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City of Salford.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1937.

BY

H. OSBORNE,
MEDICAL OFFICER OF HEALTH.

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Members of the Health Committee, 1937-38.

Alderman J. A. WEBB, J.P., M.B.E., *Chairman.*

Councillor H. KITCHIN, *Deputy-Chairman.*

Councillor MILLWOOD (*Mayor*).

Councillor ASHCROFT, J.P. (*Deputy-Mayor*).

Alderman HIGGINBOTTOM.

" SANDS, J.P.

" WEBB, L.

Councillor BELL.

" BINNS.

Councillor CRABTREE.

" CUTTIFORD, J.P.

" FAULKNER.

" FEARNEHOUGH.

" HAYNES.

" HURST.

" MERRICK.

" SHLOSBERG.

Also co-opted for Housing Purposes :—

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

MRS. RICHARDS..... Representing the Manchester and Salford Women Citizens' Association.

The following members were co-opted upon the undermentioned Sub-Committees, viz. :—

Tuberculosis Sub-Committee—Mr. W. BRICE and Mr. A. FISHWICK representing the Salford Insurance Committee.

Maternity and Child Welfare Sub-Committee—Mrs. WADE, representing the Ladies' Public Health Society; Mrs. HARGREAVES, representing the Manchester and Salford Women Citizens' Association; and Mrs. HARPER, representing the Women's Guild of the Pendleton Co-operative Industrial Society Limited.

STAFF.

Public Health Department.

Medical Officer of Health Administrative Tuberculosis Officer	H. OSBORNE, M.D., M.R.C.S., D.P.H., etc.
Clinical Tuberculosis Officers	E. N. RAMSBOTTOM, M.A., B.Sc., M.D. (Lond.), D.P.H., etc. J. V. WHITAKER, M.B.,Ch.B., D.T.M. & H., D.P.H.—to 28th February, 1937. H. S. DAVIES, M.R.C.S., L.R.C.P., D.P.H. —from 26th April, 1937.
Maternity and Child Welfare Medical Officers	M. SPROUL, M.B., Ch.B., D.P.H. J. C. KING, M.B., Ch.B., D.P.H.—to 30th April, 1937. K. M. Boyes, M.B., Ch.B, D.P.H.—from 10th May, 1937.
Consulting Obstetrician	W. R. ADDIS, M.C., M.B., Ch.B.
City Pathologist	G. J. CRAWFORD, B.Sc., M.D., M.R.C.P, (Lond.), D.P.H.
Assistant Pathologist	L. STENT, M.D., M.R.C.S., L.R.C.P.
Venereal Diseases Medical Officer	R. MARINKOVITCH, M.D.
Asst. Venereal Diseases Medical Officers.	F. M. BLADES, M.B., Ch.B. R. C. WEBSTER, B.Sc., M.D.

HOPE HOSPITAL.

WHOLE-TIME STAFF.

Medical Superintendent	J. DUDGEON GILES, O.B.E., M.D. (Edin.).
Deputy Medical Superintendent	GEORGE BROWN, M.B., Ch.B., F.R.C.S. (Edin.).
Physician	WILLIAM MACKAY, M.D., F.R.F.P.S. (Glas.).
Obstetric Officer	S. HENDERSON, M.B., Ch.B., M.R.C.S., L.R.C.P., M.C.O.G., M.M.S.A.
Assistant Medical Officers	SIX.

VISITING (PART-TIME) STAFF.

General Physician	G. J. LANGLEY, M.D., F.R.C.P. (Lond.).
Physician for Diseases of Children	CATHERINE CHISHOLM, C.B.E., B.A., M.D. (Manch.).

HOPE HOSPITAL—VISITING (PART-TIME) STAFF—*Continued.*

Obstetrician and Gynæcologist	T. F. TODD, L.R.C.P. (Lond.), M.B., B.S. (Lond.), F.R.C.S., Eng., M.C.O.G., M.S. (Lond.).
Orthopædic Surgeon	S. M. MILNER, M.A., M.B., Ch.B. (Cantab and Manch.), M.R.C.S., L.R.C.P. (Lond.), F.R.C.S. Eng.
Surgeons (Jointly) for Diseases of the Ear, Nose and Throat.	A. A. SMALLEY, M.C., M.B., Ch.B. (Manch.), M.R.C.S., L.R.C.P. (Lond.)—to April, 1937.
	L. D. MERCER, M.B., Ch.M. (Sydney), F.R.C.S. (Edin.)—to April, 1937.
	W. B. MCKELVIE, M.D., F.R.C.S. (Edin.)—from 22nd April, 1937.
General Surgeon	H. T. SIMMONS, B.Sc., M.B., Ch.B., Ch.M. (Manch.), L.R.C.P., M.R.C.S. (Lond.). F.R.C.S. Eng.
Anæsthetist, Radiologist and Lecturer	J. GHOSH, F.R.C.S.I., D.P.H.

LADYWELL SANATORIUM.

Medical Superintendent	W. EDGE, M.R.C.S., L.R.C.P., D.P.H.
Assistant Resident Medical Officer	W. P. CARGILL, M.R.C.S., L.R.C.P.—to 14th August, 1937.
	G. N. M. WISHART, M.R.C.S., L.R.C.P.—from 15th August, 1937.
Visiting Aural Surgeon	W. B. MCKELVIE, M.D., F.R.C.S. (Edin.).
Junior Resident Medical Officer	J. STARKIE, M.R.C.S., L.R.C.P.—from 3rd August, 1937.

NAB TOP SANATORIUM.

