly intervals; active immunity, shown by a negative Dick test, was found to develop in 4-5 weeks time in a large majority of patients. In this way, though immunity in an individual patient does not develop fully till say five weeks have elapsed, the general resistance of the ward population to the scarlatinal infection is very markedly raised and the spread of this disease made very much more difficult. The cases, which nevertheless developed scarlet fever were all in addition very mild, the mildness being due, no doubt, to the partial immunity, produced by the scarlet fever prophylactic. The number of diphtheria cases who developed scarlet fever was 8. The number of other patients, who contracted another infection was 9. Thus we have :—

Sent in as—

Scarlet Fever and developed Measles	.....	1 case
„ „ „	Chicken-Pox.....	1 „
„ „ „	Whooping Cough.	1 „
Diphtheria	„ Scarlet Fever ...	11 „
„	„ Measles	2 „
Enteric Fever	„ Laryngeal	
	Diphtheria	1 „
—		
Total	....	17 cases

In addition 7 scarlet fever cases and one child with gastro-enteritis were found to be harbouring diphtheria bacilli in their noses.

The average stay in hospital of the 34 cross-infected cases discharged during 1927 was 88·7 days. There were 13 cases remaining in hospital from the year before (1926) and 3 cases remained at the end of 1927. There was one death in this group: a patient with enteric fever, who developed laryngeal diphtheria; his stay in hospital was 12 days.

DEATHS.—128 cases had a fatal termination, as follows :—

Disease.	Number of deaths from	Fatality rate.
Scarlet Fever	4	0·60%
Diphtheria.....	24	5·80%
Erysipelas	1	
Measles	2	
Tuberculosis (Advanced)	75	
Encephalitis Lethargica	1	
Influenza	2	
Tuberculous Meningitis.....	2	
Cerebro-spinal Fever	2	
Lobar Pneumonia	2	
Broncho-Pneumonia (primary)	5	
Broncho-Pneumonia (after Measles)	1	
Carbuncle (face)	2	
Orbital cellulitis	1	
Mixed Infections	3	
Cross Infection	1	
	<hr/> 128 <hr/>	

The fatality rates are worked out on the number of patients treated less the number remaining at the end of the year.

The average stay in hospital for all fatal cases, excepting advanced tuberculosis, was 8.15 days.

The number of cases discharged was 1,503, as follows, viz :—

Disease.	Number.
Scarlet Fever	660
Diphtheria.....	389
Enteric Fever	3
Measles	16
Erysipelas	44
Puerperal Fever	19
Mixed Infections	34
Tuberculosis	176
Other Diseases	162

The average stay in hospital for all cases discharged during 1927 was: for scarlet fever 38.25 days; for diphtheria 56.34 days; for enteric fever 69.3 days; for measles 28.25 days; for erysipelas 28.81 days; for puerperal fever 25.9 days; for tuberculosis 68.86 days; for "other diseases" 26.53 days.

The daily average number of patients in hospital in 1927 was 204.5, as compared with 217.5 in 1926, and with 175.2, the daily average of the numbers in the five years ending 31st December, 1926.

There were remaining in hospital on December 31st, 1927, 265 cases, as compared with 179 last year. The cases remaining were scarlet fever 92, measles 4, enteric fever 3, diphtheria 88, erysipelas 5, puerperal fever 2, tuberculosis 49, "other diseases" 14, and mixed

infections 8. 52 of the cases remaining were from out-districts, as compared with 21 last year.

SCARLET FEVER.—The number of cases of this disease admitted in 1927 was 679, as against 693 in 1926. 744 cases were certified as having scarlet fever, but in 65 cases the diagnosis had to be revised; in addition, 10 cases certified as diphtheria proved to be scarlet fever. 660 cases were discharged during the year. There were 4 deaths from this disease, giving a 0·6 per cent fatality rate. The details of the fatal cases are as follows :—

One child of 4 was moribund from toxic scarlet fever on admission, and died 5 hours later, this being a return case; one child of 2 died from septic scarlet fever; one child of 5 months died after having had measles a fortnight previously; one child of 5 years died of scarlatinal endocarditis following upon heart disease due to rheumatic fever.

The type of the disease continued mild. Scarlatinal antitoxin was used in all but the very mild cases.

The complications were as follows :—

	Number		Percentage of discharged cases.
Rhinorrhoea	75	..	11·4
Otorrhoea	45	..	6·8
Albuminuria	11	..	1·6
Nephritis	8	..	1·2
Adenitis and Abscess .	79	..	11·9
Arthritis	1	..	0·15
Endocarditis	1	..	0·15

The average stay in hospital for all cases of scarlet fever discharged in 1927 was 38·25 days, for those that died 9·75 days.

There were 17 return cases (this is for Salford only) which gives a 3·2 per cent return rate; the number of Salford cases discharged in 1927 was 525.

DIPHTHERIA.—448 cases were admitted during the year and 53 remained from last year; of these 389 were discharged well, 24 died and 88 remained in hospital at the end of the year. 573 cases were admitted certified as diphtheria; in 127 cases the diagnosis had to be revised and, in addition, 2 cases sent in as scarlet fever proved to be diphtheria.

DIPHTHERIA: *Type of Disease*.—399 cases were faucial, mainly or exclusively, of which 18 died. 36 were laryngeal, of which 15 required Tracheotomy, and 5 (35·7 per cent) died. There were 13 cases of the nasal type, of which 1 died. The average stay in hospital for the cases discharged cured was 56·34 days, and 5·75 days for fatal cases. The average number of antitoxin units given was as follows:—

Recovered cases	.....	15,365 units.
Fatal cases	.....	45,166 „

Five cases received antitoxin intravenously, of which 2 died. The fatality rate for the whole of the discharged cases was 5·8 per cent, as compared with 3·1 per cent for last year. There were a number of very severe cases in which the antitoxin though given in fairly massive doses, proved of no avail.

The complications were as follows :—

Otorrhoea	13
All forms of Paralysis . .	42
Palatal Paralysis	20
Circulatory Paralysis . . .	19
Other Paralysis	3 (pharyngeal 2, ocular 1).
Empyema	1
Adenitis	9
Broncho-pneumonia	1

Before discharge two consecutive negative swabs from both nose and throat were obtained. In a great majority of cases this did not cause any detention of the patient in hospital, because they were usually obtained by the time the patient was clinically fit, but in a few cases the swabs were persistently positive for varying periods of time. In 19 such cases Dr. Crawford, the City Bacteriologist, having tested the bacilli for virulence and finding them virulent, prepared an autogenous vaccine for these carriers. The injections were given on alternate days, the first dose varying from 20 to 50 millions and the subsequent doses being doubled or more gradually increased according to reaction. The number of injections varied from 4 to 12, the average being 9. In 15 patients one course was sufficient to clear up the condition, in the other 4 one more course of injections was necessary. The carriers were not declared free from infection until 6 consecutive swabs spread over a fortnight were obtained. The average stay of these 19 carriers was 123·1 days.

ENTERIC FEVER.—There were 7 cases under treatment, with one death.

CEREBRO-SPINAL FEVER.—2 cases were admitted and both had a fatal termination.

PUERPERAL FEVER.—19 cases were admitted. 2 remained from last year and 2 remained in hospital at the end of the year. There were no deaths; 19 were discharged home well and one patient was taken home at the request of her husband.

BACTERIOLOGICAL EXAMINATIONS.—All bacteriological examinations were carried out at the hospital laboratory and at the City Bacteriological Laboratory.

STAFF.—On 31st December, 1927, the resident staff of the Sanatorium consisted of the following :—

Resident Medical Officer	1
Assistant Resident Medical Officer ..	1
City Bacteriologist	1
Matron	1
Home Sister	1
Stores Sister	1
Sister Tutor	1
Night Sister	1
Ward Sisters	6
Staff Nurses	16
Probationers	40
Cook	1
Maids	34
Head Laundress	1
Laundresses	3
Lodge Porters	2
Total resident staff	<u>111</u>

The non-resident staff consisted of :—

Engineer	1
Plumber.....	1
Firemen	3
Gardener	1
Assistant Gardeners	2
Porters	5
Seamstresses	2
Laundresses	6
Cleaners	4
Total non-resident staff	<u>25</u>

The following additions to the resident staff took place during the year 1927—the City Bacteriologist, who resides at the Sanatorium and carries out the bacteriological work of the Sanatorium in the Sanatorium Laboratory and in the City Bacteriological Laboratory, and the Sister Tutor and Operating Theatre Sister (combined post). The latter post was created to cope with the increased work required in the training and preparation of probationers for the State examination in fever nursing, and for the management of the Operating Theatre, the building of which was completed in 1927.

HEALTH OF STAFF.—During the year 1927, the Sanatorium has sustained a severe loss through the death of Engineer R. Riley.

Otherwise the health of the staff has been good, except for an outbreak of influenza in February. The number of cases of infectious diseases occurring amongst

the staff was small compared with former years, this being no doubt, the result of immunisation of the staff. All new entrants were tested by the Schick test as to susceptibility to diphtheria and immunised, if necessary. This course was adopted all through the year and from about the middle of the year the staff were similarly treated in respect of scarlet fever, that is to say, they were tested by the Dick test and immunised, if found to be susceptible to this disease. During the year the following cases of an infectious nature occurred amongst the staff:—

2 Wardmaids contracted Scarlet Fever.

1 Nurse ,, Diphtheria.

1 Nurse ,, Mumps.

1 Nurse ,, German Measles.

The nurse who contracted diphtheria did so 5 months after she was immunised against it. It is well-known that a small percentage of those that are immunised do not become protected and she was obviously one of these exceptions. She made a good recovery.

Appended are the usual Statistical Tables.

TABULATION OF CASES WHICH HAVE BEEN CLASSIFIED
AS "OTHER DISEASES."

Acute Poliomyelitis	2	Lymphangitis	1
Broncho Pneumonia	10	Meningitis	1
Bronchitis	2	Mumps	2
Bronchitis and Conjunctivitis	1	Nasal Catarrh	2
Cerebro-spinal Fever	2	Nasal Discharge	3
Carbuncle	3	Nil	2
Cellulitis	1	Orbital Cellulitis	1
Chicken Pox	3	Peritonsillar Abscess	1
Dermatitis	3	Pneumonia	1
Drug Rash	1	Pyelitis	1
Eczema	1	Retropharyngeal Abscess ...	2
Encephalitis Lethargica	3	Rheumatoid Arthritis	1
Erythema	11	Rubella	3
Fibroid Lung	1	Septic Foot	1
Food Poisoning	1	Septic Hand	1
Gastritis	2	Tetanus	1
Gastro Enteritis	4	Thrombosis of Lateral Sinus	1
Gumboil	1	Tonsillitis	97
Influenza	4	Tuberculous Meningitis	2
Influenzal Pneumonia	1	Tuberculous Hip	1
Interthoracic Tumour	1	Uterine Fibroid	1
Intestinal Obstruction	1		
Laryngitis	3		191
Lobar Pneumonia	3		

TABLE I.

STATEMENT OF THE NUMBER OF PATIENTS UNDER TREATMENT IN
LADYWELL SANATORIUM IN 1927.

	Males.		Females.		Totals
	Under 5 years	Over 5 years	Under 5 years	Over 5 years	
—PATIENTS REMAINING IN HOS- PITAL ON DECEMBER 31st, 1926, AFFECTED WITH—					
Scarlet Fever (incl. mixed infec.) ..	11	29	12	32	84
Measles .....	..	..	..	..	..
Enteric Fever .....	..	1	..	..	1
Diphtheria (incl. mixed infection).	3	27	6	19	55
Erysipelas .....	..	1	..	2	3
Puerperal Fever .....	..	..	..	2	2
Tuberculosis (Advanced) .....	..	18	..	8	26
Other Diseases	4	..	..	4	8
Total	18	76	18	67	179
—ADMITTED DURING THE YEAR ENDED DECEMBER 31st, 1927, AFFECTED WITH—					
Scarlet Fever (incl. mixed infec.) ..	71	252	83	292	698
Measles	14	1	5	2	22
Enteric Fever .....	..	3	..	3	6
Diphtheria (incl. mixed infection) .	70	157	65	167	459
Erysipelas (incl. mixed infection) .	2	18	..	28	48
Puerperal Fever .....	..	..	..	19	19
Tuberculosis (Advanced) .....	..	156	..	114	270
Other Diseases (incl. mixed intec.).	35	54	19	87	195
Total	192	641	172	712	1717
tal under treatment in 1927	210	717	190	779	1896
[.—OF THE ABOVE THERE WERE DISCHARGED RECOVERED FROM—					
Scarlet Fever (incl. mixed infec.)..	73	252	83	273	681
Measles	10	1	3	2	16
Enteric Fever .....	..	2	..	1	3
Diphtheria (incl. mixed infection)..	50	142	62	145	399
Erysipelas (incl. mixed infection)..	1	16	..	27	44
Puerperal Fever .....	..	..	..	19	19
Tuberculosis (Advanced) .....	..	102	..	70	172
Other Diseases	31	46	12	80	169
Total	165	561	160	617	1503

TABLE I.—*Continued.*STATEMENT OF NUMBER OF PATIENTS.—*Continued.*

	Males.		Females.		Totals
	Under 5 years	Over 5 years	Under 5 years	Over 5 years	
IV.—DIED FROM—					
Scarlet Fever (incl. mixed infec.)..	1	1	2	1	5
Measles	1	..	1	..	2
Enteric Fever .....	..	1	..	..	1
Diphtheria (incl. mixed infection)	7	10	3	5	25
Erysipelas (incl. mixed infection)..	..	1	..	..	1
Puerperal Fever .....	..	..	..	..	..
Tuberculosis (Advanced) .....	..	41	..	34	75
Other Diseases	3	6	4	6	19
Total	12	60	10	46	128
V.—REMAINING IN HOSPITAL ON DECEMBER 31st, 1927, AFFECTED WITH—					
Scarlet Fever (incl. mixed infec.)..	8	28	10	50	96
Measles	3	..	1	..	4
Enteric Fever .....	..	1	..	2	3
Diphtheria (incl. mixed infection).	16	32	6	36	90
Erysipelas (incl. mixed infection) .	1	2	..	3	6
Puerperal Fever .....	..	..	..	2	2
Tuberculosis (Advanced) .....	..	31	..	18	49
Other Diseases	5	2	3	5	15
Total	33	96	20	116	265
Total under treatment in 1927.....	210	717	190	779	1896

TABLE II.

MONTHLY STATEMENT OF PATIENTS FOR THE YEAR ENDED DECEMBER 31st, 1927 ; TOGETHER WITH A COMPARISON WITH THE YEAR 1926, AND WITH THE MEAN OF THE FIVE (5) AND FORTY-FOUR (44) YEARS ENDED DECEMBER 31st, 1926.

Month.	Admissions, 1927.	Admissions, 1926.	Mean of Admissions, 5 years, 1922-26.	Mean of Admissions, 44 years, 1883-1926.	Daily Average No. of Patients in Hospital, 1927.	Daily Average No. of Patients in Hospital, 1926.	Mean of Daily Average No. of Patients in Hospital, 5 yrs., 1922-26.	Mean of Daily Average No. of Patients in Hospital, 44 yrs., 1883-1926.
January	105	122	150.8	113.8	177.1	187.0	185.5	136.6
February	129	125	131.8	92.7	182.1	211.7	189.1	127.4
March	118	129	137.6	98.4	178.5	228.2	191.2	118.8
April	127	118	102.8	93.2	179.9	221.8	176.4	112.2
May	125	113	115.4	97.1	178.6	191.2	154.4	110.4
June	138	137	98.6	97.0	184.6	189.5	141.2	107.0
July	133	132	119.4	106.0	191.9	205.5	142.3	116.5
August	120	117	114.2	109.1	184.2	200.7	144.5	119.4
September	163	209	141.8	126.8	210.0	228.9	162.9	134.3
October	214	197	175.4	148.4	252.3	266.6	202.8	152.5
November	159	177	153.6	137.7	268.6	257.1	208.5	163.9
December	186	105	114.0	119.1	266.1	222.5	189.4	153.6
Totals	1717	1681	..	..	..	..	..	..
M'thly Av'ges.	143.1	140.1	129.6	111.6	204.5	217.5	174.0	129.4

TABLE III.

SHOWING THE NUMBER OF ADMISSIONS OF THE PRINCIPAL INFECTIOUS DISEASES FOR THE YEAR ENDED DECEMBER 31ST, 1927; ALSO A COMPARISON WITH THE YEAR 1926, AND WITH THE MEAN OF THE FIVE YEARS AND FORTY-FOUR YEARS ENDED DECEMBER 31ST, 1926.

Month.	Scarlet Fever.	Measles.	Enteric Fever.	Typhus Fever.	Diphtheria.	Erysipelas.	Puerperal Fever.	Small-pox.	Advanced Tuberculosis.	Other Diseases.	Totals.
January	46	..	1	..	38	3	3	..	2	12	105
February	54	..	..	..	45	6	..	..	10	14	129
March	35	..	..	..	29	3	2	..	35	14	118
April	43	..	..	..	32	4	..	..	32	16	127
May	45	1	..	..	26	2	1	..	37	13	125
June	65	1	2	..	24	1	1	..	25	19	138
July	59	4	..	..	22	2	1	..	28	17	133
August	52	3	..	..	25	4	2	..	21	13	120
September . . .	66	3	..	..	54	3	2	..	17	18	163
October	95	1	1	..	64	6	4	..	26	17	214
November	51	4	1	..	51	6	1	..	25	20	159
December	88	5	1	..	50	8	2	..	16	16	186
Totals	699	22	6	..	460	48	19	..	274	189	1717
Totals 1926 . .	716	5	11	..	469	64	21	..	212	183	1681
Increase 1927	..	17	..	..	..	..	..	..	62	6	85
Decrease 1927	17	..	5	..	9	16	2	..	..	..	49
Mean of 5 years 1922 to 1926	795.8	8.2	18.8	..	280.6	45.2	17.0	..	193.6	196.2	1548.2
Mean of 44 years— 1883 to 1926	830.7	3.1	123.6	4.8	188.6	32.2	10.0	13.7	34.0	119.7	1357.3

TABLE IV.
ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1926.	No. of Cases Treated.	No. of Cases Admitted.	No. of Cases Discharged.	No. of Deaths.	No. of Cases Remaining on Dec. 31st, 1927.
Scarlet Fever..	77	756	679	660	4	92
Measles .....	..	22	22	16	2	4
Enteric Fever..	1	7	6	3	1	3
Mixed Infections	10	45	35	34	3	8
Diphtheria	53	501	448	389	24	88
Erysipelas.....	3	50	47	44	1	5
Puerperal Fever	2	21	19	19	..	2
Tuberculosis...	26	296	270	172	75	49
Other Diseases.	7	198	191	166	18	14
Total	179	*1896	†1717	1503	128	‡265
Corresponding figures 1926.		1866	1681	1578	109	179
Average five years		1743.0	1555.4	1451.8	117.4	173.8
		From " Out-Districts."	From " Out-Districts."	From " Out-Districts."		
1927.....		*323	†302	‡52		
1926.....		*274	†232	‡21		

SECTION IV.

Medical Inspection of Schools.

Staff.

Medical Officer to the Education

Committee H. OSBORNE, M.D., M.R.C.S., D.P.H.,
(Also Medical Officer of Health) etc.

Assistant Medical Officers { H. HEATHCOTE, M.D., D.P.H. (Senior).
G. HEATHCOTE, M.B., Ch.B.
E. R. W. GILMORE, M.B., D.P.H., etc.
E. R. A. MEREWETHER, M.D. B.S.,
Barrister-at-Law (Resigned August).
W. B. MCKELVIE, M.D., F.R.C.S.E., etc.
(Appointed September.)

School Ophthalmic Officer (part time).. H. G. PARKER, F.R.C.S., etc.
Assistant „ „ (whole time). D. SIMMONS, (Miss), M.B., Ch.B.

School Dentists { H. MALLINSON, L.D.S., F.P.S.
A. E. SHERRATT, L.D.S., R.C.S.
A. V. LITTLEWOOD, L.D.S.

SCHOOL NURSES.

Miss L. HOPSON (Superintendent).

Miss G. WILLIAMS.	Miss J. BARTON (Resigned August).
„ R. LEE.	„ H. ELLIOTT.
„ C. WEIR.	„ W. M. MELLOR.
Mrs. A. G. WILLMOTT.	„ L. TAGGART.
Miss M. MOORE.	„ E. CLEMENTS.
„ A. HAIRS.	„ E. F. LITTLEWOOD.
„ A. ROWLAND.	„ E. HARLEY (Appointed October).

CLERICAL STAFF.

Mr. J. A. DARBYSHIRE (Senior).

Miss D. M. BARNES.	Miss M. DUTTON.
„ D. ARNOLD.	„ D. LEECH.
„ E. FRIESER.	„ V. D. HEPBURN.
„ E. BARLOW.	„ M. GRUNDY.

Miss P. HODGE.

Co-ordination.

(a) INFANT AND CHILD WELFARE.—Medical records are transferred from the Child Welfare Department to the School Medical Department when children attain school age. As the two Child Welfare Centres at Regent Road and Teneriffe Street are housed in the same buildings as the two School Clinics co-operation of the two departments is further assured.

(b) NURSERY SCHOOLS.—The Child Welfare Medical Officer pays weekly visits to the Nursery School for the purpose of examining the children. The school is also visited by the School Nurses.

(c) DEBILITATED CHILDREN under school age are dealt with in the Child Welfare Department.

School Hygiene.

Much of the work of medical treatment of school children would be unnecessary if it were possible to concentrate more upon the preventive side of the problem. For instance, a good deal of visual defect and eye strain might be avoided if the lighting in all the schools was what it ought to be. In the same way, there is being manufactured in crowded and insufficiently ventilated classrooms much of the material with which open air schools are filled. Similarly, defective hygiene is responsible to a large extent for the spread of epidemic infectious disease among school children. If all the schools were more on open air lines there would, surely, be a great falling-off in the incidence of infectious

disease. It is true, procedure can only be slow in this direction because of the great cost involved, but it is well that the preventive aspect of the problem should not be lost sight of.

With regard to the new schools at present under contemplation, it will be the Committee's policy to provide classrooms on the lines of the Open Air Schools, where the character of site and other conditions permit.

As regards sanitation the schools were regularly visited by the Sanitary Inspectors, who have paid altogether 449 visits. Improvement in the sanitary condition of outside offices, yards, etc., has been maintained.

Sanitary Inspectors' Visits to Schools	449
Defects Found	92
Roofs defective	4
Downspouts defective	10
W.C.'s defective	25
Yard gully choked	1
Yard surfaces out of repair	14
Flushing cisterns defective	9
Coping stones loose	3
Urinals defective	14
Ash accommodation defective	3
Eaves gutters defective.....	9
	—
	92

Routine Medical Inspection.

School Doctors visit the whole of the Elementary Schools of the City for the purpose of medical inspection.

The Routine Inspection comprises three age groups of children, namely, children of five years, eight years and twelve years of age ; these are the " Code Groups " examined every year, so that each child should be medically examined at least three times during its school career.

(A) ROUTINE MEDICAL INSPECTION IN THE SCHOOLS BY
THE MEDICAL INSPECTORS.

The arrangements for routine medical inspection are as follows :—

Each school is notified some weeks in advance of medical inspection, the Head Teacher receiving a form requesting a return of the numbers of children of the three Code Groups on the Register. A further notification of the actual date of inspection is later forwarded to the teacher, the notification being accompanied by printed forms for the invitation of parents to be present at the inspection. These invitation forms give the hour as well as the date of inspection, and so obviate unnecessary waiting of parents on the school premises.

At each inspection the Medical Officer has the assistance of a School Nurse.

The School Nurse weighs and measures the children, tests vision with the ordinary types, and loosens the child's clothing for the doctor.

The School Medical Inspectors enter all details of medical inspection on the cards in the schools.

Parents present at the inspection are, of course, notified directly of any defect discovered, and they are advised as to the necessary treatment.

The work of following up by Attendance Officers has now been replaced by re-examination of such cases by the Medical Inspector at the Inspection Clinic, and also by home visits carried out by the School Nurses.

(B) INSPECTION IN THE SCHOOLS BY NURSES.

One of the most important duties of the School Nurse is to visit the schools for the purpose of "cleanliness inspection."

On such occasions the whole of the children in attendance at a given school are submitted to inspection by the School Nurse, all heads being rapidly examined for Pediculosis, and in suspected cases the bodies also. A classification of the children's heads is made:—

A.—Signifying freedom from vermin or nits.

B.—The presence of a few nits only.

C.—The presence of a large number of nits or live vermin.

Class B children are given marked cards with warning and instructions, but are not excluded from school.

Class C children are given marked cards and are also excluded from school for 24 hours, when they are re-examined by the Nurse. In the latter case if it is found that the warning has been neglected, verminous notices are issued and the case dealt with according to Section 87 of the Education Act, 1921.

At the present time the aim is to submit every school in the City to "cleanliness inspection" three times during the year. This means, in practice, the inspection of every school for this purpose during the period—

- (a) From the beginning of the year to Easter ;
- (b) from Easter to the Midsummer Holidays ;
- (c) from the Midsummer Holidays to the end of the year.

This aim has been accomplished during the past year, when 95,228 "cleanliness inspections" were carried out by the School Nurses.

Subsequent to the visits of the Nurses to the schools for "cleanliness inspection," the schools are notified of the results of such inspection, and a notice is posted up showing the number of children classified A, B and C. This procedure is believed to have a stimulating effect.

In addition to periodical visits for "cleanliness inspection," special visits are paid by the Nurses at the request of the teacher for the specific purpose of examining children suspected of harbouring vermin or of suffering from contagious skin disease, etc.

Again, the Nurses visit schools during epidemic outbreak, and in this connection the Nurse with special fever training and experienced in throat examinations is useful.

(C) THE INSPECTION CLINIC.

Three Medical Officers now attend each afternoon, and one each morning, for the purpose of examining "special cases." These include—

- (1) Cases referred by the Medical Officers themselves in the course of routine medical inspection in the schools.

- (2) Cases referred by School Nurses from the schools.
- (3) Cases referred by School Teachers.
- (4) Cases referred by the Attendance Officers.
- (5) Cases in which medical examination is requested by the parents.

With reference to these examinations it is necessary to issue a fixed number of invitations for each session, the number varying according to the type of case, otherwise the Medical Officers would be overwhelmed on some occasions.

The Inspection Clinic serves a number of purposes.

First of all, it serves as a clearing house for children referred from different sources. For instance, cases with defects are advised as to the necessity for treatment, and are sent to the family doctor, where such exists. Otherwise, cases are sent to one of the Voluntary Hospitals, or are dealt with under the Local Authority's scheme; needy cases requiring operation are referred to hospital, minor ailments are sent to the Minor Ailments Clinic, oral sepsis to the Dental Clinic, visual defects to the Eye Clinic, and scalp ringworm to the X-Ray Clinic.

Secondly, the Inspection Clinic serves as a Court of Appeal for children booked by the Attendance Officer for absence from school on the grounds of alleged ill-health.

Thirdly, it plays a great part in the "following up" of cases referred for treatment, especially where such is not obtained under the Local Authority's scheme, invita-

tion to attend the Inspection Clinic for re-examination being issued a certain period after the recommendation for treatment. Here the "following up" is done by the Medical Officer himself.

Fourthly, the Inspection Clinic serves for the examination and grading of exceptional children, such as mentally defective.

Fifthly, it serves as a discharging centre for cases previously excluded on medical grounds. For instance, no case of scalp ringworm once excluded from school may be re-admitted until officially discharged and certified "fit for school" by the School Medical Officer.

During the year 1927 the total number of examinations of children at the Inspection Clinic was 16,780.

Findings of Medical Inspection.

Uncleanliness.

Children's heads and bodies were examined for Pediculosis on the occasion of the Nurses' visits to schools, when children of all ages were submitted to examination.

The number of children examined by the Nurses in the elementary schools totalled 95,228.

The Nurses have been able to visit all the schools in the City on three separate occasions during the year for the purpose of "cleanliness inspection," and the standard of cleanliness now adopted is very strict.