Medical Superintendent	H. M. FLEMING, B.A., M.D., D.P.H.

Public Analyst	G. H. WALKER, Ph.D., B.Sc., F.I.C.
Chief Administrative Assistant	E. WOOD.
Chief Sanitary Inspector	J. P. CARGILL, M.R.S.I.—to 6th July, 1937.
	S. MELLOR—from 7th July, 1937.

To the Health Commitiee of the City of Salford.

Mr. Chairman and Gentlemen,

I have the honour to present my Report upon the health of the City and the work of the Public Health Department during 1937.

Death Rate.

The death rate of the City was 14·6 per thousand of the population—a slight increase as compared with the previous year. The classification of deaths occurring in the City has not produced any data which need occasion special comment.

Birth Rate.

The birth rate showed a slight increase from 15·0 in 1936 to 15·1 per thousand of the population in 1937. This increase does not represent, however, an increase in the number of births, which actually fell from 3,089 to 3,050, but was brought about by the decrease in population, which was estimated by the Registrar General to have fallen from 206,000 in 1936 to 201,800 in 1937.

Infantile Mortality Rate.

I am pleased to be able to report that the Infantile mortality rate (i.e. the number of deaths of children under one year of age per thousand live births) fell from 90 in 1936 to 84 in 1937. While the latter figure does not constitute a record, it is the fourth lowest of Infantile mortality rates recorded in this City. The steady improvement in the health of children under one year of age is shown by the fact that the average Infantile mortality rate for the five years from 1933 to 1937 is 85 as compared with the lowest rate for any previous period of five years, of 102.

Recreation Rooms—Nab Top Sanatorium.

Among the most pleasant events which have occurred since publication of my last Annual Report, the opening of the Recreation Rooms for patients at the Nab Top Sanatorium, Marple, must take a high place. These rooms, which have already been greatly appreciated, will be a boon to the patients, especially during the long tedious months of winter which lie ahead.

Cubicle Block—Ladywell Sanatorium.

I have much pleasure in referring to the rapid progress which is being made with the erection of the new Cubicle Block at the Ladywell Sanatorium and Isolation Hospital. It is hoped that these buildings will be completed early in 1939.

Infectious Diseases.

On page 65 of this volume will be found a detailed report as to the use of Immune Globulin in connection with the local epidemic of measles which occurred

during the latter months of 1937 and the early part of 1938. Although, on this occasion, the use of Immune Globulin was, to a certain extent, experimental, the conclusions derived from its use were, in the main, satisfactory, and encourage the hope that it may be of value in future epidemics.

I regret that it was not possible to achieve results in connection with immunisation against diphtheria comparable with those obtained during 1936. For this, lack of staff was partly responsible, but apathy on the part of the public must also be blamed. Every effort is being made to educate the public in the value of this method of protecting their children.

Municipal Midwifery Service.

I think it desirable to make a brief reference to the fact that 1937 saw the introduction for the first time in this country of a Municipal Midwifery Service. Details relating to the scheme adopted in this area will be found in Section 7 of this Report. I am glad to be able to assure the Committee that the scheme has operated in this area with a minimum of inconvenience and an entire absence of complaint.

In concluding this introduction to my Report, I wish to offer my warmest thanks to the Committee for their constant assistance and encouragement; I am grateful, too, for the loyal and active co-operation of the staff of the Department.

I have the honour to be, Mr. Chairman and Gentlemen,

Your obedient servant,

H. OSBORNE,
Medical Officer of Health.

CONTENTS.

SECTION I.

Mortality Statistics.

STATISTICAL SUMMARY, 1937.

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

Population.—(Registrar-General's Estimate at Mid-year, 1937)		201,800
,, (Census, 1931)		223,438
Density.—The Mean Density of the City is equal to 38.8 persons per acre.		
Live Births — **Legitimate** 1,453 Males, 1,466 Females		2,919
Illegitimate 67 ,, 64 ,,		131
Total		3,050
Annual Rate of Births per 1,000 of the Population		15·1
Still Births — Males 62, Females 62 — **Total**		124
Annual Rate of Still Births per 1,000 Total Births		39·1
Deaths — Males 1,529, Females 1,411		2,940
Annual Rate of Mortality per 1,000 of the Population		14·6
Percentage of total deaths occurring in Public Institutions		55·7 per cent.

Deaths from Puerperal Causes :—	Deaths.	Rate per 1,000 Total Births.
Puerperal Sepsis	3	0.9
Other Puerperal Causes	11	3.5
Total	14	4.4

Death-rate of Infants under one year of age per 1,000 live births :—

Legitimate, 84. Illegitimate, 92. Total	84
Deaths from Measles (all ages)	12
,, ,, **Whooping Cough** (all ages)	14
,, ,, **Diarrhoea** (under 2 years of age)	25

TABLE M. 1.

DEATHS IN WARDS FOR THE YEAR 1937.

CAUSES OF DEATH.	AT ALL AGES.																
	City.	Albert Park.	Charlestown.	Claremont.	Crescent.	Docks.	Kersal.	Langworthy.	Mandley Park.	Ordsall Park.	Regent.	St. Matthias'.	St. Paul's.	St. Thomas'.	Sedley.	Trinity.	Weaste.
Enteric Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Small-pox	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Measles	12	....	1	....	....	3	....	....	....	....	3	1	1	1	....	2	....
Scarlet Fever	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whooping Cough	14	2	....	1	....	1	1	....	1	....	....	4	....	....	....	4	....
Diphtheria and Croup	12	....	2	....	3	1	....	1	1	....	1	1	....	....	....	1	1
Influenza	57	6	5	2	4	1	5	8	4	2	2	3	....	1	2	7	5
Erysipelas	3	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....
Encephalitis Lethargica	7	....	2	1	....	....	....	....	....	2	2	....	....	....	....	....	....
Tuberculosis of Respiratory System	178	13	12	9	15	8	7	15	11	11	16	13	12	10	4	10	12
Tuberculous Meningitis	11	1	....	1	1	....	3	....	....	1	....	....	....	1	1	2	....
Other Tuberculous Diseases	16	2	1	1	1	....	2	1	3	....	....	2	1	2	....	....	....
Syphilis	7	....	....	....	1	1	1	....	....	1	....	....	....	1	....	2	....
General Paralysis of the Insane, etc	6	....	1	....	....	1	....	....	2	....	....	1	....	....	....	1	....
Cancer (Malignant Disease)	381	28	26	23	34	19	23	17	14	20	28	31	25	17	18	23	35
Diabetes	39	4	1	3	....	1	3	2	4	4	4	3	1	4	....	1	4
Rheumatic Fever	15	1	1	2	....	....	....	....	....	5	....	1	1	2	....	1	1
Meningitis	2	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....
Cerebro-Spinal Fever	7	....	1	....	2	1	....	1	....	....	....	1	....	....	....	1	....
Cerebral Hæmorrhage, etc	115	11	4	8	6	6	8	4	7	6	9	9	5	11	5	7	9
Heart Disease	699	63	46	42	68	50	31	36	47	38	36	45	36	45	34	45	37
Aneurysm	6	3	....	....	....	1	....	....	....	....	....	1	....	....	....	1	....
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Other Circulatory Diseases	212	14	19	10	15	12	13	13	8	15	12	11	16	22	11	11	10
Bronchitis	179	14	10	6	18	11	8	10	15	11	15	14	9	17	3	10	8
Pneumonia (all forms)	238	20	19	10	11	17	14	14	22	16	12	17	17	13	9	17	10
Other Respiratory Diseases	19	1	....	2	3	2	....	2	2	....	2	1	1	1	....	....	2
Diarrhœa and Enteritis	25	1	....	2	2	1	2	1	3	....	1	....	4	3	1	3	1
Peptic Ulcer	26	3	1	3	....	3	2	....	3	1	1	3	....	3	....	1	2
Appendicitis	13	....	....	1	1	....	....	1	2	1	1	1	1	1	....	....	3
Cirrhosis of Liver	3	....	....	....	1	....	1	....	1	....	....	....	....	....	....	....	....
Other Diseases of Liver, etc	11	2	....	....	....	....	1	....	1	2	....	....	2	....	1	....	2
Other Digestive Diseases	44	5	4	1	6	3	3	....	4	2	4	2	2	3	....	3	2
Nephritis, Acute and Chronic	74	7	3	3	8	4	2	6	3	5	4	5	10	1	5	4	4
Puerperal Sepsis	3	....	....	....	....	....	....	....	....	1	....	....	2	....	....	....	....
Other puerperal causes	11	....	1	....	1	1	....	1	1	1	3	....	....	1	....	....	1
Congenital Debility and Malformation	70	6	2	4	6	2	2	3	3	4	7	7	4	5	7	7	1
Premature Birth	57	5	6	4	4	5	2	3	3	2	4	5	3	3	1	4	3
Senility	89	6	3	5	6	9	4	6	6	2	8	2	8	7	5	2	10
Suicide	21	3	3	4	2	2	....	1	....	....	1	....	1	2	....	1	1
Other Violence	71	1	5	1	8	5	....	2	6	6	7	5	5	10	2	3	5
Other Defined Diseases	178	22	16	8	12	12	13	6	16	10	8	14	11	7	6	8	9
Causes Ill-defined or Unknown	8	....	....	1	....	1	....	1	5	....	....	....	....	....	....	....	....
Totals	**2940**	**246**	**195**	**158**	**239**	**185**	**151**	**155**	**199**	**169**	**191**	**204**	**178**	**194**	**115**	**183**	**178**

TABLE M. 2.

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR, 1937.