Tables showing prevalence of Pediculosis are hereby appended :—

TABLES SHOWING PREVALENCE OF PEDICULOSIS IN DEPARTMENTS WHERE
ALL THE SCHOLARS PRESENT WERE EXAMINED BY THE SCHOOL NURSES.

INFANTS' DEPARTMENTS.

	BOYS.					GIRLS.				
	No. examin'd	Heads.			Ver- minous bodies.	No. examin'd	Heads.			Ver- minous bodies.
		*A.	B.	C.			*A.	B.	C.	
(A) Aggregate Numbers ..	17121	16230	708	183	84	16293	11377	4090	826	49
(B) Percentages ..	—	94.80	4.13	1.07	—	—	69.83	25.10	5.07	—

UPPER DEPARTMENTS.

	BOYS.					GIRLS.				
	No. examin'd	Heads.			Ver- minous bodies.	No. examin'd	Heads.			Ver- minous bodies.
		*A.	B.	C.			*A.	B.	C.	
(A) Aggregate Numbers ..	31120	29766	1050	304	281	30694	22203	7271	1220	64
(B) Percentages ..	—	95.65	3.37	.98	—	—	72.34	23.69	3.97	—

* Heads A—Where neither vermin nor nits are present.
B—Containing a small number of nits only.
C—Containing live vermin or numerous nits.

The accompanying table shows the work done under
Section 87 of the Education Act, 1921:—

BOYS.					GIRLS.				
Number of Cleansing Notices Served.	Hair Cut.		Cleansed at Mole Wheel Disinfecting Station.	Cleansed at Home.	Number of Cleansing Notices Served.	Hair Cut.		Cleansed at Mole Wheel Disinfecting Station.	Cleansed at Home.
	By Nurse.	By Parent.				By Nurse.	By Parent.		
234	52	54	38	89	776	377	356	9	21

Tonsils and Adenoids.

In routine cases 929 were found to be suffering from enlarged tonsils or adenoids, or both, whilst in addition 1,184 special cases were found with the same condition. As in previous years, it was found that a number of cases of enlarged tonsils were temporary in character, the condition disappearing in a short period of time, thus emphasising the importance of re-examining all these cases after an interval of a month or so before deciding on surgical measures.

Tuberculosis.

Amongst the inspection cases there were 243 children diagnosed as suffering from tuberculosis, 6 being fairly definite, and 237 suspected cases. At the same time there were very few advanced cases of phthisis, the majority being probably chiefly confined to the bronchial or mediastinal lymphatic glands and giving rise to indefinite physical signs, although the children were obviously suffering from the effects of toxic absorption, such as languor, anorexia, loss of flesh, night sweats, etc. The majority of such children are adversely affected by compulsory attendance at an ordinary school.

The Committee have fully realised the necessity for further Open Air School provision, and there are now in the City two Open Air Schools for the reception of delicate children.

Ringworm.

Cases of ringworm are notified by Teachers and Attendance Officers, as well as by the Medical Inspection

Staff. All cases are invited to attend periodically at the Centre for inspection, and no child who has been known to have ringworm is allowed to return to school without a certificate from the Medical Officer.

During the year 1927, 62 new cases of scalp ringworm and 145 cases of body ringworm have been under supervision at the Inspection Clinic, and the total number of examinations in these cases amounted to 518.

Alopecia.

There have been 84 new cases under supervision at the Inspection Centre, with a total of 212 examinations.

The Treatment of Alopecia by the High Frequency Current.

The use of the high frequency current has been continued during 1927. The children are now instructed to attend three times a week, as owing to other demands on the nurses' time, it has been found impossible to give the treatment daily. The high frequency current ($\frac{1}{4}$ inch spark) is given for five minutes, which is sufficient to produce a slight reddening of the affected area. The treatment is of considerable value in the more obstinate type of case, and the application is painless. All other treatment, *e.g.*, lotion, is stopped while the child is being treated by the high frequency current.

Five boys and four girls were under treatment in 1927.

Eczema, Impetigo and Sores.

The number of new cases of these diseases under observation during the past year was 2,321, and the number of examinations 4,738.

Scabies.

There were 82 cases under supervision and 188 examinations.

External Eye Disease.

The bulk of the cases of external eye disease found on inspection, as usual, proved to be conjunctivitis or blepharitis of a fairly mild type.

There have been no serious outbreaks of ophthalmia in any of the schools. The practice adopted is to exclude every case of conjunctivitis in which there is possibility of infection.

Vision.

Routine medical inspection in the case of the eight-year-old group and twelve-year-old group includes the testing of vision by means of the usual types at a distance of six metres. Children whose distant vision is represented by 6/18 or worse, also any children who appear to be suffering from the effects of eye strain, or children of five years suffering from strabismus, are all referred for examination at the Refraction Clinic by the Eye Specialists.

During the year under consideration, 1,891 cases have been referred for examination at the Refraction Clinic.

Ear Disease and Hearing.

The great majority of cases of ear disease met with in routine inspection are children suffering from suppurating discharge from the middle ear. These are the cases which in the old days were generally allowed to go untreated, and they often became very offensive for want of attention.

One thousand and ninety four cases were met with by the Medical Inspectors and most of these were dealt with at the School Clinic.

Dental Defects.

The following tables show (*a*) the number of sound and decayed teeth (both temporary and permanent) and (*b*) the actual state of teeth and gums, and the grinding capacity; (*c*) the actual number of decayed teeth, *per child*, among the children examined by the School Dentists.

Number of Decayed Teeth.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 and upwards	Total No. of Decayed Teeth.	Total No. of Children.
Boys aged 11— Aggregate No. of Children Percentages	59 9.48	81 13.00	107 17.17	103 16.53	95 15.25	66 10.59	40 6.43	24 3.85	19 3.05	13 2.09	7 1.12	2 .32	3 .48	3 .48	..	..	..	..	1 .16	..	..	2176 ..	623 100.00
Girls aged 11— Aggregate No. of Children Percentages	78 15.09	90 17.41	93 17.99	71 13.73	73 14.12	39 7.55	35 6.77	16 3.10	10 1.94	5 .97	1 .19	3 .57	1 .19	1 .19	..	1 .19	..	..	..	..	..	1506 ..	517 100.00
Boys aged 12— Aggregate No. of Children Percentages	113 15.27	122 16.49	153 20.67	122 16.49	104 14.05	53 7.16	30 4.05	23 3.11	8 1.08	2 .27	5 .68	4 .54	..	..	1 .14	..	..	..	..	..	..	2006 ..	740 100.00
Girls aged 12— Aggregate No. of Children Percentages	122 17.21	145 20.45	135 19.04	112 15.80	90 12.69	46 6.49	28 3.95	17 2.40	9 1.27	4 .56	1 .14	..	..	..	..	..	..	..	..	..	..	1746 ..	709 100.00
Boys aged 13— Aggregate No. of Children Percentages	141 17.76	148 18.64	195 24.56	122 15.36	91 11.46	50 6.30	19 2.39	9 1.13	12 1.51	3 .38	..	1 .13	3 .38	..	..	..	..	..	..	..	..	1865 ..	794 100.00
Girls aged 13— Aggregate No. of Children Percentages	130 19.70	107 16.21	154 23.33	103 15.61	70 10.61	44 6.67	31 4.70	13 1.97	3 .45	3 .45	1 .15	..	..	1 .1	..	..	..	..	..	..	..	1575 ..	660 100.00
Boys aged 14— Aggregate No. of Children Percentages	15 18.99	9 11.39	18 22.78	13 16.45	13 16.45	5 6.33	2 2.53	..	1 1.27	1 1.27	1 1.27	1 1.27	..	..	..	..	..	..	..	..	..	211 ..	79 100.00
Girls aged 14— Aggregate No. of Children Percentages	13 20.64	9 14.28	15 23.81	4 6.35	13 20.63	3 4.76	4 6.35	1 1.59	1 1.59	..	..	..	..	..	..	..	..	..	..	..	..	157 ..	63 100.00
TOTAL Boys and Girls— Aggregate No. of Children Percentages	1179 7.51	1249 7.95	1902 12.12	1932 12.30	1892 12.05	1634 10.40	1405 8.95	1104 7.03	962 6.12	666 4.25	591 3.76	393 2.50	293 1.86	188 1.20	137 .87	67 .43	58 .37	20 .12	19 .12	5 .03	9 .06	77441 ..	15705 100.00

Average No. of Decayed Teeth per Child—4.93.

Crippling Defects.

Amongst the Code Group cases 37 children were referred for treatment on account of rickets.

Infectious Disease.

A system of notification is in force whereby the Head Teachers forward to the Medical Officer of Health particulars of the cause of absence from sickness of the children attending their schools. These returns are sent in weekly, and are classified in the following table :—

RETURN OF SICKNESS IN SCHOOLS DURING THE YEAR 1927.

Notifiable Diseases.	Measles.	Whooping Cough.	Chicken Pox.	Mumps.	Ringworm.	Ophthalmia.	Sore Throat.	Bronchitis and Pneumonia.	Colds.	Other Diseases.
686	862	457	955	1503	230	515	4526	1141	21078	11994

Following Up.

The work of following up has been carried out by (a) the School Medical Officers, and (b) School Nurses.

A large number of cases seen in the schools during the course of routine inspection are referred to the Inspection Clinic for further examination at a later date.

Formerly "Home Visits" for the purpose of following up were carried out almost entirely by the Attendance Officers. The School Nurses, however, are now undertaking this work. During the last year they paid over 2,759 home visits.

Medical Treatment.

A number of defects requiring treatment are dealt with under the Local Authorities' Scheme. This

includes :—(1) The treatment of Minor Ailments at the School Clinic ; (2) the treatment of scalp ringworm at the X-Ray Clinic ; (3) the treatment of Alopecia by the High Frequency Current ; (4) the treatment of dental defects at the Dental Clinic ; (5) the treatment of visual defects at the Eye Clinic ; and (6) the surgical treatment of tonsils and adenoids at the Salford Royal Hospital.

The Minor Ailments Clinic.

During the past year 2,774 new cases were treated at the Minor Ailments Clinics, Regent Road, Teneriffe Street and Police Street, and the attendances of patients totalled 49,588. The cases which received treatment were those who would otherwise have received little or no attention, such as chronic ear discharge, chronic nasal discharge, often accompanied by impaired hearing ; skin diseases such as tinea, alopecia, eczema, impetigo, sores and septic conditions, and such common external eye diseases as conjunctivitis and blepharitis.

It is found that the great majority of these cases rapidly improve under thorough treatment, and, as a rule, even the bad cases are soon able to resume school.

The treatment is carried out by the School Nurses under the direction of the Medical Officers.

Two School Nurses attend the Regent Road Clinic each morning, one attends the Teneriffe Street Clinic each afternoon and one attends the Police Street Clinic each morning.

All cases attending the Clinic are first examined either at the Inspection Clinic or at school by the Medical Officers, who issue cards authorising the child's attendance at the Treatment Clinic.

The cards show the doctors' diagnosis and instructions for treatment, and the date of attendance is stamped thereon for the information of the teacher. No child is treated at the Minor Ailments Clinic unless first authorised and given a card by the Medical Officer, otherwise the Nurses would be quickly overwhelmed.

The following table shows the number of new cases and attendances up to December 31st, 1927 :—

	Boys.	Girls.	Total.
New Cases	1538	1236	2774
Attendances	28658	20930	49588

Tonsils and Adenoids.

The Education Committee have an arrangement for the surgical treatment of these cases at the Salford Royal Hospital.

A list of cases considered suitable for operation is submitted to the hospital. After operation, children are re-examined at the Inspection Clinic by a School Medical Officer.

A charge of 25s. is made by the hospital for each case operated upon, and a portion of this charge is recovered from parents who can afford to contribute towards the cost; 268 cases have been successfully operated on during the year.

Tuberculosis.

Children found to be suffering from definite tuberculosis are generally referred for treatment to the Tuberculosis Department. A certain number of children suffering from suspected tuberculosis are dealt with at the Open Air Schools.

Skin Disease.

RINGWORM.—THE X-RAY CLINIC.

The very efficient X-Ray apparatus for the treatment of ringworm was installed early in the year 1913.

From the beginning this Clinic has been so successful in coping with the large amount of scalp ringworm of an obstinate type formerly prevalent in the City that there are nowadays insufficient cases to keep the Clinic working regularly.

It was generally found necessary to epilate the whole scalp in each case according to the five-exposure method of Kienböck. By this method the whole of the scalp is exposed at one sitting of approximately two hours, epilation being complete by about the end of the third week.

After X-Ray application the children are allowed to return to school, wearing a cap, as soon as epilation is complete and no ringworm stumps remain in the scalp.

A nominal charge of 5s. per child treated is made to the parent.

X-Rays have been administered to 21 cases of scalp ring-worm during the year. Twenty-six cases were certified fit at the end of December.

Of the above 21 cases, it was necessary to epilate the whole scalp in each case.

Number of re-examinations after X-Rays, 132.

The children were fit to return to school again, on the average, five and a half weeks after the application of the Rays.

On the other hand the 18 cases cured without the application of X-Rays were only fit to return to school on the average 14 weeks after the commencement of treatment, one case taking as long as one-and-a-half years, and the large majority several months.

It may be too much to hope that the disease will ever be entirely eradicated, but compared with the prevalence of the disease before the provision of X-Ray treatment, the number of cases of scalp ringworm met with at the present time is small indeed.

ECZEMA, IMPETIGO AND SORES.

A large number of such cases are now being dealt with very successfully at the School Clinics, and many obstinate cases of impetigo are returned to school after a few days' treatment.

SCABIES.

Cases are now treated daily by the School Nurses at the Mode Wheel Disinfecting Station, and the children are first given a warm bath, after which the appropriate remedies are applied. In most of these cases the bedding is also disinfected. It is found that this treatment very considerably shortens the duration of the disease.

Ear Disease and Hearing.

Cases of ear disease and defective hearing are generally kept under observation by the School Doctor at the Inspection Clinic, and many of these receive treatment at the School Clinic. This treatment includes the daily syringing, etc., of cases of otorrhœa and also the giving of nasal douches where the impaired hearing is due to catarrh and obstruction of the nasal passages.

Dental Clinic.

The School Dentists, as in previous years, devoted most of their time to conservative dental treatment of the first permanent teeth (six-year old molars). Actual dental inspection in the schools was carried out on six mornings per week (two mornings for each of the three Dentists), the remainder of the week being occupied with the treatment of defects found in the course of this inspection.

The attendance of the children at the Clinics has been extremely good, very few of them failing to keep their appointments.

Altogether 6,661 children were treated at the Dental Clinics, making 10,529 attendances. There were 11,186 extractions of teeth, 3,734 fillings, 171 dressings and 714 scalings.

The tables on pages 150-153 show in detail the work carried out during the year 1927.

Owing to the impossibility of undertaking dental treatment for all school children in the City with the present staff of three, the School Dentists now confine their activities to a limited number of schools, the most needy being selected. This arrangement allows the School Dentists to follow up the cases already treated, and so keep the mouths of the children in order.

Crippling Defects.

A number of children suffering from well-marked ricketty and certain other deformities are very successfully dealt with at the Greengate Dispensary under the supervision of Dr. Mumford. The children so treated are resident in the institution for a period.

The Committee are agreed that the provision of a day school to accommodate 100 crippled children is a necessity. During the past year the Committee acquired a piece of land adjoining Buile Hill Park which it was thought might be utilised as a site for a Cripple School.

On further consideration it was realised that a considerable amount of money would have to be expended in preparing this site, which again was not quite as open as it might be.

The Committee are therefore in negotiation with a view to obtaining an alternative site.

Heart and Circulation.

In all well-marked cases of heart disease, the parents were interviewed and warned of the defect, and the children were referred for further examination in three months' time. The teachers were also warned of such defects and advised as to the child's fitness for drill or otherwise.

The Ophthalmic Clinics.

The Ophthalmic Officers Report is appended herewith :

REPORT OF THE OPHTHALMIC CLINICS, SALFORD EDUCATION COMMITTEE.

There are now two eye clinics in the City :

- (1) The Refraction Clinic, held at the Education Office, Chapel Street.
- (2) The External eye diseases Clinic, held at Regent Road.

The Refraction Clinic.

This clinic has now been in operation some 23 years, and is at present running every week-day, morning and afternoon, Saturdays excepted.

In September, 1927, the Education Committee appointed Dr. Dorothy Simmons to assist in the Clinic, in order to reduce the large waiting list, which had accumulated after Dr. Meynell's death. Under the present arrangements the spectacles supplied are found to be correct in alignment, and according to prescription. The children report, after obtaining the glasses, to have them examined by the Ophthalmic Surgeons.

Children with squints continue to be numerous, and the School Medical Officers co-operate with us in sending them as early as possible. This is much appreciated by the officers of the clinic, because the sooner such cases are referred, the better for the child concerned. Glasses are prescribed, and the parents are recommended useful exercises to carry out at home. In a great number of these cases the child gets, in time, useful vision, but there are a certain number where the parents will not take the trouble with their children, and eventually an operation on the squinting eye is recommended for Cosmetic reasons.

During the year, 1438 children were examined, and spectacles prescribed for 1,218 of those examined.

It is pleasing to note that the usefulness of the Ophthalmic Clinic is much appreciated by the parents, who on first visits almost always accompany their

children, and express their thanks for the treatment given. Only in a very few cases do the parents object to their children wearing glasses, and most of those objecting, eventually (after a brief explanation) decide to obtain glasses.

The External Eye Diseases Clinic.

Since Dr. Simmons' appointment, all children found to be suffering from external eye disease, are now referred to the external eye diseases clinic, held weekly at Regent Road, Dr. Simmons recommends the necessary treatment, and supervises the cases, the actual treatment being given in the minor ailments clinics, daily.

The clinic started in September, and during the period, to the end of 1927, the number of cases examined and prescribed treatment was 359.

South Bank School.

The South Bank School, which has been known hitherto as the Partially Blind School will in future be referred to as the Sight-Saving Classes, as one finds that parents have a distinct objection to their children going to a school designated under the term "Blind." The above is the American classification, where this class of special work has been so enormously improved in recent years. It is considered that the above School is one of the most important of special schools, and a monthly visit is made, new cases examined, and old ones re-examined in the hope of future helpfulness. The cases sent to this school are mostly Progressive Myopes, and also all cases which cannot be brought up to the standard recognised for teaching in a normal school, such as

Congenital Defects, and Internal Diseases of the eye. During the year, quite a number of children with External Diseases, such as Keratitis (Inflammation of Cornea) and Persistent Corneal Ulceration have been admitted and treated by the School Nurse. The usefulness of this method will be appreciated, because these children, in addition to being cared for, are taught in the special classes, whereas, hitherto they have been excluded from school, and probably running the streets, and not attending the Clinics for treatment. Children suffering from these external diseases will, as soon as they are cured, be returned to the normal school. The number of children admitted to South Bank during the year was 22 (13 girls and 9 boys), and the number discharged, 20 (13 girls and 7 boys).

(Signed), H. G. P.
D. S.

TABLE S IVa.

SUMMARY OF CASES SEEN BY THE OPHTHALMIC OFFICERS AT THE
EDUCATION OFFICE DURING THE YEAR 1927.

A.—REFRACTIONS.

	Boys.	Girls.	Total.
Hypermetropia	112	99	211
Hypermetropic Astigmatism	122	136	258
Compound Hypermetropic Astigmatism ...	119	99	218
Myopia	77	97	174
Myopic Astigmatism	32	75	107
Compound Myopic Astigmatism	51	68	119
Mixed Astigmatism	55	73	128
Anisometropia .....	..	3	3
Nil	119	101	220
TOTALS	687	751	1438

B.—DISEASES OF THE EYE.

	Boys.	Girls.	Total.
Muscle Disorders—			
Nystagmus	3	1	4
Squint	164	147	311
Disease of the Conjunctivæ and Lids—			
Conjunctivitis	1	1	2
Disease of the Cornea—			
Keratitis (active) .....	..	1	1
Nebulæ	1	4	5
Ulcer .....	..	2	2
Disease of the Lens—			
Cataract	1	2	3
Other Defects	19	21	40

Open Air Schools.

The David Lewis Day School, which provides accommodation for 70 delicate children, was opened on the 28th August, 1916, in the open shed and premises in the David Lewis Recreation Ground. The staff consists of a head teacher with two assistants.

The Barr Hill Day School, which provides accommodation for 100 delicate children, was opened on the 30th May, 1924.

The school is built on an elevated site, standing well above the valley, and its open front looks due south. The plan resembles the letter "E" with the middle tongue missing, the central portion being a shed left permanently open to the south, and windowed to the north. One projecting wing comprises two classrooms, and the other wing the administrative portion, including kitchen and cloakroom. The classrooms, by means of folding glass doors, can be opened to the east, south and west, but are permanently closed to the north.

The staff consists of a head teacher and three assistants.

Delicate children, from 6 to 14 years of age, are admitted, and are daily conveyed to and from the open air schools, free of charge, by a service of special tramcars.

Children arrive at school at 9 o'clock a.m. and remain the whole day, leaving at 6 o'clock p.m. during the summer, and 4-30 p.m. in the winter.

The children admitted to the Open Air Schools are selected by examination by the Medical Staff, and the

parents are urged to get any defects, such as enlarged tonsils and adenoids, or decayed teeth, remedied before admission to the schools.

No children are admitted who are considered likely to be a source of infection to others.

The school nurse attends each school daily, the children are weighed each week, and the Medical Inspector also visits the schools once a week.

Three meals are provided—breakfast, dinner and tea—for which a maximum charge of 5s. per week is made. After dinner the children rest in the recumbent position for two hours, either in the open when weather permits, or under cover when wet.

Children who have been discharged from the Open Air Schools to the ordinary schools are invited periodically to the Clinic, for observation of their further progress.

Open Air Schools, Year 1927.

DAVID LEWIS.

	Boys.	Girls.	Total.
Number of Admissions during 1927	36 ..	22 ..	58
Number of Discharges during 1927	31 ..	28 ..	59
Number of Children on Register at end of Year 1927	44 ..	32 ..	76

CHILDREN DISCHARGED DURING 1927.

	Boys.	Girls.	Total.
Average "Stay" in School (weeks).....	56.6 ..	41.9 ..	49.3
AVERAGE GAIN IN WEIGHT.....	9.9 ..	7.5 ..	8.7 lbs.
	yr. mth.	yr. mth.	yr. mth.
Average Age on Admission	9 8..10	2 ..	9 10

OPEN AIR SCHOOLS, YEAR 1927, DAVID LEWIS—*Continued.*

	Boys.	Girls.	Total.
Transferred to Ordinary School	19	16	35
Left, aged 14.....	5	4	9
Admitted to Nab Top, Marple	1	1	2
Unfit for any School	1	..	1
Taken off Rolls (poor attendance)	4	1	5
„ „ „ (removed from district) ...	1	3	4
„ „ „ (parents' wish) .....	..	3	3
	31	28	59

CLASSIFICATION OF DISEASES FROM WHICH THE ABOVE DISCHARGED
CHILDREN WERE SUFFERING.

	Boys.	Girls.	Total.
Tuberculosis Lungs (Early)	1	..	1
„ „ (Suspected).....	3	2	5
„ Joint	1	..	1
„ Adenitis	2	4	6
Delicate	8	8	16
Anæmia	6	7	13
Bronchitis	3	6	9
Rickets	1	..	1
Heart Disease	1	..	1
Periostitis	1	..	1
Dyspepsia	1	..	1
Scoliosis	1	..	1
Neurosis	1	..	1
Chorea	1	..	1
Unresolved Pneumonia .....	..	1	1
	31	28	59

OPEN AIR SCHOOLS, YEAR 1927.—*continued.*

BARR HILL.

	Boys.	Girls.	Total
Number of Admissions during 1927	47	.. 44	.. 91
Number of Discharges during 1927	44	.. 44	.. 88
Number of Children on Register at end of Year 1927	59	.. 52	.. 111

CHILDREN DISCHARGED DURING 1927.

	Boys.	Girls.	Total.
Average " Stay " in School (weeks)	64	.. 56	.. 60
AVERAGE GAIN IN WEIGHT.....	8.7	.. 8.8	.. 8.8 lbs.
	yr. mth.	yr. mth.	yr. mth.
Average Age on Admission.....	9 7	.. 10 0	.. 9 10

	Boys.	Girls.	Total.
Transferred to Ordinary School	31	.. 29	.. 60
Left, aged 14	3	.. 3	.. 6
Admitted to Nab Top, Marple .....	..	.. 1	.. 1
„ „ Hospital	1	.. ..	.. 1
„ „ Convalescent Home	1	.. ..	.. 1
„ „ South Bank Day Blind School .....	..	.. 1	.. 1
Taken off Rolls (left the district)	3	.. 7	.. 10
„ „ (parents' request)	3	.. 2	.. 5
„ „ (during the winter).....	1	.. ..	.. 1
„ „ (deceased)	1	.. ..	.. 1
„ „ (encephalitis lethargica) .....	..	.. 1	.. 1

44 .. 44 .. 88

OPEN AIR SCHOOLS, YEAR 1927, BARR HILL—*Continued.*CLASSIFICATION OF DISEASES FROM WHICH THE ABOVE DISCHARGED
CHILDREN WERE SUFFERING.

	Boys.	Girls.	Total.
Tuberculosis, Lungs (Early) .. .. .	..	1	1
„ „ (Suspected)	7	3	10
„ Adenitis	3	..	3
„ Abdomen .. .. .	..	2	2
„ „ (Suspected) .. .. .	..	3	3
„ Hip	2	..	2
„ Bones and Joints .. .. .	..	1	1
Delicate	11	10	21
Anæmia	8	6	14
Bronchitis	4	5	9
Debility	2	..	2
Pleurisy	1	1	2
Chorea	1	1	2
Adenitis	1	..	1
Rickets	1	1	2
Neurosis	1	..	1
Malnutrition	1	3	4
Heart Disease	1	2	3
Encephalitis Lethargica (after effects) ....	..	1	1
Inguinal Abscess .. .. .	..	1	1
Unresolved Pneumonia .. .. .	..	1	1
Scoliosis .. .. .	..	1	1
Fibrosis Lung .. .. .	..	1	1
	44	44	88

Physical Training.

The School Medical Officers advise as to the kind of exercises to be adopted in some cases of temporary deformity, such as slight scoliosis.

Provision of Meals.

The usual arrangements with regard to cooking of dinners and the conveyance to the feeding centres were followed.

The number of children requiring free meals shows a decrease during the year, the average monthly number being 139, as compared with 225 for the previous year.

Children examined in the schools by the Medical Officers and found to be suffering from malnutrition are referred for investigation into the parents' means and, where necessary, free meals are given.

Swimming Instruction.

During the season just closed, 20 Swimming Instructors were appointed for boys and four for girls, and the number of attendances of children during school hours at the several baths was 28,336 in the case of boys, and 23,807 in the case of girls, making a total of 52,143, as compared with 53,666 in the previous year. Reports were received from the Instructors that, of the children attending the baths, 1,327 boys and 774 girls proved themselves able to swim.

In order to encourage the children to learn swimming, the Baths Committee have continued the arrangement under which a free season ticket for the ensuing year is given to each scholar who, at the commencement of the season, is unable to swim more than ten yards, and who

at the end of the season has proved able to swim one length of the bath. Certificates of proficiency are also awarded by the Education Committee, after an examination conducted by a committee of Head Teachers. The number of such certificates gained during the past season was 1,726, compared with 1,640 for the previous year.

Co-operation of Parents.

Parents present at the inspection are, of course, notified directly of any defect discovered, and they are advised as to the necessary treatment. When parents are absent at the time of the inspection, and it is desirable that they should be interviewed with respect to defects discovered, invitations for these parents to attend the inspection clinic, together with the children, are issued, and so the cases are followed up.

Co-operation of Teachers.

Previous to the visit of the School Doctor, teachers notify parents of the date and time at which their children will be examined.

Each Head Teacher supplies weekly to the Medical Officer a return of sickness in the schools. In this way early information is obtained as to the outbreak of any infectious sickness amongst school children.

Again, a large number of the special cases examined at the Inspection Clinic are children who have been referred by school teachers for medical examination.

In the case of mentally defective children the work of the Medical Officer is greatly facilitated by the special reports which are furnished by Head Teachers.