CAUSES OF DEATH.	NET 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	2932	256	38	41	58	115	287	902	1235
Uncertified	8	....	....	....	....	....	1	1	6
Enteric Fever	....	....	....	....	....	....	....	....	....
Small-pox	....	....	....	....	....	....	....	....	....
Measles	12	4	4	3	1	....	....	....	....
Scarlet Fever	1	....	....	....	1	....	....	....	....
Whooping Cough	14	7	3	3	1	....	....	....	....
Diphtheria and Croup	12	1	....	3	7	1	....	....	....
Influenza	57	1	....	....	1	2	4	24	25
Erysipelas	3	....	1	....	....	....	....	1	1
Encephalitis Lethargica	7	....	....	....	....	1	3	3	....
Tuberculosis of Respiratory System	178	....	....	....	3	45	74	43	13
Tuberculous Meningitis	11	1	....	....	4	4	2	....	....
Other Tuberculous Diseases	16	1	1	2	....	2	2	6	2
Syphilis	7	1	....	....	....	....	....	5	1
General Paralysis of the Insane, Tabes Dorsalis	6	....	....	....	....	....	3	3	....
Cancer, Malignant disease	381	....	....	....	1	2	27	176	175
Diabetes	39	....	....	....	....	....	4	15	20
Rheumatic Fever	15	....	....	2	....	5	....	7	1
Meningitis	2	....	....	....	1	....	....	1	....
Cerebro-Spinal Fever	7	2	....	....	....	2	2	1	....
Cerebral Hæmorrhage, etc.	115	4	....	....	....	....	9	39	63
Heart Disease	699	....	....	....	2	9	39	226	423
Aneurysm	6	....	....	....	....	1	....	4	1
Other Circulatory Diseases	212	1	....	....	....	....	2	58	152
Bronchitis	179	8	3	3	1	3	10	61	90
Pneumonia (all forms)	238	50	17	13	10	4	27	68	49
Other Respiratory Diseases	19	....	1	1	....	1	....	10	6
Diarrhœa and Enteritis	25	24	1	....	....	....	....	....	....
Peptic Ulcer	26	....	....	....	....	2	2	20	2
Appendicitis	13	....	....	....	2	3	4	3	1
Cirrhosis of Liver	3	....	....	....	....	....	2	1	....
Other diseases of Liver, etc.	11	1	....	....	1	1	1	4	3
Other Digestive Diseases	44	4	1	1	2	3	6	9	18
Nephritis Acute and Chronic	74	....	....	....	1	3	7	39	24
Puerperal Sepsis	3	....	....	....	....	....	3	....	....
Other Puerperal causes	11	....	....	....	....	2	9	....	....
Congenital Debility and Malformation	70	68	1	....	....	1	....	....	....
Premature Birth	57	57	....	....	....	....	....	....	....
Senility	89	....	....	....	....	....	....	1	88
Suicide	21	....	....	....	....	3	8	6	4
Other Violence	71	4	2	8	9	4	13	15	16
Other Defined Diseases	178	17	3	2	9	10	24	52	61
Diseases ill-defined or unknown	8	1	....	....	1	1	1	2	2
Totals	2940	256	38	41	58	115	288	903	1241

TABLE M. 3.

BIRTHS IN THE CITY OF SALFORD AND IN ITS WARDS, DISTINGUISHING DEATHS OF LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD.
FOR THE YEAR, 1937.

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	244	19	7·8	23	2	94	93	105
Charlestown	219	6	2·7	13	....	59	61	....
Claremont	173	3	1·7	14	....	81	82	....
Crescent	245	9	3·7	23	1	94	93	111
Docks	173	5	2·9	19	....	110	113	....
Kersal	132	8	6·1	11	....	83	89	....
Langworthy	142	5	3·5	8	1	56	51	200
Mandley Park	231	20	8·6	17	2	74	71	100
Ordsall Park	211	11	5·2	13	1	62	60	99
Regent	198	5	2·5	20	1	101	99	200
St. Matthias'	238	11	4·6	22	....	93	97	....
St. Paul's	189	5	2·6	15	1	79	76	200
St. Thomas'	173	2	1·2	18	....	104	105	....
Seedley	125	6	4·8	10	1	80	84	167
Trinity	226	10	4·4	21	2	93	88	200
Weaste	131	6	4·6	9	....	69	72	....
Totals	**3,050**	**131**	**4·3**	**256**	**12**	**84**	**84**	**92**
CORRESPONDING DATA FOR THE CITY FOR THE TEN YEARS 1927-1936.								
City	**35,646**	**1,358**	**3·8**	**3,356**	**203**	**94**	**92**	**149**

TABLE M. 4.

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 1,000 BIRTHS DURING THE YEARS 1915 TO 1937.

Year.	Births.			Percentage of Illegitimate 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
1928	4073	3915	158	3·9	431	408	23	106	104	146
1929	3903	3761	142	3·6	489	460	29	125	122	204
1930	3787	3640	147	3·9	323	290	33	86	80	224
1931	3479	3357	122	3·5	351	326	25	101	97	205
1932	3401	3261	140	4·1	336	321	15	99	98	107
1933	3316	3195	121	3·6	264	250	14	80	78	116
1934	3141	3010	131	4·2	292	277	15	93	92	115
1935	3156	3059	97	3·1	245	230	15	78	75	155
1936	3089	2960	129	4·2	277	263	14	90	89	109
1937	3050	2919	131	4·3	256	244	12	84	84	92

TABLE M. 5.

OWING 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 1937.