Co-operation of School Attendance Officers.

The assistance of the School Attendance Officers is obtained in the case of children who have been invited to the Inspection Clinic and do not attend.

Cleansing notices issued in accordance with Section 87 of the Education Act, 1921, are delivered by the Attendance Officers, who insure the attendance of the verminous children at the cleansing centre.

The Superintendent of Attendance Officers is daily supplied with all information with respect to periods of school exclusion, or fitness for school in the case of children examined at the Inspection and Treatment Clinics.

Co-operation of Voluntary Bodies.

The co-operation of the Invalid Children's Aid Association and the Crippled Children's Help Association has been obtained in a number of cases. Through these agencies a considerable number of children have been sent to Holiday and Convalescent Homes at the seaside, or in the country, and in the case of some of the cripples suitable apparatus has been supplied by these voluntary bodies.

During the year 1927, the number of children of school age who have been dealt with by the Invalid

Children's Aid Association is 93, and the manner in which they have been dealt with, is as follows :—

	Boys.		Girls.		Total.
Convalescent treatment, for periods varying from 4 to 13 weeks, total number of weeks 318, an average of 6 weeks per child	28	..	24	..	52
Kept under supervision	17	..	19	..	36
Surgical Appliances provided	3	..	2	..	5
	48	..	45	..	93

In addition, grants to the amount of £6 15s. 0d. have been made.

Blind, Deaf, Defective and Epileptic Children.

A list of the above children maintained in special institutions will be found in Tables S IIIA. and S IIIB. in the Statistical Tables.

A school for the accommodation of partially blind children was opened in the City on March 7th, 1921. This school serves as a Day School for children who are not totally blind, but whose vision is too defective for them to be taught in the ordinary schools. Twenty-two children were admitted during the year.

Cases of total blindness are sent to a residential institution.

One of the School Medical Officers, Dr. H. Heathcote, is engaged in the examination and classification of mentally defective children with respect to their suitability for treatment in :—

- (a) Resident Institutions for Imbeciles.
- (b) Special Residential Schools for Mentally Defective Children.
- (c) Special Day Schools for Mentally Defective Children.
- (d) Special Classes in Ordinary Schools.

A similar list is prepared in the case of physically defective children in respect of their suitability for treatment in :—

- (a) Residential Open Air Schools.
- (b) Day Open Air Schools.
- (c) Sanatorium Schools.
- (d) Special Residential Schools for Cripples.
- (e) Special Day Schools for Cripples.
- (f) Special Residential Schools for Epileptics.

Mentally defective children who are not in Special Schools are referred to the South-East Lancashire Association for Mental Welfare for supervision, and some of them attend an Occupation Centre.

The South Bank Day School for the Partially Blind.

There are 70 children on the rolls, and the teachers at the School constitute the After-Care Committee.

Twenty children left the School in 1927, and the following is a summary of the records of their after-careers :—

	Boys.	Girls.	Total.
Returned to Ordinary School	1 ..	1 ..	2
Excluded by Medical Officer .....	.. ..	3 ..	3
Admitted to Reformatory School	1 ..	.. ..	1
Removed from the District .....	.. ..	1 ..	1
Working	5 ..	7 ..	12
Information not to hand .....	.. ..	1 ..	1
	7 ..	13 ..	20

Nursery Schools.

As yet there is but one in the City, namely, at Encombe Place, where about 48 children are in daily

attendance. This school is visited each week by the Child Welfare Medical Officer.

The school is also visited by the School Nurse for the purpose of "cleanliness inspection."

Secondary Schools.

The work of medical inspection in respect of the Secondary Schools has been undertaken by one of the Medical Inspection Staff, Dr. H. Heathcote.

On the occasion of the visit of the doctor to each of these schools the whole of the pupils in attendance have been submitted to medical examination. This examination is the same in character as in the case of Elementary Schools, and in the same way parents have an opportunity of being present.

Children who may be suffering from tonsils and adenoids or defective vision may now participate in the Education Committee's scheme for treatment.

Following up is undertaken by Dr. H. Heathcote, who re-visits the schools in order to ascertain whether the treatment recommended has been carried out.

Tables showing the number of pupils examined and the findings of the Medical Inspector will be found in the Statistical Tables.

Miscellaneous.

A number of Teachers, Exhibitioners, Bursars, and special cases have been medically examined by the Medical Officers during the year. (*See Table S IB. in the Statistical Tables.*)

The total number of children medically examined in the Elementary Schools during the year amounted to 11,404.

During the year 23,495 invitations were sent out to children referred for medical treatment, and there were 16,764 attendances; 7,246 cases were discharged from the Clinic, 90·50 per cent of which were remedied. (*See* Pages 189–190 of Statistical Tables.)

Summary of Examinations.

During the year 1927, 50,672 examinations were conducted by the Medical Officers of the Education Committee.

These examinations were made up as follows :—

(a) Children belonging to Code Groups examined in the Schools	11,404
(b) Cases of visual defects examined by retinoscopy at Chapel Street	1,806
(c) Absentees and cases of disease or defect examined by the Medical Officers at Regent Road Centre, Teneriffe Street Centre and Police Street Centre	16,780
(d) Verminous cases in which cleansing notices have been served under Section 87 of the Education Act, 1921, examined at Regent Road..	1,010
(e) Teachers, pupil teachers, bursars, and various special cases examined	750
(f) Children examined in the schools by the School Dentists	16,791
(g) Children examined in Secondary Schools	1,912
(h) Employment Certificates issued....	219

STATISTICAL TABLES.

Elementary Schools.

TABLE I.

RETURN OF MEDICAL INSPECTIONS DURING THE YEAR ENDED
31ST DECEMBER, 1927.

A.—ROUTINE MEDICAL INSPECTIONS.

	Boys.	Girls.	Total.
Number of Code Group Inspections—			
Entrants	2167	2021	4188
Intermediates	1630	1740	3370
Leavers	1952	1894	3846
Total	5749	5655	11404

Number of other Routine Inspections

B.—OTHER INSPECTIONS.

	Boys.	Girls.	Total.
Number of Special Inspections	4251	4051	8302
Number of Re-inspections	6355	6122	12477
Total	10606	10173	20779

TABLE I—Continued.
AVERAGE HEIGHTS AND WEIGHTS OF CHILDREN EXAMINED AT THE ROUTINE MEDICAL INSPECTION.

BOYS. AVERAGE HEIGHT IN INCHES.				GIRLS. AVERAGE HEIGHT IN INCHES.			
Average age in years	12 $\frac{5}{12}$	8 $\frac{5}{12}$	5 $\frac{5}{12}$	Average age in years	12 $\frac{5}{12}$	8 $\frac{5}{12}$	5 $\frac{5}{12}$
Number examined	1952	1630	2167	Number examined	1952	1740	2021
Anthropometric standard at 5, 8 and 12 years respectively	54.7	46.9	40.4	Anthropometric standard at 5, 8 and 12 years respectively	40.2	46.3	40.2
Salford average	54.9	47.6	41.2	Salford average	40.9	47.4	40.9
Difference	+.2	+.7	+.8	Difference	+.7	+.1	+.7
BOYS. AVERAGE WEIGHT IN LBS.				GIRLS. AVERAGE WEIGHT IN LBS.			
Average age in years	12 $\frac{5}{12}$	8 $\frac{5}{12}$	5 $\frac{5}{12}$	Average age in years	12 $\frac{5}{12}$	8 $\frac{5}{12}$	5 $\frac{5}{12}$
Number examined	1952	1630	2167	Number examined	1952	1740	2021
Anthropometric standard at 5, 8 and 12 years respectively	71.5	50.2	38.2	Anthropometric standard at 5, 8, and 12 years respectively	37.3	48.9	37.3
Salford average	72.4	51.5	39.3	Salford average	38.2	50.3	38.2
Difference	+.9	+1.3	+1.1	Difference	+.9	+1.4	+.9

TABLE II.

A.—RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL
INSPECTION IN 1927.

DEFECTS OR DISEASES.	ROUTINE INSPECTION.		SPECIALS.	
	No. referred for treatment.	No. requiring to be kept under observation.	No. referred for treatment.	No. requiring to be kept under observation, but not referred for treatment.
Malnutrition.....	5	25	28	16
Uncleanliness, head .....	..	..	..	..
„ body .....	..	..	..	..
(See Table IV., Group V).				
Skin—				
Ringworm, head	7	..	62	..
„ body	10	1	145	..
Scabies	20	1	80	..
Impetigo	88	3	1232	..
Other Diseases (Non-Tubercular)	103	4	1184	..
Eye—				
Blepharitis	45	..	209	..
Conjunctivitis	42	1	527	1
Keratitis	3	..	39	..
Corneal Ulcer	1	1	14	..
Corneal Opacities	2	..	3	..
Defective Vision	1131	4	88	..
Squint	292	5	60	2
Other Conditions	18	..	114	5
Ear—				
Defective Hearing	76	34	155	14
Otitis Media	146	22	500	9
Other Ear Diseases	77	6	49	6
Nose and Throat—				
Enlarged Tonsils.....	152	111	251	57
Adenoids.....	51	39	118	28
Enlarged Tonsils and Adenoids.	501	75	693	37
Other Conditions	134	36	213	14
Enlarged Cervical Glands (Non- Tubercular)	43	14	244	28
Defective Speech	14	4	26	10
Teeth—Dental Disease	741	2	205	..
Heart and Circulation—				
Heart Disease, Organic	20	76	82	137
„ „ Functional	39	183	72	126
Anæmia	34	24	114	98

TABLE II—Continued.

A.—RETURN OF DEFECTS FOUND IN THE COURSE OF MEDICAL
INSPECTION IN 1927.

DEFECTS OR DISEASES.	ROUTINE INSPECTION.		SPECIALS.	
	No. referred for treatment.	No. requiring to be kept under observation.	No. referred for treatment.	No. requiring to be kept under observation, but not referred for treatment.
Lungs—				
Bronchitis.....	97	114	386	300
Other Non-Tubercular Diseases.	70	40	26	25
Tuberculosis—				
Pulmonary, Definite .....	..	1	1	2
„ Suspected	10	10	48	183
Non-Pulmonary, Glands.....	9	2	31	18
„ Spine	1	..	2	1
Hip	4	..	7	2
Other Bones and Joints.....	1	..	3	1
Skin	1	..	7	..
Other Forms	1	1	15	2
Nervous System—				
Epilepsy	9	1	26	11
Chorea.....	19	12	124	71
Other Conditions	31	10	51	34
Deformities—				
Rickets	37	22	39	15
Spinal Curvature	8	7	7	1
Other Forms	24	12	35	12
Other Defects or Diseases	452	39	805	214
Delicate	153	37	326	137
Mentally Defective	3	13	9	7
Dull and Backward	5	7	11	5

TABLE II—Continued.

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group.	Number of Children.		Percentage of Children Found to Require Treatment.
	Inspected.	Found to Require Treatment.	
Code Groups—			Per cent.
Entrants	4188	1074	25.64
Intermediates	3370	1133	33.62
Leavers	3846	1227	31.90
Total (Code Groups)	11404	3434	30.11
Other Routine Inspections .....	..	..	..

TABLE II—Continued.

C.—DETAILS OF RE-EXAMINATION OF CHILDREN IN CODE GROUPS.

Defects or Diseases.	Had Treatment.	Not had Treatment.
Malnutrition.....	12	15
Uncleanliness, head .....	..	..
" body .....	..	..
Skin—		
Ringworm, head	3	..
" body	9	..
Scabies	16	2
Impetigo	65	10
Other Diseases (Non-Tubercular)	75	7
Eye—		
Blepharitis	32	3
Conjunctivitis	33	..
Keratitis	4	..
Corneal Ulcer	1	..
Corneal Opacities	1	..
Defective Vision	194	789
Squint	61	138
Other Conditions	7	8
Ear—		
Defective Hearing	62	9
Otitis Media	110	17
Other Ear Diseases	37	16
Nose and Throat—		
Enlarged Tonsils.....	70	77
Adenoids.....	31	23
Enlarged Tonsils and Adenoids	369	232
Other Conditions	50	7
Enlarged Cervical Glands (Non-Tubercular)	26	7
Defective Speech	8	5
Teeth—Dental Disease	273	444
Heart and Circulation—		
Heart Disease, Organic	54	43
" " Functional	107	71
Anæmia	24	11
Lungs—		
Bronchitis.....	92	56
Other Non-Tubercular Diseases	20	28
Tuberculosis—		
Pulmonary, Definite.....	3	..
" Suspected.....	22	5
Non-Pulmonary, Glands.....	5	1
" Spine	1	..
" Hip	2	..
" Other Bones and Joints ...	..	..
" Skin .....	..	..
" Other Forms .....	..	..
Nervous System—		
Epilepsy	14	4
Chorea.....	17	5
Other Conditions	11	6
Deformities—		
Rickets	27	20
Spinal Curvature	4	5
Other Forms	15	10
Other Defects or Diseases	261	164
Delicate	83	20
Mentally Defective	7	13
Dull and Backward	4	5
Number of Children Re-Examined	3,999	
Had Treatment.....	2,074 = 51.86 per cent.	
Not had Treatment	1,925	

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls.	Total.
Including partially blind).	(i.) Suitable for training in a School or Class for the totally blind.	Attending Certified Schools or Classes for the Blind....	4	3	7
		Attending Public Elementary Schools .....	..	..	..
		At other Institutions.....	..	..	..
		At no School or Institution..	..	..	..
	(ii.) Suitable for training in a School or Class for the partially blind.	Attending Certified Schools or Classes for the Blind....	31	37	68
		Attending Public Elementary Schools .....	..	..	..
		At other Institutions.....	..	..	..
		At no School or Institution..	..	..	..
Including deaf and dumb and partially deaf).	(i.) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attending Certified Schools or Classes for the Deaf....	24	13	37
		Attending Public Elementary Schools .....	..	..	..
		At other Institutions.....	..	..	..
		At no School or Institution..	4	4	8
	(ii.) Suitable for training in a School or Class for the partially deaf.	Attending Certified Schools or Classes for the Deaf....	..	..	..
		Attending Public Elementary Schools	1	..	1
		At other Institutions .....	..	..	..
		At no School or Institution..	..	..	..
Mentally defective.	Feeble-minded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children	2	1	3
		Attending Public Elementary Schools	42	21	63
		At other Institutions.....	1	3	4
		At no School or Institution..	56	34	90
	Notified to the Local Control Authority during the year	Feeble-minded .....	..	1	1
		Imbeciles	5	8	13
		Moral Imbeciles .....	..	..	..
		Idiots .....	..	1	1
Epileptics	Suffering from severe Epilepsy.	Attending Certified Special Schools for Epileptics.....	9	5	14
		In Institutions other than Certified Special Schools....	..	..	..
		Attending Public Elementary Schools	7	8	15
		At no School or Institution..	19	12	31
	Suffering from Epilepsy which is not severe.	Attending Public Elementary Schools	15	15	30
		At no School or Institution..	9	4	13

TABLE III—Continued.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls.	Total.
Physically Defective.	Infectious pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	19	5	24
		At other Institutions.....	..	..	..
		At no School or Institution..	1	..	1
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board .....	..	..	..
		At Certified Residential Open Air Schools .....	..	..	..
		At Certified Day Open Air Schools .....	..	..	..
		At Public Elementary Schools.	8	4	12
		At other Institutions.....	..	..	..
		At no School or Institution..	6	7	13
	Delicate children (<i>e.g.</i> , pre or latent tuberculosis, mal-nutrition, debility, anæmia, etc.).	At Certified Residential Open Air Schools .....	..	..	..
		At Certified Day Open Air Schools	103	84	187
		At Public Elementary Schools.	61	34	95
		At other Institutions.....	..	..	..
		At no School or Institution..	13	16	29
	Active non-pulmonary tuberculosis.	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	2	2	4
		At Public Elementary Schools.	..	..	..
		At other Institutions.....	..	..	..
		At no School or Institution..	17	6	23
	Crippled Children (other than those with active tuberculous Disease), <i>e.g.</i> , children suffering from paralysis, etc., and including those with severe heart disease.	At Certified Hospital Schools.	..	..	..
		At Certified Residential Cripple Schools	18	14	32
		At Certified Day Cripple Schools .....	..	..	..
		At Public Elementary Schools.	59	66	125
		At other Institutions.....	..	..	..
		At no School or Institution..	36	35	71

TABLE IIIa.

MENTALLY DEFECTIVE CHILDREN EXAMINED DURING 1927 BY THE
MEDICAL OFFICER.

	Boys.	Girls.	Total.
Idiots .....	..	..	..
Imbeciles	8	11	19
Mental Defectives.....	31	19	50
Dull and Backward	13	5	18
Moral Imbeciles .....	..	..	..
Encephalitis Lethargica (After Effects)	1	2	3
Found Normal .....	..	..	..
Total	53	37	90

Recommended for	Boys.	Girls.	Total.
Special Residential School for M.D.'s	9	4	13
„ Day School for M.D.'s	21	15	36
„ Resident Institution for M.D.'s.....	..	..	..
„ „ „ Idiots and Imbeciles	8	11	19
„ „ „ Moral Imbeciles .....	..	..	..
Resident Institution for Low-grade Feeble-minded	2	..	2
Residential School for Post Encephalitis Lethargica .....	..	1	1
Special Class for Dull and Backward.....	10	5	15
Industrial School .....	..	..	..
Ordinary School	3	1	4
Total	53	37	90

PHYSICALLY DEFECTIVE CHILDREN

(CRIPPLES, EPILEPTICS, ETC.).

	Boys.	Girls.	Total.
Epileptics (Definite or Suspected)	14	7	21
Cripples.....	1	..	1
„ with Tuberculosis (Lungs) .....	..	..	..
„ „ (Non-Pulmonary)	6	4	10
Rickets	5	3	8
Spinal Curvature .....	..	..	..
„ „ and Infantile Paralysis .....	..	..	..
Infantile Paralysis	7	4	11
Paralysis other than Infantile.....	5	5	10
Congenital Malformation.....	..	1	1
Delicate .....	..	..	..
Heart Disease .....	..	4	4
Deaf and Dumb	3	1	4
Deaf	1	1	2
Found Normal .....	..	..	..
Total	42	30	72

TABLE IIIa—Continued.

Recommended for	Boys.	Girls.	Total.
Special Residential School for Epileptics	3	4	7
" " Cripples.....	—	—	—
" Day Cripple School	18	17	35
Special Residential School for Deaf and Dumb..	3	—	3
Hospital School for Non-Pulmonary Tuberculosis	2	—	2
Day Open Air School	1	1	2
Unsuitable for any School	1	1	2
Deaf School	1	2	3
Ordinary School	13	5	18
Total	42	30	72

TABLE IV.

RETURN OF DEFECTS TREATED DURING THE YEAR ENDED
31ST DECEMBER, 1927.

TREATMENT TABLE.

GROUP I.—MINOR AILMENTS (EXCLUDING UNCLEANLINESS, FOR WHICH SEE
GROUP V.).

Disease or Defect.	Number of Defects Treated or under Treatment during the Year.		
	Under the Authority's Scheme.	Otherwise.	Total.
Skin—			
Ringworm, Scalp	59	3	62
" Body	129	16	145
Scabies	70	6	76
Impetigo	1165	66	1231
Other Skin Diseases	1046	137	1183
Minor Eye Defects	951	87	1038
(External and other, but excluding cases failing in Group II.).			
Minor Ear Defects	608	94	702
Miscellaneous	385	54	439
(Minor Injuries, Bruises, Sores, etc.)			
Total.....	4413	463	4876

GROUP II.—DEFECTIVE VISION AND SQUINT, EXCLUDING MINOR EYE DEFECTS
TREATED AS MINOR AILMENTS, (GROUP I.).

Defect or Disease.	Number of Defects dealt with.			
	Under the Authority's Scheme.	Submitted to refraction by Private Practitioner or at Hospital, apart from the Authority's Scheme.	Otherwise.	Total.
Errors of Refraction (including Squint)	1438	..	..	1438
Other Defects or Diseases of the Eyes (excluding those recorded in Group I.)	368	..	..	368
Total	1806	..	..	1806

Total number of children for whom spectacles were prescribed :—

- (a) Under the Authority's Scheme 1218
(b) Otherwise..... ..

Total number of children who obtained or received spectacles :—

- (a) Under the Authority's Scheme..... 1178
(b) Otherwise..... ..

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Received Operative Treatment.			Received other Forms of Treatment.	Total Number Treated.
Under the Authority's Scheme in Clinic or Hospital.	By Private Practitioner or Hospital, apart from the Authority's Scheme.	Total.		
268	162	430	211	641

GROUP IV.—DENTAL DEFECTS.

(1) Number of children who were :—		Number
(a) Inspected by the Dentist :		of
Aged :		Children. Total.
Routine Age Groups, 5 years.....		..
6	„	3,012
7	„	3,264
8	„	2,063
9	„	1,787
10	„	1,391
11	„	1,144
12	„	1,449
13	„	1,454
14	„	141
Specials		15,705
Grand Total		1,086
(b) Found to require treatment		16,791
(c) Actually treated		8,818
(d) Re-treated during the year as the result of periodical examination (included under (c) above).....		6,661
(2) Half-days devoted to (a) Inspection		208
(b) Treatment		947
(3) Attendances made by children for treatment		1,155
(4) Fillings (a) Permanent Teeth		10,529
(b) Temporary Teeth		3,734
(5) Extractions (a) Permanent Teeth		754
(b) Temporary Teeth		10,432
(6) Administrations of local anæsthetics for extractions.....		11,186
(7) Other operations (a) Permanent Teeth		9,780
(b) Temporary Teeth		865
		20
		885

GROUP V.—UNCLEANLINESS AND VERMINOUS CONDITIONS.

(i.) Average number of visits per School made during the year by the School Nurses	3
(ii.) Total number of examinations of children in the Schools by the School Nurses	95,228
(iii.) Number of individual children found unclean.....	2,533
(iv.) Number of children cleansed under arrangements made by the Local Education Authority	396
(v.) Number of cases in which legal proceedings were taken :—	
(a) Under the Education Act, 1921 .....	..
(b) Under School Attendance Byelaws .....	..

RESULTS OF TREATMENT OF DEFECTS OF CHILDREN DISCHARGED
FROM CLINICS DURING 1927

Defects or Diseases.	Remedied.	Improved.	No change or no report.	Total.	Percentage remedied.
Malnutrition.....	18	8	1	27	66.66
Uncleanliness, head	4	..	..	4	100.00
„ body .....	..	..	..	..	..
Skin—					
Ringworm, head	58	..	..	58	100.00
„ body	142	..	..	142	100.00
Scabies	77	..	..	77	100.00
Impetigo	1179	..	1	1180	99.91
Other Diseases— (Non-Tubercular)	1089	3	5	1097	99.27
Eye—					
Blepharitis	125	2	..	127	98.43
Conjunctivitis	348	2	2	352	98.86
Keratitis	22	3	..	25	88.00
Corneal Ulcer	8	..	..	8	100.00
Corneal Opacities	3	..	..	3	100.00
*Defective Vision	16	..	26	42	38.09
*Strabismus	21	1	15	37	56.76
Other Conditions	86	2	3	91	94.50
Ear—					
Defective Hearing	151	3	2	156	96.79
Otitis Media	305	6	6	317	96.21
Other Ear Diseases	40	..	..	40	100.00
Nose and Throat—					
Enlarged Tonsils.....	178	5	35	218	81.65
Adenoids.....	97	3	18	118	82.20
Enlarged Tonsils and Adenoids	358	4	63	425	84.23
Other Conditions	190	6	1	197	96.45
Enlarged Cervical Glands— (Non-Tubercular)	202	9	6	217	93.09
Defective Speech.....	10	5	..	15	66.66
*Teeth—Dental Disease.....	23	..	65	88	26.14
Heart and Circulation—					
Heart Disease, Organic .....	..	46	16	62	..
„ Functional	62	46	13	121	51.24
Anæmia	117	19	2	138	84.78

* These figures include cases coming under the notice of the School Doctor at the Inspection Clinic, and do not include the great bulk of cases treated at the Ophthalmic and Dental Clinics.

RESULTS OF TREATMENT OF DEFECTS OF CHILDREN DISCHARGED
FROM CLINICS DURING 1927—*Continued.*

Defects or Diseases.	Remedied.	Improved.	No change or no report.	Total.	Percentage remedied.
Lungs—					
Bronchitis.....	383	38	16	437	87.64
Other Non-Tubercular Diseases	35	2	..	37	94.59
Tuberculosis—					
Pulmonary, Definite	2	..	1	3	66.66
„ Suspected	49	5	10	64	76.56
Non-Pulmonary, Glands	13	4	..	17	76.47
„ Spine .....	..	..	..	..	..
„ Hip	1	1	..	2	50.00
„ Other Bones and Joints .	..	1	..	1	..
„ Skin .....	..	3	1	4	..
„ Other Forms .	8	..	1	9	88.89
Nervous System—					
Epilepsy	14	4	2	20	70.00
Chorea.....	93	18	2	113	82.30
Other Conditions	41	9	1	51	80.39
Deformities—					
Rickets	11	5	4	20	55.00
Spinal Curvature	1	1	2	4	25.00
Other Forms	10	5	5	20	50.00
Other Defects or Diseases	764	31	20	815	93.74
Delicate	201	30	11	242	83.06
Mentally Defective .....	..	..	..	..	..
Dull and Backward	3	2	..	5	60.00
Total	6558	332	356	7246	90.50

TABLE V.

SUMMARY OF TREATMENT OF DEFECTS SHOWN IN TABLE IV.

(GROUPS I., II., III. AND IV.)

Disease or Defect.	Number of children.			
	Referred for Treatment.	Treated.		
		Under Local Education Authority's Scheme.	Otherwise.	Total.
Minor Ailments	6495	4413	463	4876
Visual Defects	1806	1438	..	1438
Defects of Nose and Throat.	2113	268	373	641
Dental Defects	8818	6661	..	6661
Other Defects	4604	1127	..	1127
Total	23836	13907	836	14743

TABLE VI.

SUMMARY RELATING TO CHILDREN MEDICALLY INSPECTED AT THE
ROUTINE INSPECTIONS DURING THE YEAR 1927.

(1) The total number of children medically inspected at the routine inspections	11404
(2) The number of children in (1) suffering from—	
Malnutrition	30
Skin Disease	237
Defective Vision (including Squint)	1432
Eye Disease	113
Defective Hearing	110
Ear Disease	251
Nose and Throat Disease	1099
Enlarged Cervical Glands (non-tubercular)	57
Defective Speech	18
Dental Disease	743
Heart Disease—	
Organic	96
Functional	222
Anæmia	58
Lung Disease (non-tubercular)	321
Tuberculosis—	
Pulmonary, Definite	1
„ Suspected	20
Non-pulmonary	20
Disease of the Nervous System	82
Deformities	110
Other Defects and Diseases	709
(3) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment)	699
(4) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.)	3881
(5) The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.)	2074

TABLE Ia.

NUMBER OF CHILDREN IN SECONDARY SCHOOLS INSPECTED
DURING 1927.

A.—ROUTINE MEDICAL INSPECTION.

	Prepara- tory.	Entrants.		Intermediates.		Leavers.		Totals.
		12	13	14	15	16	17	
Boys	9	102	80	170	155	..	15	531
Girls	273	237	290	229	162	149	41	1381
Total ...	282	339	370	399	317	149	56	1912

B.—SPECIAL INSPECTIONS.

	Special Cases.	Re-examinations (i.e., No. of Children re-examined).
Boys	167
Girls	181
Totals	348

C.—TOTAL NUMBER OF INDIVIDUAL CHILDREN INSPECTED BY THE MEDICAL
OFFICER WHETHER AS ROUTINE OR SPECIAL CASES.

(No child to be counted more than once in a year.)

Number of Individual Children Inspected 1912

TABLE IIa.

A.—ROUTINE INSPECTION OF SECONDARY SCHOOLS.