ears.	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.	Phthisis.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
78	160,277	44·7	27·1	5·4	2·7	0·5	3·5	1·1	3·6	1·8	185	17·9
79* ..	165,899	43·0	26·7	4·2	2·9	0·4	3·7	1·2	4·3	1·8	170	15·2
80	171,727	41·4	27·9	7·4	2·7	0·4	3·2	0·9	3·4	1·9	197	16·6
81	177,760	38·8	22·5	3·0	2·5	0·5	3·1	1·1	3·6	1·6	163	16·4
82	179,855	39·7	23·7	4·0	2·4	0·4	3·6	1·1	2·8	1·7	177	16·9
verage 5 years.		**41·5**	**25·6**	**4·8**	**2·6**	**0·4**	**3·4**	**1·1**	**3·5**	**1·8**	**178**	**16·6**
83	181,951	37·3	23·6	3·4	2·7	0·4	3·1	1·2	3·0	1·7	171	16·1
84* ..	184,047	38·8	24·4	4·4	2·6	0·5	2·9	1·1	2·8	1·7	184	16·1
85	186,142	37·6	23·0	3·6	2·6	0·5	2·9	1·2	3·0	1·9	174	16·1
86	188,238	38·5	24·8	4·1	2·6	0·5	2·8	1·3	3·3	1·8	197	15·3
87	190,334	36·6	25·5	4·9	2·3	0·5	3·2	1·3	2·9	2·2	195	15·4
verage 5 years.		**37·8**	**24·3**	**4·1**	**2·6**	**0·5**	**3·0**	**1·2**	**3·0**	**1·9**	**184**	**15·8**
88	192,429	37·1	24·8	3·9	2·3	0·5	3·0	1·1	3·0	2·1	184	15·2
89	194,525	35·9	25·1	5·3	1·9	0·6	2·5	1·3	2·6	1·9	181	16·7
90* ..	196,621	36·1	27·7	4·4	2·2	0·5	2·0	1·3	3·4	3·8	198	17·5
91	198,775	36·3	26·0	3·4	2·2	0·5	2·2	1·1	3·7	3·0	194	18·1
92	200,833	35·8	24·6	4·6	1·9	0·6	2·0	1·2	2·6	2·9	186	16·7
verage 5 years.		**36·2**	**25·6**	**4·3**	**2·1**	**0·5**	**2·3**	**1·2**	**3·1**	**2·7**	**189**	**16·8**
93	203,015	34·7	24·1	4·2	1·9	0·6	2·0	1·4	2·6	2·3	211	16·2
94	205,220	34·3	21·1	3·3	1·8	0·6	2·0	1·1	1·9	2·3	174	17·1
95	207,449	35·9	25·6	5·0	1·9	0·6	2·3	1·3	2·6	2·7	229	17·4
96* ..	209,703	35·6	23·1	4·2	1·5	0·6	2·0	1·4	2·2	2·7	200	18.1
97	211,981	35·2	23·9	5·6	1·8	0·6	2·1	1·3	2·4	2·1	219	18.6
verage 5 years.		**35·1**	**23·6**	**4·5**	**1·8**	**0·6**	**2·1**	**1·3**	**2·3**	**2·4**	**207**	**17·5**
98	214,284	34·9	22·8	4·2	1·8	0·8	2·2	1·2	2·2	2·2	213	18·6
99	216,612	34·1	23·9	4·4	1·8	0·6	2·3	1·4	2·5	2·7	211	18·7
00	218,965	33·3	25·3	4·1	1·8	0·6	2·4	1·7	3·2	2·8	208	17 3
01	221,212	29·2	21·7	4·2	1·8	0·7	1·9	1·5	2·3	1·9	205	17·9
02* ..	222,233	34·0	19·3	2·7	1·7	0·7	2·0	1·5	2·2	2·1	157	18·4
verage 5 years.		**33·1**	**22·6**	**3·9**	**1·8**	**0·7**	**2·2**	**1·5**	**2·5**	**2·3**	**199**	**18·2**
03	223,260	32·6	19·4	2·9	1·8	0·7	1·9	1·4	2·1	1·9	168	18·1
04	224,299	32·4	21·4	4·4	2·0	0·6	1·8	1·7	2·2	1·9	193	21·5
05	225,327	31·8	17·7	2·6	1·5	0·6	1·7	1·6	1·8	1·8	148	17·8
06	226,367	31·2	19·1	3·3	1·7	0·8	1·7	1·5	2·0	1·8	162	18·6
07	227,413	30·6	18·5	2·2	1·7	0·7	1·7	1·6	2·1	2·3	140	17·9
verage 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. 5—*Continued.*

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.	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	15.5
1909	229,519	29·5	19·0	2·5	1·5	0·8	1·7	1·4	2·3	2·3	141	15.6
1910	230,579	28·6	16·2	1·8	1·4	0·9	1·6	1·4	1·8	1·7	131	16.0
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**	....
1928	241,500	16·9	13·3	0·8	1·2	1·3	0·8	1·3	1·4	1·2	106	....
1929	235,600	16·6	15·4	1·5	1·2	1·3	0·9	1·1	2·2	1·6	125	....
1930	230,100	16·5	13·3	0·9	1·2	1·4	0·8	1·3	1·6	1·1	86	....
1931	225,900	15·4	14·2	0·6	1·2	1·4	0·8	1·4	1·8	1·4	101	....
1932	220,300	15·4	13·2	0·6	1·0	1·7	0·9	1·8	1·1	1·1	99	...
Average 5 years.		**16·2**	**13·9**	**0·9**	**1·2**	**1·4**	**0·8**	**1·4**	**1·6**	**1·3**	**103**	...
1933	217,000	15·3	13·9	0·3	1·1	1·5	0·9	2·1	1 2	1·2	80	....
1934	213,850	14·7	13·6	0·6	0·9	1·8	0·9	2·5	0·8	1·1	93	....
1935	210,000	15·0	13·0	0·2	0·9	1·6	0·9	2·7	0·8	1·1	78	....
1936	206,000	15·0	14·0	0·6	1·0	1·7	0·8	3·1	0·9	1·1	90	....
1937	201,800	15·1	14·6	0·2	0·9	1·9	0·8	3·5	0·9	1·2	84	....

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

SECTION II.

General Work of the Health Department.

(A) 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.

Salford Local Acts and Orders.

Charter of Incorporation for the Borough of Salford granted 16th April, 1844.

Order in Council, dated 14th November, 1854, vesting powers in the Town Council of Salford for providing requisite places of burial for the inhabitants of

the Townships of Salford, Pendleton, and Broughton, and part of the Township of Pendlebury, under the provisions of the Burial Act, 1854.

20 and 21 Vict. cap. cxxxii.
The Salford Borough Act, 1857.

25 and 26 Vict. cap. ccv.
The Salford Improvement Act, 1862.

30 Vict. cap. lviii.
The Salford Improvement Act, 1867.

33 and 34 Vict. cap. cxxix.
The Salford Improvement Act, 1870.