Defects or Diseases.	No. referred for Treatment.	No. requiring to be kept under observation.
Malnutrition.....	..	..
Uncleanliness, head	96	..
„ body	4	..
Skin—		
Ringworm, head .....	..	..
„ body	1	..
Scabies .....	..	..
Impetigo	1	..
Other Diseases (Non-Tubercular).....	33	4
Eye—		
Blepharitis	5	2
Conjunctivitis	2	..
Keratitis .....	..	..
Corneal Ulcer .....	..	..
Corneal Opacities .....	..	..
Defective Vision	212	173
Squint ..	3	2
Other Conditions	3	1
Ear—		
Defective Hearing	6	4
Otitis Media	12	4
Other Ear Diseases .....	..	3
Nose and Throat—		
Enlarged Tonsils.....	35	19
Adenoids.....	2	2
Enlarged Tonsils and Adenoids	12	..
Other Conditions	9	3
Enlarged Cervical Glands (Non-Tubercular)..	3	..
Defective Speech	1	2
Teeth—Dental Disease	256	..
Heart and Circulation—		
Heart Disease, Organic	11	10
„ „ Functional	9	35
Anæmia	6	5
Lungs—		
Bronchitis.....	23	9
Other Non-Tubercular Diseases .....	..	3

TABLE IIa—Continued.

Defects or Diseases.	No. referred for Treatment.	No. requiring to be kept under observation.
Tuberculosis—		
Pulmonary, Definite .....	..	..
" Suspected	2	4
Non-Pulmonary, Glands.....	..	..
" Spine .....	..	..
" Hip .....	..	..
" Other Bones and Joints.	..	1
" Skin .....	..	..
" Other Forms .....	..	..
Nervous System—		
Epilepsy	1	2
Chorea.....	1	..
Other Conditions	3	15
Deformities—		
Rickets .....	..	..
Spinal Curvature	8	4
Other Forms	22	14
Other Defects or Diseases	59	52
Delicate	1	7
Mentally Defective .....	..	..
Dull and Backward .....	..	1
No. of Children Examined.....	1912	..
No. of Individual Children having Defects which required treatment or to be kept under Observation	645	317

TABLE IIa—Continued.

B.—DETAILS OF RE-EXAMINATION OF CHILDREN IN
SECONDARY SCHOOLS.

Defects or Diseases.	Had Treatment.	Not had Treatment.
Malnutrition.....	..	..
Uncleanliness, head	9	..
„ body	2	2
Skin—		
Ringworm, head .....	..	..
„ body .....	..	..
Scabies .....	..	..
Impetigo .....	..	..
Other Diseases (Non-Tubercular)	8	..
Eye—		
Blepharitis	3	1
Conjunctivitis .....	..	..
Keratitis .....	..	..
Corneal Ulcer .....	..	..
Corneal Opacities .....	..	..
Defective Vision	88	25
Squint	1	..
Other Conditions	1	..
Ear—		
Defective Hearing .....	..	2
Otitis Media	8	2
Other Ear Disease .....	..	..
Nose and Throat—		
Enlarged Tonsils.....	7	8
Adenoids.....	..	1
Enlarged Tonsils and Adenoids	5	2
Other Conditions	1	..
Enlarged Cervical Glands (Non-Tubercular) ..	2	..
Defective Speech	1	..
Teeth—		
Dental Disease	67	32
Heart and Circulation—		
Heart Disease, Organic	10	..
„ Functional	10	..
Anæmia	2	..
Lungs—		
Tuberculosis, Suspected.....	1	..
Bronchitis.....	9	..
Other Non-Tubercular Diseases .....	..	..
Tuberculosis (Non-Pulmonary)—		
Glands .....	..	..
Nervous System—		
Epilepsy	1	..
Chorea.....	..	..
Other Conditions	5	3
Deformities—		
Rickets .....	..	..
Spinal Curvature ..	4	..
Other Forms	6	..
Other Defects or Diseases	42	23
Number of Children Re-examined		348
„ Defects had Treatment		264
„ „ not had Treatment		84

TABLE IIIa.

TABLE SHOWING PREVALENCE OF PEDICULOSIS IN SECONDARY SCHOOLS
WHERE ALL THE PUPILS PRESENT WERE EXAMINED.

	BOYS.					GIRLS.				
	No. Examined.	Heads.			Vermi- nous bodies.	No. Examined.	Heads.			Vermi- nous bodies.
		A.	B.	C.			A.	B.	C.	
(A) Aggregate Numbers..	531	514	17	..	..	1,381	1,302	79	..	..
(B) Percentages..	..	96·80	3·20	..	..	..	94·28	5·72	..	..

TABLE S I.

CHILDREN EXAMINED AT THE INSPECTION CENTRES BY THE MEDICAL
INSPECTORS.

	Boys.	Girls.	Total.
New Cases.....	4251 ..	4051 ..	8302
Re-examinations	4370 ..	4108 ..	8478
Total Examinations	8621 ..	8159 ..	16780

CHILDREN EXAMINED BY THE EYE SPECIALIST.

	Boys.	Girls.	Total.
Number examined	687 ..	751 ..	1438
Spectacles prescribed for	568 ..	650 ..	1218
„ supplied	547 ..	631 ..	1178

TABLE S Ib.

MEDICAL EXAMINATION OF TEACHERS, ETC.

Teachers	13
Bursars	22
Entrants to Secondary Schools	500
Other Special Examinations	215

TABLE S IIa.

CLASSIFICATION OF SPECIAL CASES.

EXAMINED BY THE MEDICAL INSPECTORS, AT THE INSPECTION CENTRES,
DURING THE YEAR 1927.

	Boys.		Girls.		Total Examina- tions.
	1st Exam.	Re- examined.	1st Exam.	Re- examined.	
Number of cases examined.....	4251	4370	4051	4108	16780
Malnutrition	14	14	30	22	80
Cleanliness, head . . . . .	..	..	9	8	17
„ body.....	1	..	..	..	1
Skin—					
Ringworm, head	38	84	24	49	195
„ body	82	102	63	76	323
Impetigo.....	691	762	541	631	2625
Scabies	39	48	43	58	188
Alopecia	31	35	53	93	212
Other Diseases	627	583	462	441	2113
Eye—					
Defective Vision and Squint ..	70	36	79	22	207
External Eye Disease	484	756	419	625	2284
Ear—					
Defective Hearing	89	60	77	60	286
Ear Disease	313	582	256	486	1637
Teeth—					
Dental Disease	100	18	106	13	237
Nose and Throat—					
Enlarged Tonsils	116	85	194	121	516
Adenoids	87	63	61	57	268
Enlarged Tonsils and Adenoids	370	291	343	264	1268
Tonsillitis	19	22	36	39	116
Rhinitis	1	..	5	1	7
Other Diseases	84	56	82	49	271
Defective Speech	24	22	12	8	66

TABLE S IIa—Continued.

CLASSIFICATION OF SPECIAL CASES—Continued.

	Boys.		Girls.		Total Examina- tions.
	1st Exam.	Re- examined.	1st Exam.	Re- examined.	
Heart and Circulation—					
Organic Disease	101	107	114	140	462
Functional Disease	97	115	97	100	409
Anæmia	79	75	132	100	386
Lungs—					
Pulmonary { Definite	2	6	4	2	14
Tuberculosis { Suspected.....	124	111	113	86	434
Chronic Bronchitis	382	419	305	306	1412
Other Disease	31	37	27	28	123
Nervous System—					
Epilepsy	18	36	18	30	102
Chorea.....	89	153	108	160	510
Mentally Defective.....	7	2	7	8	24
Other Disease	32	29	57	51	169
Non-Pulmonary Tuberculosis—					
Glands.....	23	19	22	35	99
Bones and Joints	8	12	4	7	31
Other Forms	13	13	13	15	54
Enlarged Cervical Glands (Non- Tubercular)	132	134	138	177	581
Delicate	222	233	242	222	919
Rickets	32	17	24	19	92
Deformities	18	13	35	34	100
Other Defects or Diseases	457	360	520	528	1865
Dull and Backward	12	6	3	..	21
Abscess	23	46	20	25	114
Fit for School	5999	..	5463	..	11462

TABLE S IIIa.

BLIND, DEAF AND DEFECTIVE CHILDREN.

NEW CASES SENT TO SPECIAL SCHOOLS DURING 1927.

	Boys.	Girls.	Total.
To Royal Residential School for the Deaf	1	1	2
„ South Bank School for Partially Blind	9	13	22
„ Other Special Schools	2	2	4
TOTALS	12	16	28

TABLE S IIib.

TOTAL NUMBER OF CHILDREN MAINTAINED IN INSTITUTIONS, AT THE
PART COST OF THE COUNCIL, AS AT SEPTEMBER 30TH, 1927.

Name of Institution.	Boys.	Girls.	Total.
Henshaw's Institution for the Blind, Manchester..	3	3	6
Catholic Blind Asylum, Liverpool	1	..	1
Royal Residential Schools for the Deaf, Manchester.	20	13	33
Jews' Deaf and Dumb Home	2	..	2
St. John's Institution for the Deaf and Dumb, Boston Spa	2	..	2
Soss Moss Epileptic Colony School	1	..	1
Starnthwaite Epileptic Home	7	..	7
Home for Epileptics, Maghull	1	4	5
„ „ Chalfont St. Peter .....	..	1	1
Sandlebridge School for Feeble-minded	1	..	1
Pontville School for Mental Defectives, Ormskirk.	1	..	1
Allerton Priory School for Mental Defectives, Liverpool .....	..	1	1
Greengate Dispensary (Grimké Ward)	16	14	30
Heatherwood Hospital, Ascot	2	2	4
Swinton House.....	1	..	1
Boys' and Girls' Refuges .. }	1	..	1
Bethesda Homes for Cripples }			
TOTALS	59	38	97

TABLE S V.

INSPECTION, TREATMENT, ETC., OF CHILDREN DURING 1927.

(1) The total number of children medically inspected (whether Code Group, special or ailing child)	19,706
(2) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment)	1,844
(3) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, etc.)	9,781
(4) The number of children in (3) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.)	7,242

SECTION V.

Veterinary Inspector's Report.

DISEASES OF ANIMALS ACTS, 1894 TO 1927.

Cattle Market.

The Market was held each market day during the year with the exception of the last two market days in December, when it was closed owing to the City being in an Infected Area under the Foot and Mouth Disease (Infected Areas) Order, 1925.

The cattle exposed for sale have been regularly inspected, and with the exception of those animals dealt with under Article 12 of the Tuberculosis Order, 1925, no case of scheduled disease was found.

The following table shows the number of animals exposed for sale during the year:—

Irish, Fat and Store Cattle	24,348
Irish, Dairy Cattle	4,871
Other Fat and Store Cattle	34,461
Other Dairy Cattle.....	52
	<hr/>
	63,732
	<hr/>
Irish Sheep	18,067
Other Sheep	380,322
	<hr/>
	398,389
	<hr/>

The movement of Irish animals into and out of the Market is by licence, in accordance with the requirements of the Importation of Animals Act, 1922.

Foot and Mouth Disease.

The City remained free from restrictions until the 17th December, when a case of Foot and Mouth Disease occurred at Lymm, Cheshire. The Foot and Mouth Disease (Infected Areas) Order, 1925, was applied to an area fifteen miles round the outbreak. This area included the whole of the City of Salford, so that from that date until the end of the year movement of cattle was only permitted by licence. Strict supervision was maintained to see that the Order was complied with.

Anthrax Order of 1910.

One case of Anthrax occurred during the year. The affected animal was a cow which died suddenly in one of the authorised lairs. Instead of being reported as a case of suspected Anthrax, an attempt was made to bleed the carcase by cutting the throat, and it was then removed to the Corporation Slaughterhouse to be dressed. The skin was removed and the carcase partially opened, and it was then suspected that Anthrax was the cause of death. The examination of a sample of blood confirmed this, and the carcase was destroyed in accordance with the requirements of the Order. The slaughterhouse and lair were thoroughly disinfected.

One cannot over-emphasise the necessity of reporting all cases of sudden death so that they can be examined before any cutting takes place. No person contracted

the disease, but all those who handled the carcase exposed themselves to the risk of infection, and the work of disinfection was rendered much more difficult on account of the blood that had been spilled. Proceedings were taken against certain persons, and convictions obtained.

Tuberculosis Order, 1925.

Two cases of tuberculosis were dealt with under the above Order. Both cases occurred on the same farm, and were found on inspection of the herd under the Milk and Dairies (Consolidation) Act, 1915. In both cases a post mortem examination showed that the animals were suffering from "advanced" tuberculosis as defined by the Order, and in each case the udder was found to be affected. No other cases were reported during the year.

Market, Sales and Lairs Order, 1925.

Article 2 of the above Order came into operation on the 1st July, 1927. This Section authorised the licensing of lairs adjoining a market, used for the temporary detention of animals before or after exposure for sale, provided that the lairs were paved with a hard material, impervious to water.

Six premises, comprising seventeen separate lairs, have been licensed. They have been inspected regularly and found to be satisfactory.

Transit of Animals Order of 1927.

This Order came into force on the 1st June, 1927. By Section 27, all owners of mechanically propelled vehicles used for the conveyance of animals by road are required

to cleanse and disinfect the vehicles and appliances used in connection with animals as soon as practicable after each occasion they are used. The method of cleaning and disinfecting is definitely laid down.

A disinfecting station has been arranged at the Cattle Market where vehicles can be conveniently disinfected on being unloaded.

The railway pens and cattle trucks have been regularly inspected, and the disinfection has been carried out in a very satisfactory manner. There were 45,233 cattle trucks cleansed and disinfected during the year. The number of cattle received into and forwarded out of the City by rail was as follows :—

CATTLE RECEIVED INTO THE CITY.

Cattle.	Sheep.	Pigs.	Calves.	Horses.
92,657	699,220	4,922	3,124	160

FORWARDED OUT OF THE CITY.

Cattle.	Sheep.	Pigs.	Calves.	Horses.
34,279	198,484	542	106	111

Inspection of Meat.

SLAUGHTERHOUSES.

There are six private slaughterhouses and one public slaughterhouse within the City. The private slaughterhouses are licensed annually, three of them being used solely for killing pigs. The public slaughterhouse is at the Cattle Market, and is under the jurisdiction of the Markets Committee. It is composed of six booths, one of which is rented by a butcher, another by a horse slaughterer, and the remainder are for general use.

Constant supervision has been maintained throughout the year at all the slaughterhouses; 24,330 carcasses were inspected and 2,257 visits of inspection were made.

A number of dressed carcasses consigned from the country districts are included in the number inspected, but these have frequently been found to be unfit for food owing to carelessness in method of killing, dressing, or packing adopted by the consignors.

NUMBER OF CARCASSES INSPECTED AND DISEASED.

		No.	No.
Private Slaughterhouses	{ Cattle	2,372	87
	{ Sheep	7,257	102
	{ Pigs	12,689	512
Public Slaughterhouses	{ Cattle	520	25
	{ Sheep	1,106	111
	{ Calves	10	—
	{ Pigs	13	—
	{ Horses	363	—
		<hr/> 24,330	<hr/> 837

Unsound Food.

If only a small quantity of meat is unsound it is destroyed on the premises, under the supervision of an Inspector, but if the amount is large, it is removed to the Corporation Destructor.

The total weight of meat seized was 21 tons 8 cwts. 0 qrs. 19 lbs.

	tons.	cwts.	qrs.	lbs.	tins.
Beef	9	8	2	7	—
Mutton	3	13	1	12	—
Pork	8	6	0	11	—
Ham	—	—	—	3	—
Fish	—	—	—	14	—
Tinned Food	—	—	—	—	240
	21	8	0	19	240

Of this 10 tons 1 cwt. 2 qrs. 10 lbs., or 47 per cent, was seized on account of its being affected with tuberculosis.

TABLE SHOWING THE AMOUNT OF FOOD CONDEMNED FROM VARIOUS CAUSES.

No. of seizures.	Cause of seizure.	Weight in lbs.	No. of tins.
522	Tuberculosis	22,573	—
171	Asphyxia	7,345	—
37	Decomposition	4,104	56
33	Parasitic	321	—
27	Injury	6,105	—
22	Congestion	176	—
8	Pleurisy and Peritonitis	400	—
7	Jaundice	850	—
7	Dropsy	395	—
6	Emaciation	590	—
6	Septicæmia	2,150	—
6	Cirrhosis	62	—
4	Unsound	549	184
2	Abscess	45	—
2	Antinomycosis	30	—
2	Pyæmia	240	—
2	Pneumonia	500	—
1	Anthrax	1,120	—
1	Mould	350	—
2	Enteritis	50	—
868		47,955	240

TABLE SHOWING THE NUMBER OF PIGS INSPECTED, THE NUMBER FOUND TO BE AFFECTED WITH TUBERCULOSIS, AND THE PERCENTAGE SO AFFECTED DURING THE YEARS 1920 TO 1927.

Year.	Number Inspected.	Diseased.	Percentage.
1920.....	6,925	260	3.75
1921.....	11,111	512	4.6
1922.....	14,809	824	5.5
1923.....	13,015	606	4.6
1924.....	18,742	931	4.9
1925.....	15,684	697	4.4
1926.....	13,672	424	3.1
1927.....	12,702	512	4.03

TABLE OF MONTHLY SEIZURES OF DISEASED AND UNSOUND FOOD DISCOVERED DURING ROUTINE INSPECTION, AND OF UNSOUND FOOD SURRENDERED BY THE OWNER THEREOF.

Month	No. of seizures	Beef lbs.	Mutton lbs.	Pork lbs.	Fish lbs.	Ham lbs.	Tins of Food	Total lbs.	tins.
January ...	83	1155	995	1443	—	—	99	3593	99
February ..	80	619	1075	1535	—	—	—	3229	—
March	108	4950	2005	920	—	—	—	7875	—
April	77	1672	710	1440	—	—	—	3822	—
May	63	1408	350	1664	—	—	56	3422	56
June	41	1285	365	1150	—	—	—	2800	—
July	51	821	420	1051	—	—	—	2292	—
August	51	1125	245	1611	14	—	85	2995	85
September .	58	2454	490	1153	—	3	—	4100	—
October	41	832	666	1171	—	—	—	2669	—
November ..	69	1323	510	2491	—	—	—	4324	—
December ..	146	3475	385	2974	—	—	—	6834	—
	868	21119	8216	18603	14	3	240	47955	240

Retail Meat Shops, Food Preparing Premises, etc.

The retail meat shops have been inspected regularly. They have generally been found to be clean, and conducted in a satisfactory manner. It has been necessary

in a few instances to point out minor defects or faults, but no further action was necessary. In one instance only were proceedings taken, and that was against a retail butcher who had a quantity of unsound meat in the ice-box in his shop. A conviction was obtained and a fine of £10 imposed.

Section 20, 5(a) of the Public Health (Meat) Regulations, 1924, provides (*inter alia*) that :—

“ The occupier of any room in which any meat is
“ sold or exposed for sale or deposited for the purpose
“ of sale or of preparation for sale or with a view to
“ future sale, and any person who knowingly lets any
“ room or suffers any room to be occupied for such
“ purpose, shall take all such steps as may be reason-
“ ably necessary to guard against the contamination
“ of the meat therein by flies, and shall cause the meat
“ to be placed so as to prevent mud, filth or other
“ contaminating substance being splashed or blown
“ thereon.”

Regarding the precautions which may be considered as being reasonably necessary to prevent contamination, it is generally accepted that this phrase definitely prohibits the hanging of meat outside the shop window, but where the occupier decides to open the window, then the responsibility rests with the occupier, and he must ensure that by doing so he is not subjecting the meat to contamination. In a few instances it has been necessary to urge the occupiers to take more stringent measures to prevent contamination.

There is considerable slackness in the method of labelling imported meat. An "Imported" label is usually displayed, but very often it is displayed in such a manner that it does not indicate which meat is "Imported" and which is "Home Killed." The requirements of the Imported Food Regulations, 1921, have been pointed out to those displaying a label in this manner, and it has been found on re-inspection that the instructions given have been complied with.

Other Food Preparing Premises which have been regularly inspected are bakehouses, tripe works, pickle works, and restaurants. They are generally satisfactory. A few minor complaints have been dealt with.

Humane Slaughtering of Food Animals.

During recent years public attention has been directed to the question of humane slaughtering of animals, and in the month of March a Bye-law came into operation prescribing the methods in which animals must be killed, the chief feature of which was the use of a mechanical stunning instrument for all animals except the pig.

The facts leading up to the adoption of the Bye-law are briefly as follows :—

In 1926, representatives of the R.S.P.C.A., the Manchester Butchers' Association, the Manchester Pork Butchers' Association, the Retail Meat Traders' Association, and the members of the Health Committee met to consider the Model Bye-law relating to the humane slaughter of animals. Several points both for and against were raised. These were :—

- (1) That the pole axe is quite satisfactory, therefore there is no need for the humane killer. It was contended, however, that all users of the pole axe are not expert, and a large amount of practice is required to attain proficiency, whereas in the case of the humane killer, any slaughterman can use it after a few minutes' instruction.
- (2) That the humane killer is dangerous to human life—but it was pointed out to the meeting that any accidents in connection with the instrument were due to carelessness in the handling. Any such danger is almost entirely obviated by the use of the Captive Bolt instrument. In support of the instrument, it was also pointed out that accidents were not uncommon in using the pole axe.
- (3) That animals killed by the mechanical stunning instrument did not bleed properly, and consequently the qualities of the meat were greatly diminished. On this point the opinions of experts differed, and it was considered that there was not sufficient evidence brought forward in support of this statement.
- (4) An objection in the case of swine was that a large percentage of carcasses were "splashed," i.e., small hemorrhages appeared in the muscle. One butcher, killing about 10,000 pigs per year, stated that he had tried the humane killer, and his contention was that 25 per cent of the carcasses were "splashed."

After further discussion, it was arranged that a demonstration be held at a later date in one of the local slaughterhouses. This demonstration took place, and it was then decided to adopt the Bye-law making humane killing compulsory for all animals except swine, and that the Veterinary Inspector be asked to give a report in six months' time regarding the use of the mechanical stunning instrument on swine.

The report on swine was submitted in August, and the Health Committee passed a resolution to include swine in the Bye-law already in force.

The chief objection to the inclusion of swine was the occurrence of "splashing." It was found, however, that provided the pigs were bled immediately they were stunned, and if a short bolt was used, so as not to penetrate so far into the brain, the number of "splashed" carcasses was greatly reduced. The butcher previously referred to as having 25 per cent of his pig carcasses "splashed" declares that this has now been reduced to 2 per cent.

The provisions of the Bye-law have not yet come into force so far as swine are concerned, but the majority of pigs killed in Salford during the last two years have been killed by means of a mechanical stunning instrument, and the firms using them have expressed themselves as being satisfied with this method.

THE MILK SUPPLY.

Tuberculous Milk.

During the year 371 milk samples from farm supplies were examined for tubercle bacilli and 31, or 8·3 per cent,

were found to contain tubercle bacilli. When a sample of milk was found to contain tubercle bacilli, it was dealt with under the Milk and Dairies (Consolidation) Act, 1915, i.e., notification was sent to the Medical Officer of Health for the County in which the farm was situate. The County Medical Officer of Health then arranged for the County Veterinary Inspector to make an examination of the herd, at the same time notifying the farmer and the Medical Officer of Health of Salford of the time of the intended visit, so that they might be represented at the examination.

In the case of a positive sample taken from the West Riding of Yorkshire, this laborious procedure is somewhat modified. Here, the Medical Officer of Health for the County, on receiving notice, notifies the Veterinary Inspector, who communicates with the Medical Officer of Health of the Local Authority giving notice, and arranges for an examination of the herd. The farmer is not notified, the inspection being made under the powers conferred by the Tuberculosis Order, 1925. This procedure, I think, has a decided advantage, as it is quicker and it prevents an unscrupulous farmer from getting rid of any suspected cow before the visit of inspection is made.

Of the thirty-one farms giving a positive result, nine were found to have one cow with tuberculosis of the udder, and four had two cows affected. Of the remaining eighteen farms, no cow was found with tuberculosis of the udder, and a mixed sample of milk taken at the time of the examination was found not to contain tubercle bacilli. Of these eighteen farms, a history was obtained in the case of fifteen, that one or more cows had been

sold between the taking of the sample and the examination of the herd. One must remember that the shortest period which must elapse between taking the sample and examining the herd is three to four weeks, so that there is frequently some movement of cattle off the farm during that period.

On the remaining three farms there was no history of any cows having been sold. There are several possibilities which might account for that, e.g., it is known that a cow may eliminate tubercle bacilli in the milk at one milking, and that the milk may be free at the next subsequent milking, or there may have been improper sterilisation of the utensils, mixing of the sample, or in the case of an unscrupulous farmer, hiding a suspicious cow or disposing of one without declaring it. There is also the chance that the affected cow may have "gone dry" before the examination was made and consequently her milk would not be in the sample.

In reviewing the results obtained during the year, the first thing which strikes one is that there has not been any improvement in the milk supply so far as tuberculosis is concerned. The Counties from which we draw the bulk of our milk do not exercise the full powers conferred under the Milk and Dairies (Consolidation) Act, 1915. They have the power to inspect all the herds under their control, but, except in the case of Yorkshire, no herd is examined unless, and until, a report of suspected tuberculosis is received. It is too soon yet to say what the result of routine inspection will be in the Counties where this is carried out. It certainly will not be the means of

eliminating tuberculosis from the milk, but it should have the effect of lowering the percentage of positive samples. Most of the cases which are found on examining a herd after finding tubercle bacilli in the milk are of several months' standing, and the majority of them should have been reported by the farmers under the Tuberculosis Order of 1925, so that they could be examined. In favour of routine inspection of the herds one may say :— (1) several of the cases would be found at an earlier stage of the disease, (2) it would cause the farmers to report suspicious cases so that they could be examined, and (3) it would lower the percentage of positive samples.

TABLE SHOWING NUMBER OF SAMPLES OF MILK OBTAINED FROM VARIOUS COUNTIES, AND THE NUMBER AND PERCENTAGE FOUND TO BE TUBERCULOUS, FOR THE YEARS 1920 TO 1927.

	Year 1920.			Year 1921.			Year 1922.			Year 1923.			Year 1924.			Year 1925.			Year 1926.			Year 1927.		
	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.	Total number of samples examined.	Number positive.	Percentage positive.
Cheshire	83	12	14.4	104	13	12.5	89	8	9.0	123	17	13.8	256	14	11.1	203	22	10.8	157	14	8.9	178	20	11.2
Lancashire	112	3	2.6	105	3	2.8	76	1	1.3	94	5	5.3	76	6	8.0	90	4	4.4	152	7	4.6	124	6	4.8
Yorkshire	11	2	18.1	34	1	3.0	12	..	..	21	1	4.7	14	..	..	16	1	6.2	17	1	6.0	41	4	9.7
Staffordshire	17	1	5.8	13	1	7.7	2	..	..	7	..	..	7	1	14.3	2	..	..	1	..	..	8	1	12.5
Derbyshire	31	1	3.2	22	..	..	18	1	5.5	31	..	..	39	2	5.0	14	2	14.3	..	..	..	9	..	..
Shropshire	1	..	..	4	1	25.0	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Westmorland .....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Cumberland	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Somerset	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wales	1	..	..	1	..	..	..	..	..	1	1	100.0	1	..	..	..	..	..	..	..	..	..	..	..
Scotland .....	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..
Mixed .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pasteurised .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	..	..
Total for year	264	19	7.2	284	19	6.7	197	10	5.08	278	24	8.63	265	23	8.7	331	29	8.75	329	22	6.68	371	31	8.3

Inspection of Farms Within the City.

There are six cow-keepers in the City with a total stock of approximately one hundred and fifteen cattle. These farms have been visited regularly throughout the year, and special attention has been directed to the health and cleanliness of the cows and the cleanliness of the buildings and utensils and to the methods of handling the milk. Sufficient care is not yet being paid to the cleanliness of the cows and cow-sheds, but some improvement has been obtained by pointing out to the farmers the manner in which these defects could be remedied. The construction of some of the cow-sheds is not all that could be desired, but to insist on any alterations would mean putting the occupier to considerable expense which is not warranted if the cows and cow-sheds are kept clean.

Two cows were found, on inspection of the herds, to be affected with tuberculosis of the udder and giving tuberculous milk. These were dealt with under the Tuberculosis Order, 1925. No other cows were found affected with any of the diseases specified under the Milk and Dairies (Consolidation) Act, 1915, and their general health and condition was good.