34 and 35 Vict. cap. cx.
The Salford Improvement Act, 1871.

38 and 39 Vict. cap. ci.
The Salford Tramways and Improvement Act, 1875.

45 and 46 Vict. cap. xcvii.
Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Order Confirmation (No. 8) Act, 1882.

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.

48 and 49 Vict. cap. cii.
The Salford Corporation Tramways Order, 1885, confirmed by the Tramways Orders Confirmation (No. 2) Act, 1885.

49 and 50 Vict. cap. xxv.
The Salford Corporation Act, 1886.

53 and 54 Vict. cap. clxxxvii.
The Salford Electric Lighting Order, 1890, confirmed by the Electric Lighting Orders Confirmation (No. 2) Act, 1890.

54 Vict. cap. xiv.
The Salford Corporation Act, 1891.

54 and 55 Vict. cap. ccxi.
Provisional Order relating to the Borough of Salford, confirmed by the Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1891.

54 and 55 Vict. cap. ccxiii.
Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (Housing of Working Classes) Act, 1891.

55 and 56 Vict. cap. ccxxiii.
Provisional Order relating to the Borough of Salford confirmed by the Local Government Board's Provisional Orders Confirmation (No. 12) Act, 1892.

56 Vict. cap. xxxi.
The Salford Improvement Act, 1893.

60 and 61 Vict. cap. cclv.
The Salford Corporation Act, 1897.

Order of the Local Government Board, dated 11th September, 1897, conferring on the Corporation certain powers with respect to the acquisition by agreement of rights of way, and certain powers, duties, and liabilities with respect to any charity held wholly or partly for the benefit of the said Townships.

61 and 62 Vict. cap. ccxii.
The Salford Order, 1898, confirmed by the L.G.B. Provisional Orders Confirmation (No. 13) Act, 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.

62 and 63 Vict. cap. ccxliv.
The Salford Corporation Act, 1899.

63 and 64 Vict. cap. ccxx.
The Salford Corporation Act, 1900.

1 Edw. VII. cap. ccxxii.
The Salford Corporation Act, 1901.

2 Edw. VII. cap. cxlviii.
The Salford Corporation Act, 1902.

3 Edw. VII. cap. ccxxxvi.
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.

6 Edw. VII. cap. ci.
The Salford Order, 1906, confirmed by the L.G.B. Provisional Orders Confirmation (No. 2) Act, 1906.

8 Edw. VII. cap. cxlvi.
The Salford Order, 1908, confirmed by L.G.B. Provisional Orders Confirmation (No. 6) Act, 1908.

2 and 3 Geo. V. cap. cxxxvi.
The Salford Order, 1912, confirmed by L.G.B. Provisional Orders Confirmation (No. 10) Act, 1912.

Order of Local Government Board, dated 5th December, 1917 (Venereal Diseases (Anglesey &c.) Order, 1917).

The Salford Corporation Gas (Standard of Calorific Power) Order, 1918.

The Salford (Union of Townships) Order, 1918.

10 and 11 Geo. V. cap. cxlviii.
The Salford Corporation Act, 1920.

Consent Order of Minister of Health, dated 9th February, 1921, to the Creation and Issue of Stock.

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 of Minister of Health, dated 18th July, 1921, confirming Scheme for the equation and consolidation of loans under the Salford Corporation Acts, 1902 and 1920.

Order of the Council, dated 3rd August, 1921, as to Polling Districts and Polling Places.

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

12 and 13 Geo. V. cap. xli.
The Salford Order, 1922, confirmed by the Ministry of Health Provisional Orders Confirmation (No. 5) Act, 1922.

The Salford Electricity Special Order, 1923.

Order of the Council, dated 3rd September, 1924, altering the boundaries of certain Polling Districts.

Regulations dated 13th May, 1925, made by the Minister of Transport for regulating the use of Electrical Power on the Salford and District, Eccles, Prestwich and Whitefield Tramways, and other matters.

Order of the Council, dated 1st July, 1925, for the re-division of a portion of the constituency of North Salford and the appointment of polling places.

15 and 16 Geo. V. cap. lxxvii.
The Salford Order, 1925, confirmed by Salford Provisional Order Confirmation Act, 1925.

The County Borough of Salford Roads (Restriction) Order, 1926.

Charter, dated 21st April, 1926, appointing Salford a City.

The Salford Gas Order, 1926.

17 and 18 Geo. V. cap. xcix.
The Salford Corporation Act, 1927.

City of Salford (Springfield Terrace Area Improvement Scheme) Order 1928.

The Salford Gas (Charges) Order, 1928.

19 and 20 Geo. V. cap. xxxix.
The Salford Corporation Act, 1929.

20 and 21 Geo. V. cap. cxxxvi.
The Salford Order, 1930, confirmed by Salford Provisional Order Confirmation Act, 1930.

The City and County Borough of Salford (formerly County Borough of Salford) Roads (Restriction) Amendment Order, 1930.

The Cities of Manchester and Salford (Traffic Regulation) Order, 1932.

23 and 24 Geo. V. cap.
The Salford Corporation Act, 1933.

The Salford Stock Order, 1933.

Order of the Secretary of State, dated 20th July, 1934, as to Superannuation of Justices' Clerk and Staff.

The Salford Registration Scheme, 1934, as to Registration of Births, Marriages and Deaths.

The Salford (Measles) Regulations, 1936.

The Salford (Public Works Facilities Compulsory Purchase) Confirmation Order, 1936.

Enactments Adopted by the Council and Applied by Order.

Infectious Disease (Prevention) Act, 1890 (except secs. 14 and 19). Adopted 7th January, 1891.