Inspection of Dairies.

The distribution of milk in Salford is carried out by :—

Large depôts in Manchester.

Large depôts in Salford.

Roundsmen.

Retail Shops.

The inspection of the large depôts in Manchester is carried out by the Manchester Milk Inspectors.

There are seven large depôts in Salford from which milk is distributed, either directly to the consumer or through the retail shops. In this class of dairy the facilities for washing the milk vessels and utensils are good; in every case the vessels are sterilised by steam. About 90 per cent of the milk which is sold from these depôts is either "Pasteurised" or "Sterilised," but that which is "Pasteurised" is not sold as such, and therefore no supervision is maintained over the method employed. The milk may be heated to any temperature and not necessarily kept within the temperatures allowed in the Milk (Special Designations) Order, 1923. This is the objection to this method of Pasteurisation; it is done purely for commercial reasons.

Regarding the class which I have referred to as Roundsmen, there are thirty-five dealers who may be classified thus, and by that I refer to dealers who receive one or two farmers' milk each day and distribute it in the locality in which the dairy is situate. Generally speaking, this class of dealer is satisfactory, but it has been necessary to make complaints in several instances regarding the accommodation available for storage of surplus milk and also the lack of boiling water for sterilisation of the cans on their being emptied.

There are approximately seven hundred and sixty shops retailing milk. There is only a very small percentage of these that are "dairies" and kept solely for the sale of milk or milk produce. The others all sell some

other commodity, and only sell a comparatively small quantity of milk. These shops are classified thus :—

Other Commodity Sold.	Percentage of total shops.
Groceries	51·6
Confectionery	9·2
Dairy Produce	14·7
Mixed Business	19·2
Miscellaneous	5·3
	<hr/> 100·0

The “mixed business” includes shops selling an assortment of articles, and the miscellaneous include :—
Off-licences 6, butchers 2, tripe 8, groceries and beer 13, groceries and drapery 1, dairy and tripe 1, tobacco 8.

When one realises how readily milk absorbs odours and flavours, one can appreciate how undesirable it is for milk to be kept in close proximity to certain articles. That, however, is not the chief objection to these shops, but the fact that in a great many instances the shop is overcrowded and there is no proper accommodation for washing and storing the milk vessels. This class of milk dealer is undesirable, and the matter is at present under consideration.

Milk (Special Designations) Order, 1923.

The following licences were granted under the above Order :—

- 7 Dealers' Licences to sell milk as “Certified” ;
- 6 Dealers' Licences to sell milk as “Pasteurised” ;
- 1 Supplementary Licence to sell milk as “Certified” ;
- 2 Supplementary Licences to sell milk as “Pasteurised.”

This number shows an increase on last year, but there is still comparatively little "graded" milk sold. The chief cause for that is that the price asked for Grade "A" milk or for any corresponding grade of milk is such that it is prohibitive for most people. If the general public understood the significance of the various grades and the conditions under which the milk is produced, then I am sure there would be an increase in the amount of Grade "A" milk consumed, and this would have the ultimate effect of lowering the cost. It is rather a pity that milk is sold under so many designations, both official and unofficial, because it all tends to mystify the public. It would be beneficial if only two or three designations were allowed.

Referring to the cost of production of "Certified" and Grade "A" (Tuberculin Tested) Milk, it must be more than is required for ordinary milk, because, apart from the extra expense incurred in altering the buildings, installing new plant, and maintaining the herd in the required condition, there is the additional cost of replacing cows which re-act to the tuberculin test, as all such cows have to be removed from the herd and replaced by non-reactors. With regard to Grade "A" milk however, the cost of production is very little more than is required for ordinary milk, as the only extra expense incurred is the fee for clinical examination of the herd by a Veterinary Surgeon every three months. The conditions applying to buildings and cattle are no more than are required for any farm under the Milk and Dairies (Consolidation) Act, 1915. The maximum number of organisms allowed per c.c. (200,000) is exceedingly liberal, and a bacterial content

under this number can be obtained without any great effort on the part of the producer.

There is one other point worthy of mention, and that concerns ordinary raw milk. At the present time there is no bacterial standard for ordinary raw milk. It is not an offence to sell milk containing any number of organisms, and the careless producer receives the same return for his milk as the man who goes to the trouble of producing clean milk. One can of dirty milk when mixed with clean milk contaminates the whole supply. All milk should be produced to conform to the standard of bacterial content which is specified for Grade "A" Milk, and it should be an offence to produce milk with a bacterial content exceeding that standard—provided the milk is examined within a stated time after production, and that other conditions such as care and treatment of the milk before examination are adhered to.

OFFENSIVE TRADES.

The following is a list of the offensive trades in the City :—

Nature of Trades.	City.	Discontinued.	Newly Registered.
Tripe Dressing	4	..	..
Soap Works	3	..	..
Fat Boiling.....	..	..	..
Tanneries	1	..	..
Skin Dressers	1	..	..
Gut Scrapers	2	..	..
Total	11	..	..

Bacteriological Laboratory Report.

BACTERIOLOGICAL LABORATORY.

I have pleasure in submitting the following report as to the work carried out in the Municipal Bacteriological Laboratory during the year 1927 :—

During 1927 there were no outbreaks of food poisoning or infectious disease in Salford requiring bacteriological investigation.

It will be noted that 1,086 swabs were examined for Vincent's Angina, this being due to the fact that all throat swabs, apart from those at Ladywell Sanatorium, are examined by direct smear as well as by culture, the organisms of Vincent's Angina being looked for in addition to those of Diphtheria. Quite a number of cases of Vincent's Angina were diagnosed in this way which would otherwise have been missed, as the causal organism of this disease does not grow on culture. The prevalence of this infection, which in its early stage can resemble Diphtheria, may be gauged from the following table :—

Total Swabs Examined.	No. of cases of Vincent's Angina.
1,086.	22.

With regard to Diphtheria, the direct smear is generally regarded as being of little or no value as an aid to

diagnosis. The following table shows this not to be the case :—

Age of Patient.	Smear Positive and Culture Positive.	Smear Positive and Culture Negative.	Smear Negative and Culture Positive.
Under 10 years	36	0	66
Over 10 years	18	6	42
Age not given	4	1	22
Total at all ages	58	7	130

It will be seen that approximately 31 per cent of all cases which were positive on culture were also positive on direct smear, while in children under 10 years of age, over 35 per cent of positive cases were positive on direct smear. As the direct smear method, if positive, gives the result a day earlier, the extra trouble and time involved is well justified. A negative result on direct smear, of course, does not exclude Diphtheria, as many cases are positive the following day on culture.

In cases over 10 years, one occasionally gets a swab positive on direct smear which proves negative on culture. There is no satisfactory explanation of this anomaly.

The appended table gives an account of the work done at the Laboratory and for Ladywell Sanatorium during the year 1927. The total number of examinations made was 11,362, which shows a very substantial increase on the previous year's work.

Shortly after the arrival of Dr. Crawford, application was made to the Ministry of Health to have the Labor-

atory sanctioned for the performance of Wassermanns, and as soon as permission was obtained, the Department was fully equipped for this purpose, the work being transferred from the Public Health Laboratory, York Place, Manchester, to our own Laboratory in November. This has meant a considerable increase in the work of the Department, as the weekly preparation of materials and apparatus for performing this test, the continual making up and issuing of outfits, in addition to the actual performance of the test, occupy the total Laboratory staff now employed for at least a quarter of their time.

The Department has also been equipped for the preparation of vaccines and for cutting and staining sections of tissues removed at operation, etc., which require microscopical examination. Thirty-seven autogenous vaccines were prepared, the majority of these being made for virulent Diphtheria carriers at Ladywell Sanatorium. Only four histological sections were reported on for Hope Hospital, as this work was undertaken late in the year, but one hopes to see a marked increase in this branch next year.

Experiments testing the efficiency of the disinfectors at Ladywell Sanatorium and Mode Wheel were carried out. These were found to be satisfactory. Some work was also undertaken at the Municipal Maternity Home to test the possibility of air borne infection in the wards. Plates of bacteriological media were exposed to the air of the ward for varying periods and then incubated for growth of bacteria. It was found that only a few non-pathogenic organisms grew on the exposed media, thus

sustaining the generally accepted view that air borne infection is practically negligible.

In conclusion, one wishes to emphasise the fact that the work entailed, in order to report on over 11,000 specimens, in the preparation of bacteriological media, preparation and issuing of Wassermann, Diphtheria, Milk and Sputum Outfits, writing up and duplicating bacteriological and pathological reports, cleansing and sterilising of used material, cutting and staining of histological sections, and many other things too numerous to mention, is enormous and only fully appreciated by those who have actually worked in a Pathological Laboratory.

SOURCES FROM WHICH PATHOLOGICAL SPECIMENS WERE RECEIVED.

Nature of Investigation.	Ladywell Sanatorium.	Veterinary Dept.	T. B. Dept.	School Medical Dept.	M. & C. W. Dept.	General Practitioners.	Hope Hospital.	Salford Royal Hospital.	Corporation.	TOTAL.
Examination of Throat Swabs for Diphtheria	6380	..	..	129	4	998	67	..	..	7578
Examination of Throat Swabs for Vincent's Angina .....	..	..	..	111	4	944	27	..	..	1086
Virulence Tests of Diphtheria Organisms	29	..	..	1	..	..	1	..	..	31
Preparation of Autogenous Vaccines	33	..	..	..	4	..	..	..	..	37
Examination of Sputa for Tubercle bacilli	276	..	738	..	..	561	25	..	..	1600
Biological tests of milk for tuberculosis	3	461	..	..	..	1	..	1	..	466
Bacteriological examination of milk .....	..	168	..	..	..	..	..	..	..	168
Widal Reactions	11	..	..	..	..	11	6	..	..	28
Disinfection experiments ...	22	..	..	..	..	..	..	..	11	33
Bacteriological and Cytologi- cal examination of Urine	14	..	2	..	8	8	..	1	..	33
Bacteriological examination of Fæces	13	..	..	..	..	5	..	..	..	18
Examination of Hairs and Scales for Ringworm .....	..	..	..	38	1	..	..	..	..	39
Examination of blood films..	1	..	..	..	4	..	..	..	..	5
Examination of blood for Anthrax .....	..	9	..	..	..	..	..	..	..	9
Autopsies	6	..	..	..	..	..	..	..	..	6
Wassermann Reaction .....	..	..	..	..	2	18	22	126	..	168
Blood Cultures.....	..	..	..	..	..	..	1	..	..	1
Examination for Gonococci..	..	..	..	..	36	5	..	..	..	41
Miscellaneous	2	..	..	..	..	..	..	..	..	2
Bacteriological and Cytologi- cal examination of Cerebro —Spinal Fluid	7	..	..	..	1	1	..	..	..	9
Histological sections .....	..	..	..	..	..	..	4	..	..	4
TOTALS	6797	638	740	279	64	2552	153	128	11	11362

SECTION VI.

City Analyst's Report.

During the year 3247 samples have been submitted for analysis. Of these, 1482 were taken in connection with the Sale of Food and Drugs Acts, while 1765 were submitted by various Corporation Departments.

Of the 1482 samples taken under the Sale of Food and Drugs Acts, 64 or 43 per cent, were returned as adulterated.

Samples taken under the Sale of Food and Drugs Act.

The following table gives complete details regarding the various articles examined :—

TABLE 1.

SAMPLES.	Number Examined.	Number Adulterated.		Percentage of Adulteration.
		Preservatives Only.	Other ways.	
Milk	1028	—	22	2·14
Skimmed Milk.....	1	—	—	—
Dried Milk	2	—	—	—
Condensed Milk	10	—	—	—
Malted Milk	1	—	1	100·0
Butter	54	—	—	—
Cheshire Cheese	18	—	—	—
Cheese (other varieties) .	8	—	2	25·0
Dutch Cheese	2	—	—	—
Lard	10	—	—	—
Margarine	5	—	—	—
Cream	4	2	—	50·0
Preserved Cream	6	—	—	—
Tinned Cream	1	—	—	—
Tea	25	—	—	—
Coffee	19	—	—	—
Coffee and Chicory	2	—	—	—
Coffee Essence.....	2	—	—	—
Cocoa	5	—	—	—
Jam	30	5	12	56·6
Sugar.....	9	—	—	—
Bread	2	—	—	—
Sausage	8	—	—	—
Self Raising Flour	4	—	—	—
Ground Rice	5	—	—	—
Arrowroot.....	5	—	—	—
Beef Suet	4	—	—	—
Jelly	7	—	—	—
Baking Powder	1	—	—	—
Custard Powder	3	—	—	—
New Laid Eggs	1	—	1	100·0
Fish and Meat Paste ...	2	—	—	—
Biscuits	2	—	—	—
Cayenne	6	—	—	—

TABLE 1—Continued.

SAMPLES.	Number Examined.	Number Adulterated.		Percentage of Adulteration.
		Preservatives Only.	Other ways.	
" Farola "	1	—	—	—
" Rum and Coffee "	1	—	1	100.0
Ground Almonds	1	—	—	—
Cream of Tomato Soup .	1	—	—	—
Toffee and other Sweets.	15	—	2	13.3
Frozen Beef	1	—	—	—
Farina	1	—	—	—
Vinegar	4	—	—	—
Non-Alcoholic Wine	8	—	—	—
Whisky	20	—	4	20.0
Malt Extract	2	—	—	—
Cod Liver Oil and Malt ..	2	—	—	—
Epsom Salts	17	—	—	—
Glauber Salts	8	—	—	—
Rochelle Salts	7	—	—	—
Cream of Tartar	11	—	—	—
Boracic Ointment	5	—	1	20.0
White Precipitate Ointment	6	—	—	—
Sulphur Ointment	7	—	3	42.9
Potassium Iodide	5	—	—	—
Tincture of Iodine	6	—	1	16.6
Borax	6	—	—	—
Potassium Permanganate	6	—	—	—
Iron Pills	8	—	3	37.5
Grey Powder	5	—	2	40.0
Chlorodyne	2	—	—	—
Chlorodyne Lozenges and Pastilles	9	—	—	—
Other Medicated Pastilles	3	—	—	—
Castor Oil	6	—	—	—
Glycerine	6	—	—	—
Turpentine	4	—	—	—
Formalin Tablets	1	—	—	—
Cod Liver Oil Tablets...	2	—	2	100.0
Preservative	1	—	—	—
Tripe Bleach	2	—	—	—
	1482	7	57	4.32

The total number of samples is greater than that for any previous year with the exception of 1924, and represents a purchase of 593 samples per 100,000 of the population, which is a greater number than that taken by most other local authorities. Of the total samples 64, or 4·3 per cent, were returned as adulterated. Comparative figures for adulteration in previous years are given in Table 2.

TABLE 2.

COMPARATIVE PERCENTAGE OF ADULTERATION.

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Percentage of Adulteration	4·0	8·8	6·3	8·7	5·6	6·9	4·3	7·7	4·5	4·3
Total Samples .	1,237	1,234	1,410	1,364	1,452	1,383	1,544	1,396	1,387	1,482
Formal Samples	858	657	807	623	653	644	775	752	765	744
Informal „	379	577	603	741	799	744	769	644	622	738
No. of Samples per 100,000 persons	591	546	599	570	607	577	641	572	563	593

It will be noticed that in the above table the total samples are divided into two parts, named respectively “Formal” and “Informal” samples. “Formal” samples are those which are taken in accordance with Section 14 of the Sale of Food and Drugs Acts, 1875, which reads, “The person purchasing any article with the intention of submitting the same for analysis shall . . . forthwith notify to the seller . . . his intention to have the same analysed by the Public Analyst and shall divide the sample into three parts . . . and shall deliver one of the parts to the seller. He shall retain one of the said

parts for future comparison and submit the third part to the Analyst."

In the case of "Informal" samples the formalities of the Act are not complied with, and usually the vendor is not aware that the sample has been bought for the purpose of analysis. Informal samples serve a very useful purpose since they enable the Inspector to find out at what shops adulteration is being practised, without causing annoyance to honest shopkeepers, whose chief objections to the taking of samples are that the Inspector takes up their time and counter space for the division of samples, and that his (the Inspector's) action excites the curiosity of his customers and may arouse their suspicions. The buying of an informal sample is a very simple matter, requiring much less time and trouble than the purchase of a formal sample. No legal action under the Sale of Food and Drugs Acts can take place with respect to an informal sample, but if the latter, upon examination, proves to be adulterated, a formal sample may, if necessary, be taken, and proceedings may then be instituted, which are generally taken under Section 6 of the Act. This makes it an offence to "sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance and quality demanded."

So far as chemical examination goes, informal samples are treated in precisely the same way as formal ones. The same care is necessarily bestowed on the analysis, since adulteration is generally detected by this means (except in the case of milk) and in cases where some

particularly ingenious adulteration has been practised practically all the work is done on the informal sample, thus rendering the analysis of the subsequent formal sample a comparatively simple matter.

The adulteration of foodstuffs nowadays is not the crude, unscientific business it once was ; it is conducted on scientific lines and as much time and ingenuity are spent on it as the analyst is often compelled to use to detect it. It is now very seldom that such obvious adulteration is practised as, for example, the addition of sand to sugar. Addition or substitution of a foreign substance, or the abstraction of a natural one, is usually so well disguised, that very careful examination has to be made before it is discovered. It is plain, therefore, that informal samples cannot be examined by the so-called rough sorting methods, but that, on the contrary, it is necessary to be always on the watch for a new, and often far from obvious, form of adulteration.

It is the policy in Salford to take a case to court only as a last resort. There are times, of course, when the offence is so flagrant that the only course to be adopted is to institute proceedings forthwith. There are other less serious cases which are met in the first instance by a caution from the Medical Officer of Health, and there are finally a comparatively large number, particularly those relating to the labelling of an article, which are made the subject of negotiation. An interview is arranged with the makers of the article in question and in the course of an informal conversation, the matter is thrashed out. In the majority of cases a satisfactory conclusion is arrived at

by this means. If the views of the two parties are found to conflict so much that no agreement is possible, the matter can still be submitted to the decision of the courts. It is, however, found that the majority of the firms concerned are quite willing to fall in with any reasonable suggestions made to them.

During the year the question of the proper labelling of goods has been the cause of a number of these informal meetings, and there seems to be a growing tendency for manufacturers to make misleading statements of the kind described later in the Report. The ordinary purchaser has no means of verifying these statements for himself, but the difficulty could be met by requiring manufacturers to give on the label the ingredients used and their approximate amounts. No honest manufacturer would have anything to fear from such a measure of reform, and the purchaser would have some idea of what he was buying, which at present is emphatically not the case. For example, the customer is entitled to know, when buying chicken and ham paste, what the proportions of chicken and ham actually are. Probably the knowledge would surprise many people. One is reminded in this connection of an old story, which I quote at the risk of being thought frivolous. The proprietor of an eating house was long suspected of introducing an illicit ingredient into his famous rabbit pies in order to give them their piquant flavour, and was at length obliged to admit that he used a little horseflesh as well as rabbit. "How much horseflesh do you put in?" he was asked, "Oh," said he, "'fifty-fifty,' one horse, one rabbit." The parallel need not be carried too far, but it must be

admitted that the principle involved is, to say the least of it, of considerable interest to some of the less scrupulous manufacturers.

The provisions of the Sale of Food and Drugs Act were originally meant to apply principally to retail sales over the counter of the ordinary simple commodities. But the Act is now over fifty years old and conditions are very different from what they were in 1875 when it was passed. The opportunities for profitable adulteration and misrepresentation have now largely passed from the hands of retailers to those of wholesale manufacturers. The housewife does not now, except in comparatively few cases, make everything at home. She buys the ready made articles instead, and the manufacture of these has passed almost entirely into the hands of large firms. It is an exceedingly difficult and costly matter to prosecute successfully a big wholesale manufacturer for an irregularity in the composition of his products, by means of an Act which was designed to prevent the *retail* sale over the counter of an adulterated article. The only Section of the Act which allows of a prosecution being taken directly against the manufacturer is Section 27, which provides that, "Every person who shall wilfully give a label which shall falsely describe the article sold, shall be guilty of an offence under this Act." Unfortunately the word "wilfully" renders the section practically inoperative. It is very seldom indeed that the prosecution can prove that a false label has been *wilfully* given.

Apart from this section, the only other method of getting at the actual manufacturer is to buy a sample at a

retail shop and prosecute the retailer for the sale. If the latter is fortunate enough to have a sufficient warranty of the purity of the article from his wholesaler, the case against him may be dismissed on the production of such warranty. The wholesaler may then be proceeded against for the false warranty. If he possesses a warranty from the manufacturer the process may be repeated and the manufacturer himself prosecuted for giving a false warranty. But if the latter states in court that he believed in the accuracy of the statements contained in the warranty he may also be discharged. Such a cumbrous and antiquated method of getting at the real offender obviously gives him plenty of loopholes for escape, while if the retailer does not possess any warranty he may be fined for an offence of which he is ignorant, and the maker himself escape altogether.

The Act needs thorough revision to bring it up-to-date, and to enable local authorities to proceed directly against the real offender, be he retailer, wholesaler or manufacturer, without being under the necessity of prosecuting innocent people.

Milk.

One thousand and twenty-eight samples of milk have been examined during the year, of which number 22, or 2.1 per cent have been returned as adulterated. This is the lowest figure on record for Salford. The excellent quality of the milk samples taken during the year has been one of the most striking features of the year's work. During the last two quarters of the year particularly the quality was extraordinarily consistent, there being only eight samples returned as adulterated. Of these, 6 were taken from one farmer and the poor quality was as much

due to abnormality of composition as to deliberate adulteration.

During the last three months of the year, the percentages of fat in the samples were unusually high, and for each of these three months the average figure for fat content for the whole of the samples taken was over 4 per cent, the average for October being as high as 4.25. The corresponding figures for the last three months of 1926 were 3.79 per cent, 3.69 per cent and 3.69 per cent, respectively, and these may be taken as average figures so far as Salford is concerned. The extraordinarily good quality of the milk samples taken during the last quarter of 1927 is thus very clearly demonstrated. The following table gives some idea of the remarkable figures obtained for the percentages of fat for the months, October to December.

TABLE 3.

FAT CONTENT OF MILK SAMPLES, OCTOBER TO DECEMBER, 1927.

Fat, per cent.	Percentage of Total Samples.		
	October.	November.	December.
3.7 per cent and over.....	96.0	92.2	76.5
4.0 per cent and over.....	71.0	68.9	51.8
4.5 per cent and over.....	25.0	21.1	18.5

The excellent quality of the milk samples will be appreciated if it is recollected that a sample under the Sale of Milk Regulations, 1901, is presumed to be genuine, so far as the fat is concerned, if it contains 3.0 per cent.

Table 4 gives the percentages of adulteration of milk in Salford for the past twelve years, and the average compositions of the milk samples taken in Salford during 1927 will be found in Tables 5, 6 and 7. Table 5 gives

the composition of the whole of the samples taken. Table 6 gives the composition of the milk delivered by farmers, whether by road or rail. The amount sent by road has largely increased during the past year and its advantages both from the point of view of the farmer and the wholesaler are obvious, as the churns are taken direct from the farm to the latter's premises. The sampling of such milk is, however, rather more difficult than the sampling of milk sent by rail since the driver of the lorry is generally in constant touch with the farmer and is likely to inform him when samples have been taken, with the result that further adulterated samples may be unobtainable. Table 7 gives the composition of the milk retailed in the City whether in shops or carts.

The samples include 36 taken at Ladywell Sanatorium, 13 at the Maternity Home, 1 at the Open Air School and 38 at Hope Hospital. The milk delivered to the first three mentioned of these institutions is delivered in bulk in sealed cans, and under the existing contract must be of Grade A quality and contain at least 3.25 per cent of fat. This latter standard has been well maintained during the year, the average fat content for the samples taken at Ladywell Sanatorium being 3.9 per cent, and at the Maternity Home 4.0 per cent. The single sample taken at the Open Air School contained 3.8 per cent of fat.

TABLE 4.
ADULTERATION OF MILK.

	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Number of Samples.	386	539	865	829	981	899	923	779	833	921	994	1028
Percentage of Adulteration.	10.1	2.4	3.1	7.1	7.2	8.9	5.3	5.4	2.6	4.7	2.5	2.1

TABLE 5.
AVERAGE COMPOSITION OF ALL MILK SAMPLES, 1927.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids not fat per cent.
January	97	12.35	3.63	8.72
February	84			
March	106			
April	96	12.45	3.57	8.88
May	59			
June	90			
July	28	12.57	3.81	8.76
August	109			
September	93			
October	101	13.05	4.15	8.90
November	90			
December	81			
TOTAL	1028	12.61	3.80	8.81

TABLE 6.
AVERAGE COMPOSITION OF STATION MILK SAMPLES, 1927.

Month	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids not fat per cent.
January	23	12.27	3.61	8.66
February	11			
March	39			
April	23	12.58	3.64	8.94
May	18			
June	38			
July	12	12.33	3.61	8.72
August	23			
September	2			
October	12	13.01	4.21	8.80
November	13			
December	29			
TOTAL	246	12.54	3.75	8.79

TABLE 7.
AVERAGE COMPOSITION OF MILK SAMPLES OTHER THAN
STATION MILKS, 1927.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids not fat per cent.
January	74	12·37	3·63	8·74
February	73			
March	67			
April	67	12·39	3·53	8·86
May	41			
June	52			
July	16	12·63	3·86	8·77
August	83			
September	91			
October	89	13·07	4·14	8·93
November	77			
December	52			
TOTAL	782	12·63	3·81	8·82

Table 8 gives the average composition of the whole of the samples of milk taken in Salford for the past twelve years. For the purpose of comparison, the average results given in the reports of other Public Analysts are also tabulated, together with the averages for the whole of the milk samples taken in Salford during the years, 1915-1927.

TABLE 8.

Place.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids not fat per cent.
Salford .....1927	1028	12·61	3·80	8·81
Birmingham .....1927	2568	12·45	3·63	8·82
Lancashire .....1927	2467	12·70	3·76	8·94
Kent .....1926	1666	12·57	3·74	8·83
Portsmouth .....1926	588	12·50	3·67	8·83
Average, Salford 1915-1927	10446	12·48	3·64	8·84

All samples, whether genuine or adulterated, are included and this fact of course tends to make the figures lower than they otherwise would be. In some cases several adulterated samples may be taken from a vendor whose supply lies under suspicion and the inclusion of these in the averages will still further reduce the average figures by a disproportionate amount. Actually, therefore, the quality of the milk sold in Salford and other districts is appreciably better than appears in the tables.

Table 9 contains a list of the samples of milk found to be adulterated, together with the action taken in respect of each sample.

TABLE 9.

No. of Sample.	Nature of Adulteration.	Action taken.	Remarks.
7442	Deficient 8.2% solids-not-fat.	None.	Shopkeeper, see 7458-60.
7458	Deficient 3.5% solids-not-fat.	} Referred to Manchester Authority.	Farmer supplying shopkeeper above.
7459	Deficient 4.7% solids-not-fat.		
7460	Deficient 3.5% solids-not-fat.		
7514	Deficient 6.2% solids-not-fat.		
7545	Deficient 11.7% fat.	Fined £5.	Shopkeeper.
7548	Deficient 3.5% solids-not-fat.	Fined £1.	Shopkeeper.
		Further samples taken.	Farmer. Subsequent samples genuine.
7635	Deficient 3.5% solids-not-fat.	Caution.	Farmer.
7891	Deficient 3.5% solids-not-fat.	Further samples taken.	Cafe. Subsequent samples genuine.
8035	Deficient 10.0% fat.	Farm visited.	
8100	Deficient 16.7% fat.	} Fined £3.	Shopkeeper.
8107	Deficient 41.7% fat.		
8103	Deficient 6.7% fat.	} Farmer supplying visited.	Shopkeeper.
8104	Deficient 6.7% fat.		
8243	Deficient 10.0% fat.	Caution.	Shopkeeper.
8249	Deficient 13.3% fat.	Caution.	Shopkeeper.
8795	Deficient 16.5% solids-not-fat	} Caution.	Farmer.
8796	Deficient 16.5% solids-not-fat		
8797	Deficient 17.6% solids-not-fat		
8807	Deficient 11.8% solids-not-fat		
8808	Deficient 7.0% solids-not-fat		
8809	Deficient 11.8% solids-not-fat		

Sample No. 7442 was bought at a small shop. A second sample taken on the following day was found to be genuine, and a sample taken later in the day from the wholesale dealer was also of good quality.

Two days later a series of samples from several farmers supplying the wholesale dealer was taken at Central Station. Of these samples, three from one farmer were adulterated and a fourth was slightly below the Board of Agriculture limit. The three adulterated samples were those numbered 7458, 7459 and 7460. Under the Milk and Dairies (Consolidation) Act, 1915, a Local Authority within whose area milk is being sold from any dairy outside that area, may require the outside Authority to take samples of milk at that dairy, and such samples are deemed, for the purpose of the Sale of Food and Drugs Acts, to have been taken within the area of the Local Authority giving the notice. In the above case, however, the question was complicated by the fact that the milk from the farmer mentioned was consigned to a wholesale dealer whose place of business is in Manchester, and this caused a difficulty in the wording of the summons. It was, therefore, thought advisable, in the circumstances, to inform the Manchester Authorities of the facts with a view to the taking of action by them if necessary. This was done and samples were taken by the Manchester Inspector at Central Station. One of these was deficient in solids-not-fat to a small extent and a sample was subsequently taken at the farm. The solids-not-fat in this sample were slightly below the Board of Agriculture limit. Proceedings were taken against the farmer but the case was dismissed.

In view of this, no further action was taken against the shopkeeper.

Sample No. 7514 was also bought at a shop, and in this case the proprietress practically admitted the offence by telling the Inspector, "he need not trouble to look any further." No samples were taken therefore, either from the wholesale dealer supplying the shop, or from the farmer supplying the wholesale dealer. Proceedings were instituted against the shopkeeper and she was convicted and fined £5.

Sample No. 7545 was taken at a small shop. On the same day a sample was taken from the wholesale dealer on delivery and on the following day, two further samples, one from the wholesale dealer and one from the farmer supplying him. All these were of good quality so far as the fat content was concerned, although one of the wholesaler's samples was slightly deficient in solids-not-fat. The shopkeeper was proceeded against and was convicted and fined £1.

Sample No. 7548 was the wholesaler's sample mentioned above. All subsequent samples from the same source were genuine and no further action was taken.

Sample No. 7635 was a sample taken from a farmer's churn as the result of a complaint from the wholesale dealer whom he supplied. The deficiency found was not sufficient to justify proceedings being taken and although other samples were afterwards taken, a sample sufficiently bad to form the basis of a summons could not be obtained. The wholesale dealer concerned was

therefore advised to take the matter into his own hands and personally warn the farmer.

Sample No. 7891 was an informal one obtained at a café buying from a large Manchester wholesale firm. No action was taken since a further adulterated sample was not forthcoming.

Sample No. 8035 was taken from a farmer's churn and a sample from another churn belonging to the same farmer contained only 3 per cent of fat. Both these samples were morning's milk. Samples taken on the following day were genuine. Your Inspector later paid a visit to the farm in company with the wholesale dealer to whom the milk was consigned and it was found that the intervals between the two milkings on the day concerned were unequal. This very probably accounted for the low fat in the sample of morning's milk. The farmer promised to improve his methods in this direction.

Samples Nos. 8100 and 8107 were taken at a shop and the usual "follow up" samples from the wholesale dealer and the farmer were genuine. Summonses were accordingly issued in respect of both samples and as a result fines of £3 and £2 respectively were imposed.

Samples Nos. 8103 and 8104 were taken from a shop and from a cart respectively, both of which were supplied with the same farmer's milk. The farmer was visited in company with the wholesale dealer and it appeared that the trouble was probably caused, as in the case of No. 8035, by unequal intervals of milking. According to the farmer, this occurred only at the week-end when his

milker took his weekly holiday and left earlier than usual. In the circumstances no further action was taken.

Sample No. 8243 was bought at a shop and on learning that it was deficient in fat, the vendor explained that the milk in question had been reserved for his own use, there being only a small quantity in the can. Since the offence seemed due to carelessness rather than to deliberate adulteration, no legal proceedings were taken, but a strong cautionary letter was sent to the vendor by the Medical Officer of Health.

Sample No. 8249 was also taken at a shop and upon enquiry it was found that it was the previous day's milk. It appeared that during the day customers were served by a young girl, the proprietor being at home only in the mornings and evenings. In the circumstances a prosecution was not deemed to be desirable but a strong cautionary letter was sent by the Medical Officer of Health.

Samples Nos. 8795-7 and 8807-9 were farmer's milks. The first three were informal and were taken on delivery as the milk came in by road. All of them were deficient to a large extent of solids-not-fat, but the fat contents were high, particularly in the case of No. 8797 which contained the unusual amount of 4.8 per cent. The next day three formal samples were taken at the place of delivery and these also proved to be deficient in solids-not-fat, although not to such a great extent. Here again the fats were good (4.6 per cent, 4.2 per cent and 4.1 per cent).

The following day a visit was paid to the farm and an extraordinary state of affairs was revealed in that practi-

cally the whole of the herd of 48 cows was drying off, the total amount of milk obtained being only thirteen gallons. Two samples of the milk were obtained and both were deficient in solids not fat, containing respectively 8.3 per cent and 8.1 per cent as against the Board of Agriculture limit of 8.5 per cent. The fats were again high, viz.: 4.6 per cent, and 5.3 per cent. It was fairly evident that these abnormal figures were partly due to the state of the cows, although there seemed more than a suspicion that in the case of the six samples taken in Salford water had been added. In view of the unusual circumstances it was decided to take no legal action, but the farmer was strongly cautioned in a letter sent by the Medical Officer of Health.

Table 10 contains a list of samples, other than milk, found to be adulterated, together with the action taken in regard to each sample.

TABLE 10.

No. of Sample.	Description.	Nature of Adulteration.	Remarks.
7533	Malted Milk.	Contained only 0.4% fat, 37% added cane sugar and 15% starch.	Vendor unable to be found. Retailer warned.
7566	Iron Pills.	} Consisted of carbonate of iron pills.	{ Manufacturers communicated with.
7567	Iron Pills.		
7568	Iron Pills.		
7584	Grey Powder.	Deficient of 80% mercury.	{ Vendors cautioned.
7588	Grey Powder.	Deficient of 80% mercury.	
7602	Gooseberry and Raspberry Jam.	Made from preserved pulp.	Informal, see 7629.
7629	Gooseberry and Raspberry Jam.	Made from preserved pulp.	Fined £20 and £2 2s. costs.
7906	Rum and Coffee.	Contained only 2% rum.	Manufacturers communicated with.
7907	Strawberry Jam.	} Contained other fruit juice.	{ Manufacturers agreed to alter labels.
7908	Blackcurrant Jam.		
7916	Blackcurrant Jam.		
8006	Boric Ointment.	Deficient of 15% boric acid.	Cautioned.
8044	Sulphur Ointment.	Contained 19% excess of sulphur.	Cautioned.

TABLE 10—(Continued).

No. of Sample.	Description.	Nature of Adulteration.	Remarks.
8047	Sulphur Ointment.	Contained 18% excess of sulphur.	Cautioned.
8048	Sulphur Ointment.	Contained 24% excess of sulphur.	Cautioned.
8227	Tincture of Iodine.	Deficient 18% potassium iodide	Cautioned.
8260	Blackcurrant Jam.	Contained a large amount of other fruit juice.	Manufacturers agreed to alter labels.
8262	Cream.	Contained .25% boric acid and had no statutory label.	Cautioned.
8316	Blackcurrant Jam.	Misleading label.	Manufacturers agreed to drop use of fruit juice altogether.
8317	Blackcurrant and Apple Jam.	Contained practically no blackcurrants.	Manufacturers agreed to increase percentage of blackcurrants.
8328	Cheese (full cream)	Consisted of whole milk cheese.	Manufacturers agreed to alter labels.
8332	Cream.	Contained .19% boric acid and had no statutory label.	Formal sample genuine.
8351	Blackcurrant Jam.	Misleading label.	Manufacturers communicated with.
8356	Blackcurrant Jam.	Misleading label.	Manufacturers agreed to alter label.
8363	Blackcurrant Jam.	Contained other fruit juice.	Manufacturers agreed to alter label.
8376	Blackcurrant Jam.	Misleading label.	Manufacturers communicated with.
8385	Strawberry Jam.	Contained 32 parts per million sulphur dioxide.	No action at present.
8405	Blackcurrant Jam.	Misleading label.	Manufacturers communicated with.
8488	Blackcurrant Jam.	Made from preserved pulp.	Action deferred.
8511	Cheese (full cream).	Consisted of whole milk cheese.	Manufacturers agreed to alter label.
8543	Cod Liver Extract Tablets.	Deficient in vitamin content.	Formal sample taken in February, 1928.
8564	Toffee.	Fat contained 50% coconut oil.	Informal, see 8632.
8615	Whisky.	Contained 2% excess water.	See 8706.
8632	Toffee.	Fat contained 50% coconut oil.	Manufacturers agreed to cease advertising as made from butter only.
8641	Blackcurrant Jam.	Contained other fruit juice.	See 8760.
8706	Whisky.	Contained 2% excess water.	Further sample genuine.
8717	New Laid Eggs.	Not new laid.	Caution.
8760	Blackcurrant Jam.	Made from preserved pulp.	Manufacturers agreed to alter label.
8849	Cod Liver Oil Tablets.	Deficient in vitamin content.	No action.
8826	Whisky.	Contained 3% excess water.	Informal, see 8890.
8890	Whisky.	Contained 3% excess water.	Fined £5.

Butter and Margarine.

Fifty-four samples of butter have been examined during the year, all of which were found to be genuine. The percentage of contained water varied from 7.3 per cent to 14.7 per cent and the Reichert-Wollny number of the fat from 24.6 to 32.6. All the samples were examined for boron preservative and this was detected in only one case, the amount being 0.06 per cent.

Butter should be made entirely from the milk of the cow and should not contain more than 16 per cent water. According to the new Regulations governing the use of preservatives in food, no preservative is allowed in butter after the 1st January, 1928. This regulation, of course, overrides the recommendation of the Departmental Committee on Preservatives in Food, 1901, to the effect that borax or boric acid should be allowed up to a maximum of 0.5 per cent, calculated as boric acid.

Five samples of margarine were examined all of which were genuine. The percentage of moisture varied from 7.9 per cent to 13.0 per cent. Three of the five samples contained small percentages of butter, but less than the statutory limit of 10 per cent. No preservative was detected in any of the samples. Margarine should contain less than 16 per cent water, and no preservative.

Three prosecutions were instituted against vendors of margarine for exposing it for sale without the necessary label.

All the vendors had previously been warned for this practice, and fines of £2, £1, and £1 respectively were inflicted.

Lard and Cheese.

Ten samples of lard have all been returned as genuine. Eighteen samples of Cheshire Cheese were also genuine, the percentage of fat varying from 29 per cent to 44 per cent. Two samples of Dutch Cheese contained 17 per cent and 21 per cent fat. Eight samples of other varieties of cheese were examined and of these, two were made the subject of communication with the manufacturers. Both samples were of the popular crustless variety, and both were described as "Full Cream Cheese." Upon analysis they were shown to be ordinary whole milk cheeses and it was considered that the use of the term "full cream" for such an article was unjustifiable and misleading to the purchaser (although possibly not to the trade). Interviews were arranged with representatives of both firms and the matter discussed in detail. In one case it was agreed to withdraw the phrase both in the advertisements of the article and in the boxes, cartons and labels used by the firm. In the other case the firm decided to substitute the words "made from full-cream milk" for the term "full cream."

The other six samples were all genuine whole milk cheeses.

Flour.

Only four samples of self-raising flour were examined, and these contained no persulphate or peroxide as "improver." The position with regard to the chemical treatment of flour remains about the same. The Committee appointed by the Ministry of Health to enquire into the practice of treating flour with chemical substances

reported that it was not prepared to recommend the complete elimination of the bleaching agents and improvers now in use, but rather to limit the use of the substances to those which seem the least objectionable, among which acid calcium and ammonium phosphates and nitrogen peroxide are included. At a late stage in the proceedings of the Committee, reference was made to a process of improving flour by physical means. This consists essentially of heating the flour for a definite time at a definite temperature, the baking properties of the flour being thereby greatly improved. The Committee considered that the results obtained were promising and the report states that "if elucidation of the subject should enable the use of chemical improvers to be superseded by physical methods, such an outcome should be very desirable." In another part of the report the following sentence occurs, "If improving is necessary, it is in this direction rather than in the use of chemical substances, that we should like to see progress made." I gather that experiments on the commercial scale with the new process have been successful, and one may express the hope that ultimately the new physical method of improving will become the standard one. No legal sanction has yet been given to any of the Committee's recommendations and it is hoped that further experience of the heat process will allow of the prohibition by the Ministry of Health of the addition of chemicals for improving flour. It is certainly time that the interests of the purchasing public were considered. It is doubtful whether many people are aware of the fact that a large proportion of the flour sold is treated in the way mentioned.

Jam.

Thirty samples of jam have been taken during the year, and of these 17, or 56.6 per cent have been returned as adulterated or misdescribed. The most usual offence was the description as e.g., blackcurrant jam, of a mixture containing various proportions of pectin preparations or other fruit juices. In many cases justification of the addition of a foreign ingredient was attempted by the statement on the label, "fruit juice added to give consistency." Unfortunately for the makers, it is only in the case of strawberry, and occasionally raspberry jam, that any other fruit juice is necessary to give consistency. The pectin content of other fruits is high enough to assure that, with sufficient precautions, the resulting jam will "set" properly. In other cases the words "improved with other fruit juice" were used in a similar attempt to justify the use of, in many cases, large quantities of pectin preparations. This phrase was objected to on the ground that a jam from a particular fruit cannot be improved by the use of a foreign ingredient, particularly when the addition is entirely unnecessary for the preparation of a perfectly good article. When either of these phrases was used, the makers were asked to substitute the plain statement, "with addition of other fruit juice," or words to that effect. The only reason for adding other fruit juice to jam other than strawberry jam, is to lower the cost of manufacture. Price cutting operations in the jam industry during the last few years have resulted in the manufacture of a very inferior quality of jam and the quality tends to get worse rather than better. Competing

firms have gradually increased the amount of "other fruit juice" in their jam until, in some cases, there is more of it present than of the fruit whose name it bears. This adulteration is covered in a large number of cases by the statement already referred to, "to give consistency." The diluent in most cases is pectin, which is prepared generally from apple juice, and is the constituent of fruit which enables jam made from it to gelatinize or "set." Apple juice and gooseberry juice are rich in this substance and hence are useful in the manufacture of strawberry jam, since strawberries are relatively poor in pectin. Such a fruit as blackcurrant is generally much richer in pectin than apples, and to declare that apple juice is added to give consistency is ridiculous. In several cases where this declaration has been made the product has actually been far more liquid than a jam made from the pure fruit only.

It cannot be said that these cheap jams are unwholesome—probably their food value is fairly good. But the purchaser in general cannot tell from the label, what the composition is. A genuine jam should contain pure fruit and sugar only, except in the case of strawberry where the fruit may be mixed with, say, 10 per cent other fruit juice in order to give the necessary stiffness. If any other ingredient is used, its presence and amount should be distinctly declared on the label. Even such a phrase as "contains other fruit juice" might cover anything. It might mean the almost complete substitution of the fruit supposed to be present, by pectin.

There is very urgent need for a proper system of description in the case of jam, more perhaps, than in the

case of any other common food-stuff. At present the label on many jams gives no more than the faintest clue to the composition of the article, and this state of affairs, it may be said, is just as detrimental to the interests of the manufacturers as to those of the purchaser.

Some years ago many manufacturers were in the habit of using glucose to replace part of the cane sugar which should be used, without any declaration to that effect. The ostensible reason for the use of the glucose was to "break the grain" of the sugar or prevent crystallisation, but it is to be feared that the real reason was the comparative cheapness of glucose at the time compared with sugar. In the samples examined last year, glucose was found in only three cases and there is now apparently no need for its presence to "break the grain." Incidentally glucose is now more expensive relatively, than cane sugar, a state of affairs which might perhaps invite somewhat cynical comment.

Sample No. 7602 was an informal sample which was taken as the result of an advertisement appearing in a local paper. This was issued by a large multiple shop concern and stated that, "All our jams are made from freshly gathered whole fruit, ripe and perfect," and giving a list of several varieties of jam sold. Upon analysis their jam proved to contain sulphur di-oxide and to be dyed with an aniline dye.

It contained practically no whole fruit. A jam made from fresh fruit would certainly not contain sulphur di-oxide and the presence of the latter and of an aniline dye was sufficient evidence that it was made from

preserved pulped fruit, possibly two or three years old. The dye was obviously put in to restore the colour lost by preserving. Accordingly your Inspector took the advertisement to one of the shops owned by the firm and asked for a jar of raspberry and gooseberry jam made, according to the advertisement, from freshly gathered whole fruit. He was supplied without question with the jam, which was thereupon divided in the usual way (Sample No. 7629). In reply to enquiries he was further told that no other make of jam was sold at the shop. This sample proved to have the same composition as the informal one. Proceedings were instituted against the firm and a conviction was obtained, a fine of £20 with £2 2s. costs being imposed.

Sample No. 7907 was bought from a shop belonging to a multiple firm and proved to contain a considerable amount of apple juice and pectin and was further coloured with an aniline dye. No statement to this effect appeared on the label and the retailers were therefore communicated with. They replied that they bought it with a guarantee from a firm in another town, but promised to withhold the remainder of the stock from sale. Subsequently a visit was paid to the makers and they stated that the labels on the jam were supplied by the retailers, the fact that no notification of the presence of added fruit juice appeared on them having been overlooked. Their own labels for all kinds of jam contained the words "improved with other fruit juice." They had already agreed to collect the remainder of the retailer's stocks and relabel the whole.

During the interview it was pointed out that jam could not be "improved" by the addition of the juice of another fruit, and also that no addition of juice is required for the making of any jam, with the exception of strawberry. The firm agreed in future to substitute the words "with addition of other fruit juice" on all their labels.

Sample No. 7908 contained a considerable amount of fruit juice. The wholesale dealers, a large multiple firm, were communicated with and it was pointed out that no declaration of the presence of added fruit juice appeared on the label. The firm then submitted a fresh label which they proposed to use. This read, "This jam is made from the finest selected fruit, with an addition of other fruit juice to give consistency." The firm was advised that this was unsatisfactory, as except in the case of strawberry jam, no addition was required to be made to give consistency. A promise was obtained that this label should be used for strawberry and raspberry jams only. The writer also had an interview with the chief chemist of the firm making the jam in question, and an agreement was arrived at with regard to labelling in general. The usual label of the firm read "Set with other fruit juice," when any was added. It was pointed out that this statement was incorrect for the reason set out above. The addition of fruit juice to jams such as blackcurrant was obviously made for the purpose of increasing the bulk. A promise was made that the objectionable phrase would no longer be used, and that the words "contains other fruit juice" would be substituted.

Sample No. 7916, bought at a local stores, was made by a large well-known firm and they were at once

communicated with. There was no mention of any addition on the label. Their reply was to the effect that they were not committing any offence, since fruit juice was necessary to make jam "stand up" and that therefore they were protected by a sub-section of section 6 of the Sale of Food and Drugs Acts, which reads, "An offence shall not be deemed to be committed where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce." It was pointed out that blackcurrant jam does not require any addition of other fruit juice to make it set. The firm agreed to make their blackcurrant jam in future without any addition and if at any time fruit juice was found to be required the product would be labelled in accordance with our requirements, viz.: "With the addition of other fruit juice."

On the general question of labelling some further correspondence took place and in the end the firm agreed to fall in with our suggestions, and to use the words mentioned above in the case of any jam to which an addition of fruit juice was made, including strawberry and raspberry.

Sample No. 8260 bore a label on which the words "Blackcurrant Jam" appeared in large type, and just below this statement in smaller type "With the addition of fruit juice." From the analytical results it appeared that only about half of the usual amount of fruit was present, the remainder consisting of other fruit juice.

Artificial dye was also present. The firm was communicated with and in an interview with the manager it was contended that jam of this composition should be described by the names of both fruits used in its manufacture, viz: "Blackcurrant and Apple jam." After some discussion, the manager agreed to have printed a new stock of labels describing the jam as "Blackcurrant and Fruit Jelly," all the words to be in the same size type, and to apply this principle to all his jams where a large amount of other fruit juice was used. He said that the fruit juice used was sometimes from one fruit, sometimes from another, and that, therefore, it would be very inconvenient to have to state on the label the actual fruit juice used. The above compromise was accepted and the printer's proof of the new label was seen and passed as satisfactory.

Sample No. 8316 included in the fruity part of the jam about 20 per cent of other fruit juice. The label bore the words "Blackcurrant Jam" in the usual large type, and at the bottom in practically invisible type, "Improved with fruit juice." An interview was arranged with the manager of the firm and he was asked to leave out the word "improved" altogether for reasons already mentioned above. He was also asked to print the words "With other fruit juice" in conspicuous type and make it part of the description of the jam, instead of putting it at the bottom of the label where it could hardly be seen. The matter was put by him before the head of the firm and it was decided to drop the use of fruit juice altogether in the manufacture of their jams.

Sample No. 8317 was practically apple jam, very little blackcurrant being present. It also contained 11 per cent glucose syrup and was artificially dyed. The jam was made by the same firm as No. 8405 below. In an interview with the head of the firm it was agreed that the percentage of blackcurrants in the fruit should be increased to 25.

Sample No. 8351 was labelled in the usual way, "Fruit juice added to give consistency." The fruity part contained about 25 per cent other fruit juice. A letter was written to the firm explaining the writer's views on this point, and a promise was made by the manager that they should be fully considered, and an interview arranged later. This has not yet materialised but the matter will be followed up during the present year.

Sample No. 8356 contained only about half the usual quantity of blackcurrants, the amount of sugar present was less than usual and the cane sugar originally used had practically all been inverted instead of, as usual, only about half of it. The label bore the statement, "Improved by the addition of fruit juice." At an interview, when these facts were mentioned, the works manager denied that more than 10 per cent of fruit juice was added to the fruit used in the manufacture, but on seeing the sample taken for analysis, admitted that there was something wrong with it, and suggested that the workmen had not boiled it properly, resulting in an inversion of the sugar. The presence of such a large amount of fruit juice he put down to the improper filling of the jars. He promised to investigate the matter, and

to prove his bona fides gave us an invitation to the works at any time. As regards the label a promise was given that the word "improved" would be dropped, and the plain statement made that "This jam is made from fruit, cane sugar and other fruit juice." Time was asked for to use up the old stock of labels and six months was allowed as a limit. Later the works were visited and nothing suspicious was discovered.

Sample No. 8363 was labelled "Blackcurrant Jam" without any qualification. It contained, however, about 25 per cent of other fruit juice masquerading as blackcurrants, and was artificially dyed. Later a formal sample, No. 8641, was taken at the same shop. This also contained fruit juice although in smaller quantity, and was again artificially dyed. The label still bore no indication of any addition. A short time afterwards a sample was taken on delivery at the shop so that if necessary the makers could be dealt with. This sample, No. 8760, was found to show no evidence of the addition of fruit juice, and no prosecution on this account was therefore possible. The jam was, however, made from preserved pulp as shown by the presence of 23 parts per million of sulphur di-oxide, and of an aniline dye. It was described on the label as being made from the "Finest fruit and refined sugar," a description which hardly applied in the circumstances. A visit was paid to the works and a promise obtained that the offending phrase would no longer be used.

Sample No. 8376 bore the usual statement "With a small addition of other fruit juice to improve consistency."

The amount of added juice was small. The manufacturers were approached but very little progress could be made, and nothing further has yet been done in the matter.

Sample No. 8385 was labelled "Home made," but on analysis was found to contain 32 parts per million of sulphur di-oxide, which seemed to exclude any possibility of it being made from fresh fruit as "home made" jam should be. A formal sample on delivery from the maker was not obtainable at the time, since the stocks were bought through a Manchester dealer, but if possible further attempts will be made during the present year.

Sample No. 8405 bore the familiar statement on the label, "Improved with fruit juice" and the fruity matter in the jam contained 25 per cent other fruit juice and was artificially dyed. In an interview with the head of the firm responsible he agreed to alter the above statement to, "Contains other fruit juice."

Sample No. 8488 was also described as being "Improved by the addition of fruit juice" and also as being made from fresh fruit and refined sugar. It was found to contain 25 parts per million of sulphur di-oxide and to be coloured with an aniline dye. These facts show that it was made from preserved pulp and not fresh fruit. Further action was deferred until this year.

Toffee.

Sample No. 8564 was advertised as being made from pure butter *only*, but on analysis the fat was found to contain about 50 per cent coconut oil. Sample No. 8632

was a formal sample of the same toffee and had the same composition. The jar containing the toffee was labelled "Made from pure butter *only*." The wholesale dealers were approached and it was explained that the toffee was bought from another firm and that the idea of using the label in question was their (the wholesalers') own. This label, it was stated, was intended to convey the impression that the butter used in the manufacture was pure butter. It was, however, admitted that the public would be more likely to take it as meaning that the only fat used was butter fat. It was also admitted that the article was selling extremely well, probably owing largely to this belief. The firm finally agreed to drop the label altogether and a letter to that effect was received from them.

"Rum and Coffee."

This sample was described as "—————'s Rum and Coffee" but contained only 2 per cent rum and a considerable amount of chicory extract, while over half consisted of molasses. In small type on the back of the bottle statements appeared to the effect that chicory and sugar were present, and that it was non-intoxicating and could be sold without an excise licence. This last statement would probably convey little meaning to the average purchaser. The only difference between this article and an ordinary coffee and chicory extract is that it contains 2 per cent rum. Instructions on the bottle for making the beverage require the addition of a teaspoonful to a cup of milk. The amount of rum in the resulting mixture would be infinitesimal. It was thought undesirable that an article of this sort should be described

as "Rum and Coffee" since the amount of rum was negligible. A long correspondence and several interviews ensued, and the firm consulted their legal advisers once again. The result up to date has been the alteration of the labels in several minor particulars, but the words "Rum and Coffee" in large print on the principal part of the label still remain the subject of debate. The alterations which have been made up to now include the placing of these words in inverted commas wherever they occur (which may be a slight improvement), the printing in larger type and the underlining of the words "coffee" and "chicory" when mentioned together with rum on the direction labels, a fuller explanation of the meaning of the words "Can be sold without an excise licence," and the addition on the front label of a statement declaring the presence of chicory. These small alterations, although all in the right direction, do not remove the chief cause of offence and further attempts will probably be made to get the matter put right.

The above is an example of the ingenious methods by which the Sale of Food and Drugs Acts are evaded by the skilful use of small size type. Large size type is reserved for the printing of the name of the article which the manufacturer desires the purchaser to think he is getting, while the smaller print is used for the explanations which modify the title, and which probably nine people out of ten do not read. Of course they should read them, but similarly the maker should be at pains to make it perfectly clear at a glance what the composition of the goods is that he sells.

Malted Milk.

A sample of what purported to be malted milk was sold in twopenny packets and had very little resemblance to this article, containing as it did only 0.4 per cent fat. It also contained 37 per cent cane sugar and about 15 per cent starch and fibre, none of which should be present in genuine malted milk. It should consist of dried milk and malt extract only.

The material was bought for cash by a shopkeeper from a traveller who left no name or address and has since not been heard of. The article was of course unsaleable.

It may be remembered that a similar thing occurred during 1926 when several shopkeepers were imposed upon in the same way. Whether the person or persons engaged in this ingenious business are the same as in the previous year is not known but there is a remarkable similarity between their methods and their wares. It seems, unfortunately, to be impossible to bring this person to book and no one seems to have any idea of his name or his place of business, if any.

New-laid Eggs.

The single sample of "New laid eggs" consisted of eggs which were probably some weeks old judging by physical characteristics but unfortunately no action could be taken under the Sale of Food Order, 1921, which forbids the sale of imported eggs as fresh or new laid, since it would be impossible to prove that the eggs were actually imported. The vendor, however, was cautioned.

Whisky.