Public Health Acts, Amendment Act, 1890, Parts II., III., IV. and V. Adopted 7th January, 1891.

Museums and Gymnasiums Act, 1891. Adopted 7th February, 1894.

Public Libraries Act, 1892. Adopted on poll of Ratepayers, reported to Council, 5th October, 1892.

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

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

Public Health Acts Amendment Act, 1907 :

Section 19 (urgent repairs to private streets). Order of Minister of Health, dated 14th April, 1921.

Section 76 (parks and pleasure gardens). Order of Local Government Board, dated 22nd April, 1914.

Section 85 (registries for servants). Order of Secretary of State, dated 12th September, 1923.

Section 94 (licensing of pleasure boats). Order of Ministry of Health, dated 26th January, 1933.

Section 95 (purchase of lands). Order of Local Government Board, dated 27th October, 1908.

Local Government and other Officers' Superannuation Act, 1922. Adopted as from 1st April, 1924.

Public Health Act, 1925 :

Sections 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 29, 30, 31, 32, 33, 35 Adopted as from 1st February, 1933.

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.

The whole of the property in the City is supplied on the constant system with water from the Corporation mains. With the exception of a very few houses in common courts, each house is supplied with an internal water supply.

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.

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

PUBLIC CLEANSING.

No alteration in the method of disposing of dry house refuse in Salford took place during 1937, as compared with 1936. I am indebted to the Director of Public Cleansing for the following particulars as to the method of collection and disposal of refuse, etc., in Salford :—

(*a*) The method of collecting dry house refuse.	Weekly collection in semi-dustless loading vehicles from galvanised standard ashbins.
(*b*) The method of collecting refuse from earth closets and privies.	No privy ashpits. The number of excreta pails is negligible. The collection of excreta, in two-wheeled tanks, is made during the midnight hours, and taken direct to the Chief Depôt of the Cleansing Department.
(*c*) The method of disposing of dry house refuse.	Strictly under Controlled Tipping methods as laid down by the Ministry of Health, and also by incineration at the Chief Depôt of the Cleansing Department.
(*d*) The method of disposing of refuse from earth closets and privies.	(See (b)).

Sanitary Inspection of District.

STAFF.—The staff employed in this connection consisted during 1937 of the Chief Inspector, a Deputy Chief Inspector, fifteen Assistant Inspectors and one Lady Inspector.

The systematic inspection of the City was conducted during the year 1937 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 4,576, as compared with 5,797 received in 1936, also that 7,524 dwellinghouses were inspected during the year. The details of each section of the work will be found under the special heading.

TABLE G. 1.

COMMON LODGING HOUSES, 1937.

	Wards.			
	Crescent.	St, Paul's.	Trinity.	Total.
Number on Register	5	1	3	**9**
Number added to Register in 1936	....	....	....	....
Number removed from Register in 1936	1	....	....	**1**
Number of Rooms	49	6	18	**73**
,, Beds	215	25	367	**607**
Average Number occupied each night–Males.	95	15	250	**360**
Females.	....	....	....	....
Notices served on Landlords	2	....	....	**2**
,, ,, Keepers	....	....	....	....
Number of Day Inspections	95	22	55	**172**
,, Night Inspections	....	....	....	....

Common Lodging Houses.

There were 9 Common Lodging Houses on the register during the year, including "Salford House" in Bloom Street; 5 are in the Crescent Ward, three in Trinity, and one in St. Paul's Wards. These houses contain 73 rooms, with 607 beds. The average number of beds occupied per night was 360 for males and none for females. 172 inspections were made during the day time.

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 accommodated during the year.	Total number of lodgers accommodated during the year.
17, Bolton Street	5	49	17,885	9,351
61, Bury Street	7	33	12,045	5,625
" Salford House," Bloom Street	6	285	104,025	75,116
1 and 1A, Park Place	24	125	45,625	19,741
2, Park Place	13	25	9,125	6,640
3, Park Place	4	36	13,140	1,661
13, Windsor	4	15	5,475	1,003
2, Comus Street	6	34	12,410	5,732
2, West High Street	6	25	9,125	5,387

The total number of lodgers who could be accommodated during the year, in all the houses, was 228,855, and the total number actually accommodated was 130,256, a difference of 98,599.

Of the 607 beds, an average of 360 was occupied each night, leaving an average of 247 beds empty.

One house No. 3, Park Place, was only occupied part of the year, the house being discontinued as a lodging house in August.

The above figures show that although the lodging houses as a whole (excluding the Corporation's own institution—" Salford House ") were occupied to only 44·2 per cent. of their full capacity, " Salford House " itself was occupied to the extent of 72·2 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 lodging houses have been kept in good and clean condition during the year, and the Byelaws have been observed.

Houses Sub-let in Lodgings.

There are 420 houses let in apartments in the City ; these contain 2,414 rooms. 59 houses were registered during the year and 12 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 892 inspections in the day time and 133 at night.

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

There were 46 infringements of the Byelaws; 2 for rooms being overcrowded, 38 for houses requiring cleansing and re-decorating, 2 for no proper washing accommodation for clothes, 2 for there being no means provided for the preparation, cooking or storage of food, and 2 for lack of W.C. accommodation.

During the year 36 infringements were rectified.

Seamen's Lodging Houses.

There were 7 Seamen's Lodging Houses in the City on the Register during the year, containing 26 rooms and 79 beds. There have been 6 applications for renewals and new licences.

The Byelaws in force regulating these houses have been carried out, and the houses generally kept in good and clean condition. 53 visits have been made during the day time.