Sample No. 8615 was diluted beyond the limit of 35 degrees under proof allowed by Section 10 of the Licensing Act, 1921, the excess water amounting to 2 per cent. Another sample, No. 8706 from the same vendor contained the same amount of water, but a third sample was genuine. No action was taken at the time but a watch is being kept on the premises.

Samples Nos. 8886 and 8890 were informal and formal samples respectively and were both 36.9 degrees under proof. Both samples therefore contained 3 per cent excess water. Proceedings were instituted and the vendor was fined £5.

Boric Ointment.

Sample No. 8006 was found to be deficient of 15 per cent of the proper amount of boric acid. According to the B.P. it should contain 10 per cent. The vendor was cautioned.

Sulphur Ointment.

Three samples of sulphur ointment, Nos. 8044, 8047 and 8048 were carelessly made up, containing an excess of sulphur to the extents of 19 per cent, 18 per cent and 24 per cent respectively. The proper amount, according to the B.P., is 10 per cent. Cautionary letters were sent to the vendors by the Medical Officer of Health.

Tincture of Iodine.

One sample, No. 8227, was deficient of 18 per cent of the proper amount of potassium iodide. The genuine

article should contain 2.5 per cent potassium iodide and 2.5 per cent iodine. The vendor was cautioned.

Iron Pills.

Eight samples of iron pills (Blaud's Pills) were taken during the year and of these, three were returned as adulterated, as being carbonate of iron pills and not iron pills. The B.P. directs *Pil. Ferri* to be made by the admixture of exsiccated ferrous sulphate and exsiccated sodium carbonate, with other ingredients to form a mass. The chemical action which takes place results in the formation of ferrous carbonate and sodium sulphate. In the three cases mentioned no sulphate was present and the pills had apparently been made from ferrous carbonate and not as directed by the B.P. They were therefore carbonate of iron pills. A good deal seems to turn on the question as to what Blaud's Pill should be. In the *Pharmacopœia* of 1898, the name was synonymous with *Pil. Ferri* B.P. Although it has been dropped in the 1914 *Pharmacopœia* the name is still retained as a synonym in the B.P. Codex, 1923. It appears that many manufacturers have ceased making their Blaud's Pills by the official process and either make them directly with ferrous carbonate, or else wash out the sodium sulphate which is formed when using the B.P. process, leaving the ferrous carbonate. There is no objection to these processes if the resulting pill is called by its proper name, viz., carbonate of iron pill, or some similar name, but the name Blaud's Pill should be restricted to the article made by the official process.

The wholesale dealers supplying No. 7566 were approached and it was discovered that they had no

knowledge that the pills were made otherwise than by the official process. They were obtained from a London firm. The wholesale dealers undertook to recall the pills that had been sold and practically all were actually recovered. They also promised in future to get a specific guarantee from the firm they dealt with that the pills were made by the B.P. process.

By the courtesy of the firm manufacturing sample No. 7579 the writer was put into touch with the secretary of the Chemists Supply Association, which includes the largest pill makers in the country, and as a result of correspondence with him, he agreed to recommend his members to use the official process only in the manufacture of Blaud's Pills.

Iron pills should contain at least 20 per cent ferrous carbonate and all the pills examined were passed as correct so far as their iron content was concerned, the lowest figure being given by a 4-grain pill which should have contained 0.8 grains ferrous carbonate, and which actually contained only 0.73 grains.

Grey Powder.

According to the B.P., grey powder should contain $33\frac{1}{3}$ per cent mercury, and $66\frac{2}{3}$ per cent prepared chalk. Sample No. 7584 contained only about 6 per cent mercury, and in addition, other ingredients, e.g., bicarbonate of soda, which should not be present at all. A vegetable powder was also present, which appeared to be cinnamon but the quantity available was too small to be quite sure on the matter. The vendor was asked for "Grey Powder," but the packet he supplied to the Inspector

was labelled "Children's Powder," and he also used these words when handing over the purchase. In the circumstances, it was thought advisable not to prosecute, but a strong cautionary letter was sent to the pharmacist concerned by the Medical Officer of Health.

Sample No. 7588 consisted of 6 per cent mercury and 94 per cent chalk. A formal sample purchased a day or two later proved, however, to be genuine. A cautionary letter was also sent to this vendor. It appeared that the first sample was part of some old stock which had afterwards been destroyed.

Cod Liver Oil Tablets.

Sample No. 8543 consisted of tablets bearing the name, "———'s Cod Liver Extract Tablets" which had been extensively advertised for some time. Very high claims were made for them. They were said to have all the virtues of cod liver oil, with the additional advantage that the unpleasant taste and smell of the latter were eliminated. The vitamins A and D, which are, of course, in the light of recent research, two of the most important constituents of cod liver oil, with far reaching effects on the human organism, were said to be fully retained, and, in short, it was claimed that it was entirely unnecessary to take the fresh oil at all, and that the tablets would take its place. Besides this, they were said to contain other valuable tonic ingredients which still further enhanced their value.

Upon examination, the tablets were found to contain about three per cent of oily matter which would contain

any vitamin present. By the only chemical test available, it was shown that vitamin A was entirely absent from this oily matter. This fact was sufficient to condemn the tablets from the point of view of the maker's claim that they were a substitute for cod liver oil. There is, unfortunately, as yet no chemical test for vitamin D.

The only conclusive method of comparing such a preparation as this with genuine cod liver oil is a biological one, which consists of feeding test animals with the preparation, and ascertaining the effects on their growth and health. It was felt by the writer that, in view of the fact that these tablets were quite valueless for the purpose for which they were sold, and the steadily increasing sales, an attempt should be made to show up the real character of them, and your Committee consented to have biological feeding tests done.

The remainder of the history of this case belongs to this year and will be discussed in my next annual report. It is sufficient here to say that a formal sample was bought and tested chemically, and in the way indicated above, and that as a result, the vendors were fined £30 with £75 costs.

Sample No. 8849 consisted of chocolate coated tablets purporting to take the place of cod liver oil. According to the advertising matter they were actually more effective than the oil itself, and it was also stated that "the form in which cod liver oil is present . . . is 250 times as rich in vitamins as the very best butter." The actual content of vitamin A was practically nil and the therapeutic value of the tablets was probably very

small. To ascertain the precise value of the tablets as a substitute for cod liver oil, feeding tests, as explained above, would be necessary, and no further action was taken at the time owing to the fact that tests were going forward on the brand already mentioned. The matter however, is being taken up again during the present year. No condemnation is sufficiently strong for the sale of such articles as these. Very serious harm might be done by the belief that they have the same therapeutic value as cod liver oil, and the fact that the latter is unpleasant to take rendered the task of the promoters of these so called substitutes an easy one. The very large sale of at least one of the brands is a sufficient proof of the advertising methods of the firm concerned.

Samples under the Milk and Cream Regulations, 1912 and 1917.

1. MILK AND CREAM NOT SOLD AS PRESERVED CREAM.

	No. of samples examined for the presence of a preservative.		No. in which preservative was reported to be present.
Milk	1,028	....	0
Cream	5	....	2

2. CREAM SOLD AS "PRESERVED CREAM."

(a) (i.) Correct statements made.....	6
(ii.) Statements incorrect.....	0
	—
	6
	—

(iii.) Percentage of preservative found in each
sample: 0.32; 0.24; 0.28; 0.28; 0.30; 0.19.

(b) Determinations made of milk fat in cream sold as
“Preserved Cream” :—

(i.) Above 35 per cent.	6
(ii.) Below 35 per cent.	0
	—
	<u>6</u>

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of Preserved Cream in Article V (1) and in the proviso in Article V (2) of the regulations have not been observed :—

None.

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

Sample No. 8262 was asked for as “fresh cream” but preserved cream containing 0.25 per cent boric acid was supplied in a carton bearing the name and address of a large wholesale dairy company. This carton had the words “preserved cream” printed on it in small type, but did not bear the statutory declaratory label which should read, “Preserved cream, containing boric acid not exceeding 0.4 per cent, not suitable for infants or invalids.” Nothing was said at the time of the purchase which would lead the purchaser to believe that he was getting other than fresh cream. The vendor pleaded ignorance of the Regulations and as this was his first offence, no proceedings were instituted but a strong cautionary letter was sent to him by the Medical Officer of Health.

The dairy company in question was also communicated with and asked for an explanation of the fact that their carton did not bear the proper label. They replied that all their preserved cream, when sent away, was accompanied by the necessary labels. They asked for the name and address of the vendor concerned and this was supplied to them in order that they might take any action they thought fit, the absence of the label being obviously due to the shopkeeper's carelessness.

Sample No. 8332 was an informal sample supplied as cream and contained 0.19 per cent boron preservative calculated as boric acid. No declaratory label was affixed to the carton. A formal sample taken the next day had, however, the proper label attached. No further action was taken at the time, but the shop will be kept under observation.

Public Health (Preservatives, &c., in Foods) Regulations, 1925.

These regulations, with a few exceptions, came into force on January 1st, 1927. They allow of the use of sulphur di-oxide or sulphites and of benzoic acid or benzoates in limited quantity in certain specified foods and drinks only. Boric acid and other preservative was allowed during 1927 in certain other foods but the number of these foods has been progressively reduced. On July 1st, 1927, bacon, ham and egg yolk were removed from the list of foods which might be preserved, and on January 1st, 1928, butter, cream and pearl barley were similarly removed. Preserved butter is allowed to be used in the preparation of other articles of food until July 1st, 1928,

and after this date the use of boric acid or any other preservative in food will be illegal, except in the cases of the foods specified in a schedule to the Regulations in which a prescribed preservative may be used in limited amounts, as indicated above.

The Milk and Cream Regulations, 1912 and 1917, are superseded by the Regulations as from January 1st, 1928. These allowed the use of boric acid or borax as a preservative in cream in quantities not exceeding 0.4 per cent expressed as boric acid.

Sale of Food and Drugs Act, 1927.

This became law on April 12th, 1927, and it gives effect to the recommendation of the Departmental Committee on Preservatives, etc., in Food, that, "Any prohibitions or limitations imposed by the Regulations should bind the Courts in proceedings taken under the Sale of Food and Drugs Acts." It provides that, "Where any regulations made under the Public Health (Regulations as to Food) Act, 1907, prescribe the composition of any article of food or drink or prohibit or restrict the addition of any preservative or other ingredient or material to such article, such regulations shall be deemed, for the purposes of the Sale of Food and Drugs Acts, 1875 and 1907, to define the nature, substance and quality of the article as regards the presence or amount of any ingredient or material specified in the Regulations and to determine whether the addition of any such ingredient or material, and, if so, what amount thereof renders the article injurious to health."

The Act applies, it will be noticed, to all regulations made under the 1907 Act, which deal with the composition of, or addition of any ingredient or material to, an article of food. The standards laid down by the Condensed Milk and Dried Milk Regulations, as well as the prohibitions and restrictions in the Preservative Regulations, will in future therefore be conclusive for the purpose of proceedings under the Sale of Food and Drugs Acts, 1875.

Miscellaneous Samples.

Sunlight Tests	1592
Human Milks	52
Infant Food	1
Milk	19
Cream	1
Table Salt	2
Sweets	3
Other Foods	3
Vitamin Margarine	1
Vitamin Concentrate	1
Formalin Solution	5
Medicines	3
Coroner's Cases.....	5
Veronal Tablets	1
"Cocaine"	1
Soap	10
Smokeless Fuel	1
Sand	4
Paint	8
Pitch	1
Asphalt	1
Effluent.....	3
Rainwater Gauges	47
	<hr/>
	1765

The human milks and the infant food were examined for the Child Welfare Department. The vitamin margarine, submitted by the Medical Officer of Health, was found to contain Vitamin A. The samples of formalin, examined for the Health Department, were all of good quality. The "Coroner's cases" consisted of the viscera of a person supposed to have died from narcotic poisoning and veronal was found in sufficient quantity to justify the supposition. The medicines and the veronal tablets were also samples connected with this examination. The sample of so called "Cocaine" submitted by the police, was found to consist of a mixture of chalk and carbonate and bicarbonate of soda and contained no alkaloid. The samples of soap were examined in connection with the half-yearly tenders submitted to the Health Department. The samples of sand, paint, pitch and asphalt were all submitted by the City Engineer's Department. The three samples of effluent were taken from the sewage plant at Nab Top Sanatorium and were all of good quality.

Strength of Sunlight.

The 1,592 miscellaneous samples described as "Sunlight tests" were taken in connection with an investigation begun in 1926 and continued during 1927, with regard to the comparative amounts of sunlight received at four different stations, viz: Regent Road, Ladywell Sanatorium, Drinkwater Park and Nab Top Sanatorium, Marple.

In the case of the first named station, the tests were carried out on the roof of the Health Department

Building, and in the other three cases, in the grounds of the institutions named. The test consisted in the exposure of a solution of potassium iodide acidified with sulphuric acid in a two ounce bottle, in the presence of air. Free iodine is liberated by the action of the sunlight, and the amount found is proportional to the light received. The figures given in the following tables represent milligrams of iodine. The monthly totals for 1927 are given below.

TABLE 1.

Month 1927	Regent Road	Nab Top		
		Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
January	41.2	54.2	55.7	53.5
February	68.5	76.3	71.6	66.7
March	159.6	184.7	184.9	176.3
April	148.7	178.0	174.8	202.3
May	188.6	216.2	241.1	277.1
June	179.4	202.4	233.1	260.3
July	208.0	275.6	246.8	267.2
August	178.6	159.1	107.7	200.7
September	118.7	112.6	138.9	125.4
October	65.5	73.0	72.5	75.6
November	68.4	78.0	79.7	79.2
December	42.0	68.4	47.3	61.8

It will be seen that the figures for Regent Road are, with one or two exceptions, lower than those for the other three stations. This gives some idea of the effect of the smoke blanket which hangs over the centre of the City. Other factors, such as ground mist, cannot of course be taken into consideration, but in general the figures show that the amount of active sunlight received in the centre

of the City is considerably less than the amount received at outlying stations.

During 1927 atmospheric conditions were probably nearly normal so far as the amounts of dust and smoke arising from the combustion of raw coal were concerned. In this respect, the conditions were very different from those of 1926, which was marked, during the latter half of the year, by the coal stoppage. This affected the amounts of dust and smoke in the atmosphere to a considerable degree, and the effect was very marked during the last six months of the year.

In the following table are given the figures for the two half yearly periods of 1926.

TABLE 2.

Year 1926.	Regent Road.	Nab Top		
		Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
1st half year	744.5	885.8	842.9	876.9
2nd „ „	869.2	860.8	812.0	870.3

It will be seen that the comparative absence of the usual atmospheric impurities arising from the burning of coal is very noticeable. Whereas the totals for the outer stations are apparently the same for the two periods, the figure for Regent Road for the second period was about 17 per cent higher than that for the first period showing that the central area indirectly benefited by the stoppage, in that the amount of sunlight received during the period affected was much greater than it otherwise would have been.

In Table 3 are given the corresponding half yearly totals for 1927, and it will be noticed that there is no such striking result in the case of Regent Road as there was in the previous year, thus confirming the opinion formed of the effect of the lessening of the amount of smoke in the air during the 1926 coal dispure.

TABLE 3.

Year 1926.	Regent Road,	Nab Top		
		Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
1st half year	786.0	911.8	952.5	1036.2
2nd „ „	681.2	766.7	792.9	809.9

Atmospheric Pollution.

The work of examining the deposits obtained in special gauges placed at various points in the City, which has been described in the reports for the last four years, has been continued. At the present time, the standard gauge is situate in Peel Park, and similar types of gauges are situated in the grounds of Ladywell Sanatorium, in the centre of the recreation ground in Regent Square, and in the grounds of the Corporation Sanatorium at Marple, Cheshire.

In uniformity with the results expressed by other stations, of which there are a number scattered throughout Great Britain, the results are expressed in metric tons per square kilometre. The metric ton is equivalent to slightly more than the British ton, whilst there are 2.59 square kilometres in a square mile, so that to convert metric tons per square kilometre to tons per square mile it is necessary to multiply by 2.55 or, roughly, $2\frac{1}{2}$.

The following are the average results that have been obtained during the year. The contamination of the Ladywell area is rather less than that of the other two City areas, whilst, as was to be expected, the atmosphere at Marple is, comparatively speaking, "pure."

In order that comparison may be made with other districts, the average figure has been included in the table for the gauge giving the least deposit, that is the one at Southport, Hesketh Park, and also for that giving the greatest deposit, the one at Burnley. These figures are, however, not yet available for the year 1927, and the average figures of the results obtained from April, 1926, to March, 1927, are given in place.

AVERAGE MONTHLY FIGURES FOR 1927.

	Salford : Peel Park.	Salford : Ladywell Sanatorium.	Salford : Regent Square.	Marple : Salford Sanatorium.	Burnley :	Scuthport : Hesketh Park.
Rainfall in Millimetres . . .	76.16	74.53	74.73	82.75	105	78
Tar, Carbonaceous other than tar. } Insoluble Ash. } Matter.	0.64 4.73 5.63 } 11.00	0.12 2.70 4.03 } 6.85	0.84 6.48 4.81 } 12.13	0.38 3.60 1.71 } 5.69	0.78 4.84 9.28 } 14.90	0.03 0.77 0.79 } 1.59
Loss on ignition. } Soluble Ash. } Matter.	2.49 3.63 } 6.12	1.95 2.04 } 3.99	1.64 3.05 } 4.69	2.02 1.27 } 3.29	6.26 7.87 } 14.13	1.00 1.52 } 2.52
Total Solids	17.12	10.84	16.82	8.98	29.03	4.11
Sulphates, Chlorine, Ammonia. } Included in Soluble Matter.	2.52 1.74 0.11	1.60 1.07 0.08	1.75 1.41 0.09	1.41 0.88 0.08	4.28 1.18 0.24	0.59 0.66 0.03

SECTION VII.

Maternity and Child Welfare and Supervision of Midwives.

The Staff consists of three Lady Medical Officers, an Assistant Inspector of Midwives, 16 Health Visitors, two Masseuses, and six clerks. It is the duty of the Medical Officers to conduct all examinations of mothers and children attending at the Clinics and at the Centres. The Senior Medical Officer supervises the visiting and assists in the administrative work of the Department. Each Health Visitor is allotted a district, to the visiting of which most of her time is devoted, and a record is kept of all details connected with the sanitary state of the house and the health of its occupants. In addition, the Health Visitors carry on the work at the various Mothers' Centres in the City.

The Work of the Health Visitors.

During the year 1927, the whole of the Wards in the City were visited by the Health Visitors.

The following table gives the number of visits paid by the Health Visitors in the various Wards, and the number of babies and expectant mothers visited during the year 1927 :—

TABLE C.W. 1.

Wards	Total No. of Visits to Homes in 1927.	First Visits to Homes of Babies.	No. of Visits to Expectant Mothers.
Kersal	1100	131	23
Mandley Park	1687	192	76
Albert Park	2898	288	104
Trinity	3626	328	98
St. Matthias'	2276	359	111
Crescent	2893	407	102
St. Thomas	2837	232	129
Charlestown	1856	226	32
Claremont and Weaste	3245	242	94
Seedley	537	91	7
Langworthy	1136	155	42
Regent	2253	281	21
Docks	2341	148	39
St. Paul's	2453	265	100
Ordsall Park	2875	329	50
	34013	3674	1028

The following is a summary of the work done in Salford by the Visitor employed by the Manchester Jewish Ladies' Visiting Association.

January to December, 1927.

House to House 947
Special 158

Municipal Maternity Home and Babies' Hospital.

MATERNITY DEPARTMENT.

1. ADMISSIONS.

The number of new cases admitted during the year 1927 was as follows :—

For special ante-natal treatment	39
For confinement	341
Treated and not returned for confinement	7
Referred to Hope Hospital.....	1

2. BIRTHS.

Males	170
Females	162

3. STILLBIRTHS.

Males	6
Females	6

4. DEATHS OF INFANTS.

Males	2
Females	2

5. MEDICAL ASSISTANCE.

Maternity	37
Infants	3

This Institution, with accommodation for 10 maternity cases, has now been in existence for nearly three years, during which time 651 births have taken place therein. As time goes on, the Institution is becoming more widely known, and great demands have

been made upon the accommodation at our disposal, so much so, that it has been necessary during the year to form a Committee whose duty it has been to select suitable cases from the large number of applicants. Preference is given, in the first place, to applicants who have not the necessary accommodation in their homes, and secondly, to those applicants who cannot, with safety, be confined in their homes. When refusals are made to applicants, these patients are always advised either to enter another Institution, or to engage competent midwives for their confinements.

All cases booked for the Maternity Home are invited to attend a special ante-natal clinic which is held at Regent Road Clinic every Friday afternoon, in order to reduce any possible complication at the confinement to a minimum.

Ante-natal Work.

The work of the ante-natal department still shows a marked increase, both in the number of attendances and in value. The mothers very much appreciate the complete examinations which are made at the ante-natal clinics, and it has been possible, through this work, to prevent the onset of serious complications, and to advise special treatment where some abnormality has been present.

The midwives in the City also continue to send their patients to our Clinic doctors for ante-natal examinations, and fully appreciate the reports they receive after the examinations.

Ante-natal advice is given at the following sessions :

Regent Road	{	Tuesday 9 to 11 a.m.
		Thursday 9 to 11 a.m.
		Thursday 2 to 3 p.m.
		Friday 2 to 3 p.m.
Teneriffe Street		Thursday 2 to 4 p.m.

Work of the Babies' Department of the Municipal Maternity Home and Babies' Hospital.

1. ADMISSIONS.

The number of new cases admitted during the year 1927 was 60, disposed as follows :—

26 Rickets.

14 Marasmus (including one suffering from Puerpera).

15 Malnutrition (including one suffering from Congenital Heart-Disease).

3 Broncho-Pneumonia.

1 Leukaemia.

1 Erythroderma (Polyneuritis).

2. DISCHARGES.

The number of cases discharged during the year 1927 was 68. These were as follows :—

Cured.

17 Rickets.

14 Marasmus.

18 Malnutrition.

Much improved.

3 Rickets.

6 Malnutrition.

Improved.

- 1 Rickets.
- 2 Malnutrition.

Taken out by parents.

- 4 Rickets.
- 2 Malnutrition.

Transferred to another Hospital.

- 1 Chest trouble transferred to Nab Top Sanatorium.

3. DEATHS.

The number of deaths during 1927 was 9, as follows :—

- 1 Acute Miliary Tuberculosis.
- 1 Leukaemia.
- 1 Erythroderma Polyneuritis.
- 1 Broncho-Pneumonia.
- 1 Acute Hydrocephalus.
- 4 Marasmus.

The work of the Babies' Hospital has now been in progress nearly three years, and this is a good opportunity to speak in some little detail of the work that has been done, and the progress made since the opening of the Hospital in March, 1925.

Since the inception of the scheme, eighteen beds have been available, ten for cases of Rickets and eight for other sick infants, and there have been great demands upon the space at our disposal.

One of the outstanding advantages which has accrued from the presence of the Hospital, has been the

fact that the Medical Officers at the Clinics in the City have been able to send urgent cases to the Hospital without the slightest delay. In many cases there is no doubt that prompt treatment has saved lives in this way.

In many cases of Marasmus and Malnutrition, ordinary advice and home treatment sometimes fail to produce the desired results, and a selection of these cases—selection has been necessary owing to our lack of space—has shown remarkable response to hospital treatment, and the Mortality Rate has been surprisingly low.

Refractory cases of Rickets have been sent to the Hospital, and failure to respond to treatment has been very exceptional. The Sunlight Lamp which was installed in June, 1926, was originally intended mainly for the treatment of Rickets, but it has been possible to take much advantage of its presence for the treatment of other and younger sick infants, whose recovery has been very considerably stimulated by its judicious use. The value of artificial sunlight carefully employed is of especial importance in the smokier atmospheres of our great cities, but it has been our practice to supplement clinical treatment by natural sunlight and fresh air. In the summer months it has often been possible to keep the babies out of doors throughout the day.

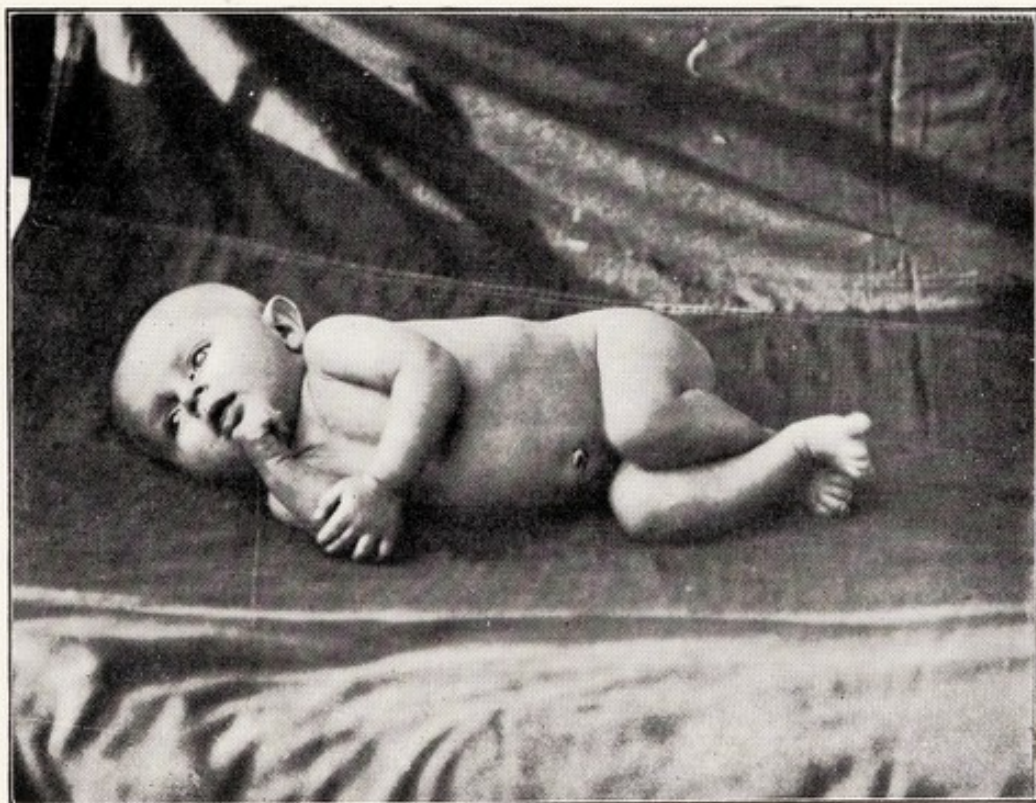
It is of especial interest to note that the simplest methods of feeding have proved the best for Marasmic infants, and in most cases excellent results have been obtained on milk and water, the milk being cow's milk

from supervised sources, of high quality and guaranteed purity. A great advantage of this simple method is seen when the infant has sufficiently recovered to go home. It is then possible for the mother to continue the methods that have been so successful in hospital, an important factor in the gradual improvement of the infant's strength and general condition.

The accompanying photographs (see pages 289 and 290) give some idea of the results obtained with the sick infants at the Babies' Hospital, and these are by no means exceptional cases.

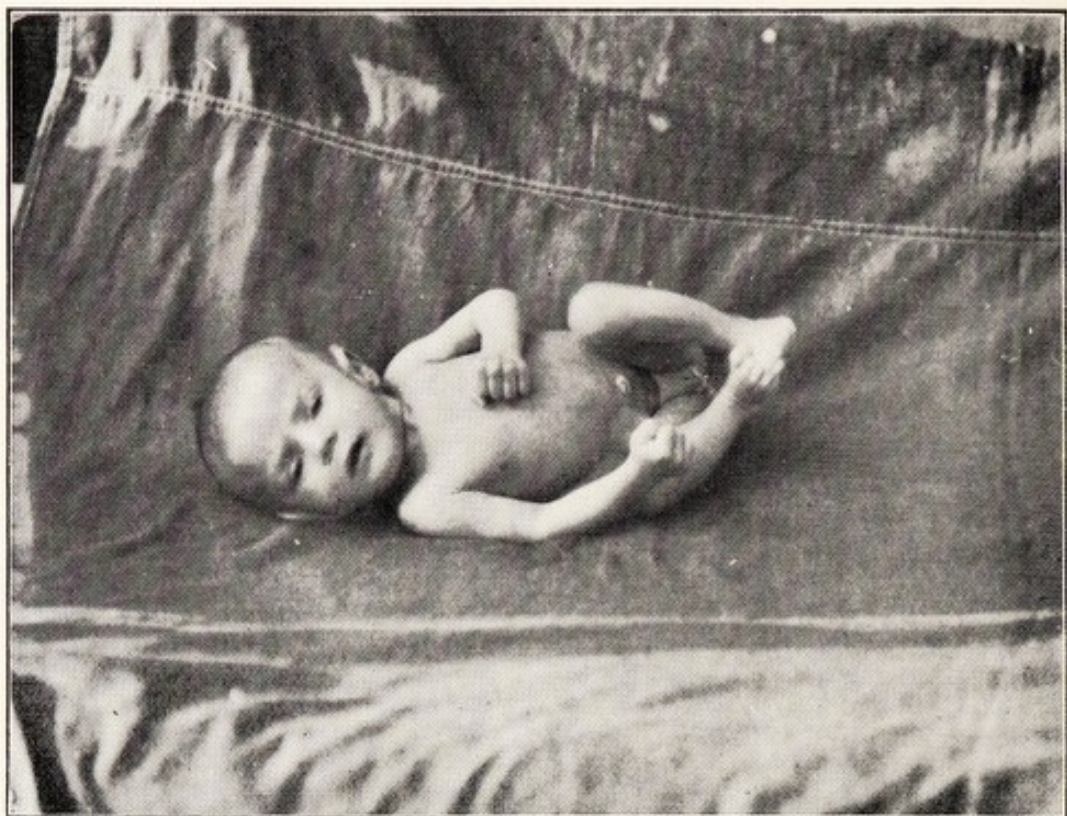


No. 1.



No. 2.

Photographs 1 and 2. The baby was admitted on the 22nd July, 1927, at the age of one month. He then weighed 5 lbs. 2 ozs. and was suffering from Marasmus, being in an extremely weak condition. Photograph 1 was taken one month after admission, when the baby weighed 6 lbs. 2 ozs.; he was discharged on November 27th, 1927, and then weighed 11 lbs. 3 ozs. (photograph 2).



No. 3.



No. 4.

Photographs 3 and 4. This baby girl was admitted on the 17th October, 1927, at the age of three months, when she weighed 5 lbs. 8 ozs.; she was suffering from Marasmus. Photograph 3 was taken on admission. She was discharged on the 25th January, 1928, and then weighed 11 lbs. 4 ozs. (photograph 4).

Maternity and Child Welfare Clinics and Centres.

The practical side of the Maternity and Child Welfare work is carried on at the Clinics and Centres scattered throughout the City. At these, children up to five years of age are weighed, and mothers can obtain medical advice for themselves and the children.

The two Clinics, which are open daily, provide special facilities for the examination and treatment of ailing children requiring more frequent medical supervision than can be obtained at the Child Welfare Centres.

At the nine Centres the children are weighed, and the mothers can seek advice from the doctor *re* the feeding and general care of the infants.

When the children attending the Clinics improve in health, many of them are passed on to the Centre nearest to their homes. Also, any children attending one or other of the Centres, who require treatment, are referred to the nearest Clinic.

MATERNITY AND CHILD WELFARE CLINICS.

There are two Clinics in the City, namely, Regent Road, Salford, and Teneriffe Street, Broughton.

Regent Road Clinic is open five mornings per week, and Teneriffe Street Clinic is open five afternoons per week.

Thursday in each week is set apart at both Clinics for expectant and nursing mothers who require medical advice for themselves. Thus, skilled attention is available for the child from the time of its conception to the time at which it is passed on to the care of the School Medical Officer.

MATERNITY AND CHILD WELFARE CENTRES.

There are nine Child Welfare Centres in the City, namely :—

Ordsall Centre, Ordsall Hall, Salford.

Chapel Street Centre (Rosamond Street extension),
Coombes Chapel, Chapel Street, Salford.

John Street Centre, John Street Hall, Pendleton.

Seedley Centre, St. John's Wesleyan School, Langworthy Road, Pendleton.

Enys Street Centre, Enys Street School, Whit Lane, Pendleton.

Woodbine Street, Woodbine Street School, Cross Lane, Salford.

Regent Road Centre, 139, Regent Road, Salford.

Teneriffe Street Centre, Teneriffe Street, Broughton.

Irlams-o'th'-Height Centre, Congregational Church, Irlams-o'th'-Height.

At each Centre an afternoon is set apart for the weighing of the children, and at Chapel Street, Langworthy Road, Enys Street, and Ordsall, an additional morning session has been found necessary. All children are medically examined at their first attendance, and periodically afterwards, and, in addition, any children who are not gaining satisfactorily, or are ailing, are examined at more frequent intervals. Expectant and nursing mothers who are in need of advice are also seen, but are referred for detailed examination to one of the Ante-natal Clinics.

At Ordsall, Rosamond Street and John Street Centres, expectant and nursing mothers are able to obtain dinners

on every full working day at a nominal price, of which every advantage is taken. It is due to the generous help of private persons that this work is able to be conducted satisfactorily without undue call being made upon the time of the professional staff.

On other days at Ordsall, Rosamond Street, John Street, Enys Street, Regent Road and Teneriffe Street practical classes and demonstrations are held in sewing, and at John Street and Rosamond Street classes are also held in cookery and the general hygiene of pregnancy and of the infant.

The Health Visitor for the district in which the Centre is situated helps with certain of these classes, and other workers assist in caring for the babies, so that the mothers may enjoy the benefit of the lessons undisturbed. Much interest has been taken in these classes during the past year.

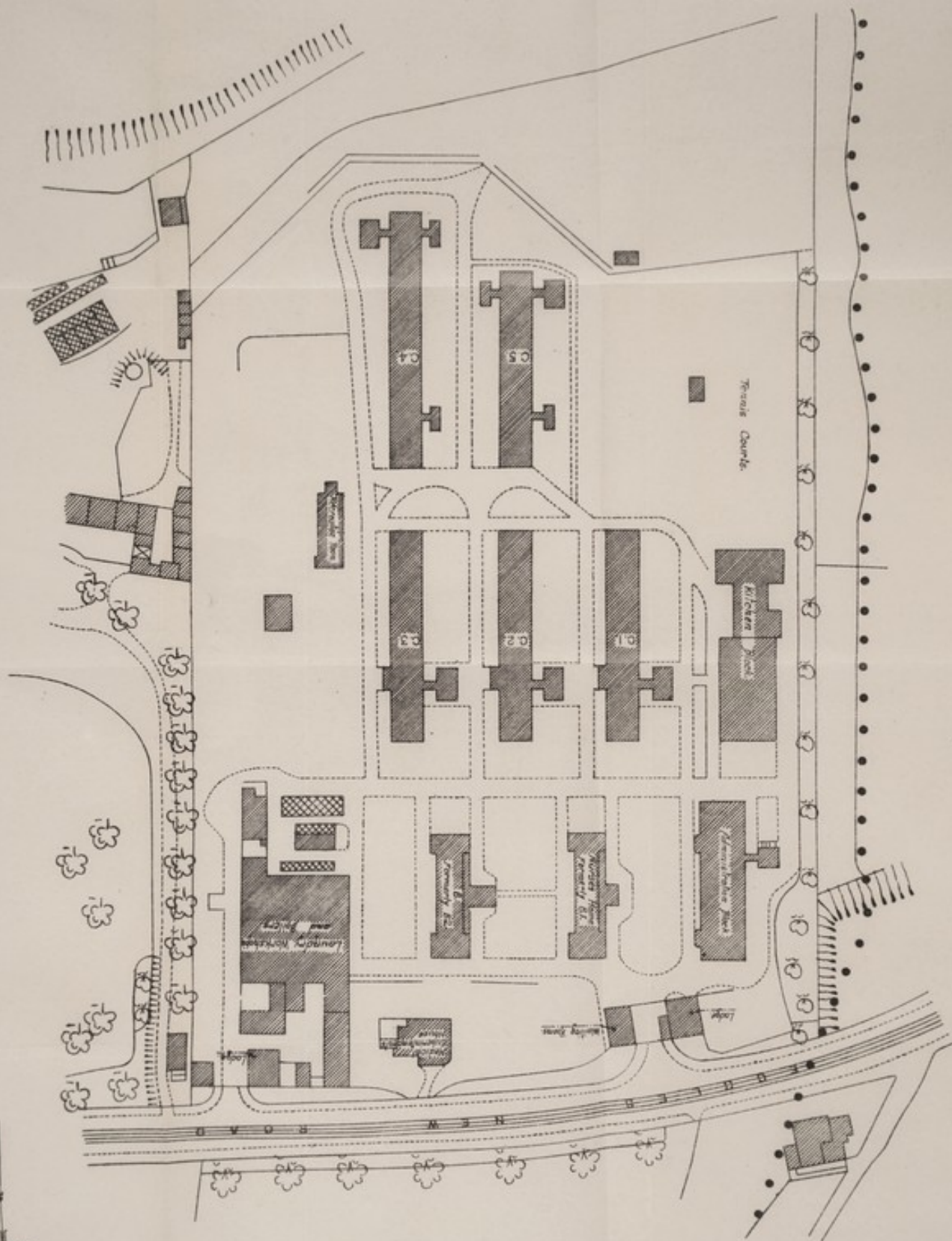
All cases attending at the Clinics and Centres are "followed up" in the homes by the Health Visitors, who help the patients to carry out the instructions given.

The following figures show the number of attendances at the Clinics and various Centres during the year 1927:—

TABLE C.W. 2.

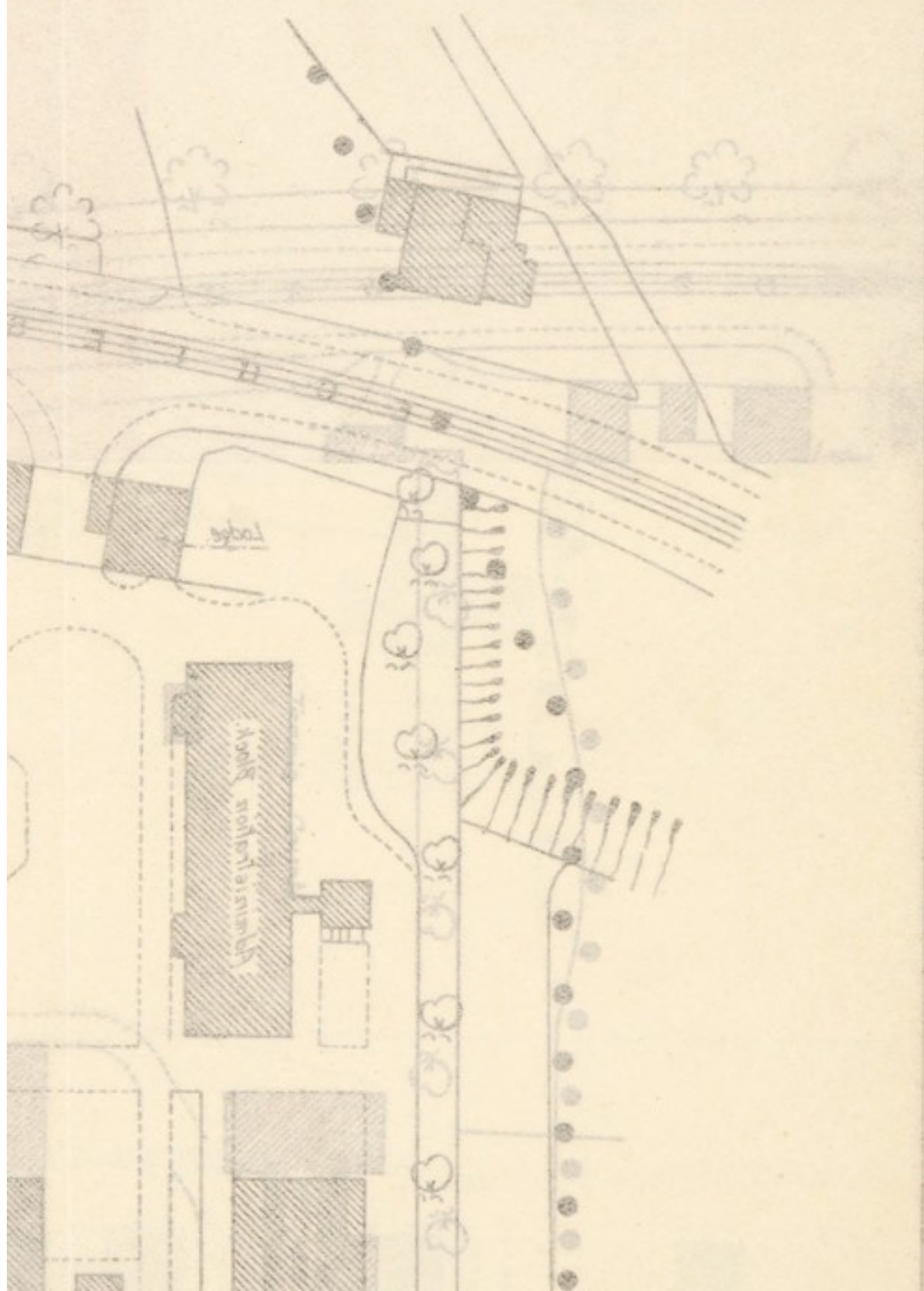
CLINICS & CENTRES.	No. of New Cases.		No. of New Cases.		Total Attendances.				Grand Total Attend- ances.	Consultations.			
	Children.		Mothers.		Mothers.		Children.			Children.	Mothers.		
	Under 1.	Over 1.	Expec- tant.	Nursing.	Expec- tant.	Nursing.	Under 1.	Over 1.			Under 1.	Over 1.	
C.W. Clinic	499	416	691	141	2607	479	2992	2939	9017	1714	1859	2607	479
Ordsall Hall.....	148	38	10	64	25	567	1756	796	3144	325	205	25	19
Chapel Street	219	60	24	64	104	836	2856	2259	6055	672	461	104	138
John Street, Pendleton...	173	49	12	66	36	908	3411	1947	6302	640	446	36	47
Seedley	300	66	3	130	12	1011	3570	1180	5773	692	340	12	76
Enys Street	179	45	14	54	33	647	2318	1458	4456	554	462	33	102
Regent Road	221	114	5	83	10	622	2003	1650	4285	777	587	10	30
Woodbine Street	176	61	4	66	7	420	1444	504	2375	388	137	7	23
Teneriffe Street Clinic....	528	310	116	145	352	520	5331	4147	10350	2186	1954	352	511
Urlands-o'-th'-Height	125	43	13	23	23	112	1457	574	2166	525	296	23	42
	2568	1202	892	836	3209	6122	27138	17454	53923	8473	6747	3209	1467

—PLAN REFERRED TO—



Ernest B. Martin, P.O. #1400, S.E.
City Engineer,
Towson Hall,
Baltimore

9 — REFERRED TO —



Milk Scheme.

A number of very deserving cases have been assisted under the above scheme, and the admirable results are increasingly evident, the individual improvement of the babies being observed as they are brought to the various centres to be weighed each week.

Up to the end of December, 1927, assistance has been given to 1,247 applicants, free milk being granted to 1,185 and milk at part-pay to 62.

Massage.

During the current year massage treatment has been given at the Clinics and at John Street, Rosamond Street, Ordsall and Enys Street. The results of the treatment in all cases where mothers will continue to bring the children regularly and for a sufficient length of time are very satisfactory, and complete cures have been effected in a number of cases, as will be seen by the figures in the statement below. Quite a number still retained on our books are practically ready for discharge. No case is officially discharged without being first thoroughly examined by the doctor; some cases, however, which are really fit for discharge, cease attending and thus miss the official discharge.

Most of the mothers take a keen interest in this work, and are very willing to carry out the advice given to them with regard to the children who are receiving treatment.

During the year 1927 the following cases have been dealt with :—

Clinics and Centres.	No. of Regular Cases.	No. of Casual Cases.	Cases Discharged Cured.
Regent Road	142	95	23
John Street	36	39	2
Rosamond Street	28	34	4
Teneriffe Street	85	114	14
Enys Street	26	51	2
Ordsall	19	12	4
TOTAL	336	345	49

Midwives and Maternity Homes Act, 1926.

Under the above Act, which came into force on the 1st January, 1927, six applications for registration of Maternity Homes in this area were received, to four of whom certificates of registration were issued after the necessary inspection had taken place.

Two orders of refusal to register were made owing to the premises in question not being suitable for Maternity Homes, and no appeals against such orders were made.

Midwives' Act.

There are 90 midwives on the register in Salford ; 7 are connected with a public institution and 5 are not

practising, leaving 78 practising midwives, of whom 67 reside within the City.

PARTICULARS OF QUALIFICATIONS.

	Bona-fides.	St. Mary's Hospital.	London Obstetrical Society.	Central Midwives' Board.	Total.
Practising Midwives	3	7	6	62	78
Non-practising Midwives.....	—	—	1	4	5
Maternity Nursing	—	—	—	—	—
Institution Nurses	—	—	—	7	7
Totals	3	7	7	73	90

The midwives are regularly visited, and their books, instruments, &c., inspected by the Assistant Inspector, under the supervision of the Medical Officer, and the midwives are encouraged to consult with the Medical Officer when cases of difficulty arise. During the year 10 midwives removed from the district, 4 of these from the Royal District Nurses' Home, The Crescent; 3 changed their address; 11 midwives were newly registered; 2 ceased to practise, and 1 was struck off the Roll. During the year 1927, 3,051 births were attended by midwives alone, and 330 cases were attended by doctors and midwives acting as Maternity Nurses.

Puerperal Fever.

Eight cases of puerperal fever were notified during the year; 1 occurred in St. Mary's Hospital and 1 was a doctor's case; 1 patient was confined in Crumpsall Infirmary. Of the remaining 5 cases, 3 midwives had 1 case each and 1 had 2 cases. They were thoroughly enquired into, and every care taken to prevent the spread of the disease.

On notification, each case is inspected. The house is visited by the Assistant Inspector of Midwives and the patient is removed by Doctor's orders (except in one or two special cases), to Ladywell Sanatorium or Hope Hospital. Full details concerning the onset of the illness are taken from someone in the house in authority, and questions are asked as to the Midwife's regular visiting, cleanliness, etc. The patient's bedding is taken away for disinfection, and the room is disinfected. The house is visited later to see that disinfection is satisfactory. The Midwife is interviewed and particulars taken of the case, also a resumé of any work done since last seeing the infected person. She is temporarily suspended in order that she may go to the Disinfecting Station to have a disinfecting bath, and have her clothes, instruments and bag disinfected. Should she have visited other patients, not being aware of infection at the time, these are seen by the Assistant Supervisor, temperature and pulse taken, and their condition generally noted. The Midwife is warned to take special precautions regarding them, to watch carefully, and send for the Doctor without delay if at all anxious about them. In a case of suspected Sepsis, the Midwife sends for the Doctor, reports to the Health Office, and is temporarily suspended until she hears the Doctor's decision, or as an alternative she may devote herself to the one patient, and pass on her other duties to another Midwife.

Puerperal Pyrexia

The regulations relating to the notification of Puerperal Pyrexia came into force on October 1st, 1926.

During the year 1927, 28 cases were notified in Salford :—

27 recovered, and

1 proved fatal. (This was a case of Albuminuria, and the patient had been medically treated during her pregnancy. A doctor had been engaged for the confinement).

13 cases were removed to Hospital.

13 cases were nursed at home.

2 cases occurred in the Municipal Maternity Home and were isolated there.

Special accommodation has been provided at Ladywell Sanatorium for this class of case, and all the patients removed there have done extremely well.

As the regulations require prompt notification of rise of temperature, special attention for these cases is quickly available, and, if necessary, a consultant may be called in, arrangements for which have been made.

Bacteriological examinations of lochia and blood are made, on request, at the Municipal Laboratories, and in cases where the doctor does not think it necessary to send the patient to hospital, she can be nursed at home, a special nurse (trained and a midwife) being sent from the Maternity and Child Welfare Department to nurse the case under the supervision of the patient's own doctor.

The same precautions are taken with Puerperal Pyrexia as with Puerperal Fever, the disinfection and suspension of midwives being carried out in a similar manner.

Disinfection.

Eight Midwives were disinfected at Mode Wheel on account of having been in contact with a notifiable infectious disease other than puerperal fever; and 5 Midwives were instructed to take disinfecting baths at home. Three Midwives were disinfected at Mode Wheel on account of having been in contact with Pemphigus Neonatorum. In 3 cases in which it was found that the rash had developed after the Midwives had ceased to attend the patients, the Midwives had disinfecting baths at home.

Notifications.

1,254 notifications of calling in medical practitioners have been received, the causes being the following:—

Abnormal Presentations.....	67
Deformed Pelvis	9
Antepartum Hæmorrhage	42
Placenta Prævia	4
Postpartum Hæmorrhage.....	23
Uterine Inertia.....	49
Obstructed labour, or requiring instrumental assistance	255
Retained Placenta or Membranes	54
Ruptured Perineum	259
Rise of Temperature	20
Eclampsia .....	..
Premature Birth	36
Miscarriage and Abortion	16
Inflammation of Eyes	173
Other causes relating to Mother	153
" " Child.....	94
Total	1,254

Sixteen notifications of contact with infectious disease were received.

Forty-seven notifications of artificial feeding, 52 stillbirths and 55 deaths of infants were notified by Midwives during the year.

Investigation of Stillbirths and Infant Deaths.

Each case occurring in Midwives' practices is thoroughly investigated by the Assistant Inspector of Midwives.

As practically every mother now receives Ante-natal care where there is a history of previous stillbirth, the mother is advised to seek medical advice from her own Doctor, the Welfare Clinics, St. Mary's Hospital, or other kindred institutions, and in most cases this advice is followed out.

Out of the 52 stillbirths occurring in Midwives' practices there were :—

- 5 Abnormal presentation.
- 14 Premature.
- 2 Hydrocephalus.
- 2 Spina Bifida.
- 6 With history of previous Stillbirth.
- 5 Born before arrival of help (3 of these were macerated).
- 20 Macerated.
- 4 cases of Antepartum hæmorrhage.
- 4 cases of illness of mother.
- 1 case when mother had had a bad shock.

Death of Newly-born Infants (no Registered Practitioner being in Attendance at the Birth).

Inquests were held in connection with 5 Infant Deaths occurring in the practice of Midwives. Of these :—

- 1 was found dead in bed (probably accidentally overlaid).
- 2 were found dead in bed (natural causes—debility).
- 1 was found dead in bed (natural causes—convulsions).
- 1 owing to inattention at birth—born before Midwife sent for.

When necessary, the Assistant Inspector attends the inquests.

In addition, 48 notifications of infants' deaths were received, medical practitioners being called in each case.

The causes of deaths were as follows, viz. :—

Prematurity and Debility	24
Prematurity and Cardiac Failure	4
Asphyxia Neonatorum and Congenital Debility..	6
Congenital Malformation	2
Congenital Debility	4
Cerebral Hæmorrhage.....	1
Enteritis	3
Atelectasis	3
Broncho-Pneumonia	1

Ophthalmia Neonatorum.

During the year 1927, 47 cases of Ophthalmia Neonatorum were notified, 7 of these being notified or re-notified by the Medical Staff of the Royal Eye Hospital.

Of the 47 cases notified—

41 occurred in the practice of Midwives.

1 was attended by Doctors.

1 was attended by St. Mary's Hospital Nurses.

2 were notified from St. Mary's Hospital.

1 was notified from Crumpsall Union.

1 was notified from Hope Union.

These cases are visited, on notification, by the Assistant Inspector of Midwives, and where necessary a District Nurse is sent to give treatment under Doctor's orders.

In 29 cases both eyes were affected, and in 18 cases one was affected. There were 4 very bad cases, 4 bad cases, 6 fairly bad, 16 slight cases, 17 very slight cases, and 6 cases were referred to the District Nurses, who paid 355 visits. 176 visits were paid by the Assistant Inspector of Midwives, who also visited all cases of inflammation of the eyes notified under the Midwives' Act, to which she paid 434 visits.

Of the 47 cases—

47 recovered without injury to sight.

As the Midwives are all very anxious to avoid any trouble with regard to eyes, they are prompt in sending for medical help at the least sign of discharge or inflammation, so that the majority of cases are quite slight.

Ophthalmia Neonatorum.

Cases Notified.	Cases Treated.			Vision Unim- paired.	Vision Im- paired.	Total Blind- ness.	Deaths.
	At Home	At Ho- Out-P.	spital. In-P.				
47	38	8	1	47	—	Nil.	Nil.

Pemphigus Neonatorum.

There has been a decided decrease in the number of cases of this disease during the year 1927, as compared with 1926. One noticeable feature again has been the difference in the age of the infants affected, those this year not having been attacked at quite so early an age as cases last year.

The number of cases which occurred during 1927 was 16, and all recovered.

Of the 16 cases :—

- 1 was affected on the body.
- 4 were affected on the legs.
- 1 was affected on the neck and leg.
- 2 were affected on the limbs.
- 1 was affected on the arms.
- 3 were affected on the groin and thigh.
- 1 was affected on the head.
- 1 was affected on the head and limbs.
- 2 were affected on the abdomen and thighs.

The age at which the disease started varied from the sixth day to 11 months, the period of greatest infection being about the fourteenth day.

Most of the cases occurred in the Midwives' practices.

2 were born in Municipal Maternity Home.

5 were St. Mary's Hospital cases.

9 were Midwives' cases.

All the Nurses involved were disinfected at the Corporation Disinfecting Station, and every care was taken to prevent the spread of infection.

When the disease started during the first 10 days, the cases were taken over from the Midwives and nursed by a trained Midwife and Nurse belonging to the Health Department.

TABLE C.W. 3.—NOTIFICATION OF BIRTHS.

WARD.	Still Births Notified.	Total Live Births Notified.	Births Notified by Midwives.	Births Notified by Medical Practitioners.	Births by Notified by Parents and other persons.	Births in St. Mary's Hospital and Salford Union.	Births in Municipal Maternity Home.	Live Births not Notified.
Kersal	7	186	127	32	4	10	13	14
Mandley Park	3	249	180	27	..	32	10	3
Albert Park	14	262	154	58	..	35	15	9
Charlestown	6	278	213	11	..	32	22	6
St. Matthias'	8	351	251	50	1	41	8	2
Trinity	9	357	226	76	..	39	16	4
St. Thomas'	4	247	181	8	2	22	14	7
Claremont	2	82	16	43	6	2	15	13
St. Paul's	3	300	236	12	1	33	18	3
Seedley	15	97	43	15	..	8	21	1
Langworthy	5	193	128	24	..	15	26	3
Weaste	50	183	101	17	3	34	28	9
Regent	18	330	226	30	2	43	29	1
Docks	4	208	134	28	4	18	24	1
Crescent	7	444	320	45	..	56	23	2
Ordsall Park	9	348	274	16	2	36	10	1
	164	4115	2810	492	25	456	332	79

TABLE C.W. 4.

SUMMARY.

BIRTHS.

Registered: Legitimate, 4,130; Illegitimate, 171; Total, 4,301.

Notified: Live births, 4,115; Stillbirths, 164; Total, 4,279.

By Midwives, 2,810; by Parents, Doctors and Institutions, 1,305.

Un-notified Births = 79.

INFANT DEATHS (UNDER 1 YEAR).

Number: Legitimate, 328; Illegitimate, 20; Total, 348.

Rate per 1,000 births: Legitimate, 79; Illegitimate, 117; Total, 81.

MIDWIVES.

Number practising in district: Trained, 75; Untrained, 3.

Number of visits paid: Routine and special, 425.

HEALTH VISITORS.

Visits paid by Health Visitors during year:—

To Expectant Mothers: First visits, 980; Total visits, 1,028.

To Children: First visits, 3,674; Total visits, 32,985.

To Mothers and Children: Total visits, 34,013.

	No. of cases notified.	No. of visits.	No. of cases nursed.	No. of cases removed to hospital.
Ophthalmia Neonatorum	47	176	4	1
Puerperal Fever	8	21	—	7
Measies (all ages)	—	—	—	—