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

Address.	Accommodation. Sleeping Rooms.	Lodgers.
53, Trafford Road	4	18
68, Monmouth Street	4	8
73, Goodiers Lane	4	14
61, Trafford Road	3	12
178, West Park Street	3	7
78, Monmouth Street	3	6
71, Trafford Road	5	14

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.

Workshops.

At the end of the year there were 694 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.

75 defects were found in the workshops, the particulars being given in Table B. The chief defect was want of cleanliness.

At bakehouses where persons of both sexes are employed, it was found in many cases that the sanitary accommodation was insufficient or not separate for the sexes: additional w.c.'s have been provided in these cases.

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 67 visits have been paid.

During this year the Lady Inspector of Workshops has inspected 346 Fish and Chip Restaurants, to ascertain the conditions as to cleanliness and sanitation.

FACTORIES, WORKSHOPS, WORKPLACES AND HOME-WORK.

A.—Inspection.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS DURING THE YEAR 1937.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (Including Factory Laundries)	40	7	....
Workshops (Including Workshop Laundries)	1046	26	....
Workplaces (Other than Outworkers' premises included in Part 3 of this Report)	355	20	....
Total	1441	53	....

B.—Defects Found.

Premises.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
(1)	(2)	(3)	(4)	(5)
*Nuisances under the Public Health Act—**				
Want of cleanliness	21	21	....	....
Want of ventilation	3	3	....	....
Overcrowding	....	....	....	....
Want of drainage of floors	....	....	....	....
Other nuisances	39	39	....	....
Sanitary accommodation — insufficient	6	5	....	....
Sanitary accommodation — unsuitable or defective	5	4	....	....
Sanitary accommodation — not separate for sexes	1	1	....	...
Offences under the Factory and Workshops Act—				
Illegal occupation of underground bakehouse (s. 101)	....	....	....	...
Breach of special sanitary requirements for bakehouses (ss. 97 to 100)	....	....	....	....
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	....	....	....	....
Total	75	73	....	....

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

NATURE OF WORK.	Outworkers' Lists, Section 107.											Outwork in Unwholesome Premises, Section 108.			Outwork in Infected Premises, Sections 109, 110.		
	Lists received from Employers.						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.	Prosecutions.		Number of Inspections of Outworkers' premises.						
	Sending twice in the year.			Sending once in the year.						Failing to keep or permit inspection of lists.	Failing to send lists.		Instances.	Notices served.	Prosecutions.	Instances.	Order made, S. 110.	Prosecution, SS. 109, 110.
	Lists.	Outworkers. Contractors.	Outworkers. Workpeople.	Lists.	Outworkers. Contractors.	Outworkers. Workpeople.												
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
*																		
Wearing Apparel—																		
1. Making, &c.	13	11	230	....	....	....	125	164	....	....	....	67	....	....	....	....	....	....
2. Cleaning and washing	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lace, lace curtains and nets	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Artificial flowers	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nets, other than wire nets	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Tents	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sacks	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Furniture and upholstery	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Fur pulling	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Feather sorting	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Umbrellas, &c.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Carding, &c., of buttons, &c.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Paper bags and boxes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Basket making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Brush making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Racquet and tennis balls	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stuffed toys	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
File making	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Electro plate	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cables and chains	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cart gear	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Locks, latches and keys	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anchors and grapnels	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pea picking	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total	13	11	230	....	....	....	125	164	....	....	....	67	....	....	....	....	....	....

* List of Industries as prescribed by Home Office.

D.—Registered Workshops.

Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Tenement Workshops	3
Domestic Workshops	147
Laundries	10
Workshop Bakehouses	265
Other Workshops	269
Total number of Workshops on Register	694

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)		2
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5).	Notified by H.M. Inspector.	46
	Reports (of action taken) sent to H.M. Inspector.	38
Other		....
Underground Bakehouses (s. 101)—		
Certificates granted during the year		....
In use at the end of the year		....

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

Number of such premises in the district, 265.
Note as to their sanitary condition. Ground floor bakehouses—Good.
Action taken as to retail bakehouses in 1937, 16 notices served.

Action taken.	No. of Defects found.	Notices served.	Legal Proceedings.	Defects remedied	Remarks.
As to Closets, &c., Sec. 97	1	....	....	1	
As to Water Cisterns, Sec. 97	....	....	....	....	
As to Drain Openings, Sec. 97	....	....	....	....	
As to Limewashing, &c., Sec. 97	30	4	....	30	
As to Sleeping Places, Sec. 100	....	....	....	....	

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

BAKEHOUSES, 1937.

Registered	265
Added to Register	24
Discontinued	36
Changed Hands	13
Number of Underground Bakehouses Certified by Authority	Nil.
Total Number of Ovens	323
Employees—Males	197
,, Females	523
Notices Served	16

Smoke Nuisance.

Particulars as to smoke nuisance caused by firms during the year 1937 and dealt with by the Health Committee :—

Twelve Notices were issued under the Public Health Act.

Legal proceedings were taken against one firm in respect of a smoke nuisance. This firm was ordered to pay £1 1s. 0d. costs.

During the year 3,232 smoke observations have been made as against 1,897 in the year 1936 and 3,563 in the year 1935.

121 stokers and others were cautioned by the Inspector for negligence in firing the furnaces under their charge, at the same time 22 firms were reported to and dealt with by the Health Committee, also 22 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.

TABLE SHOWING THE NUMBER OF HALF-HOURLY OBSERVATIONS TAKEN DURING THE YEAR 1937.

Minutes of Black Smoke emitted in half-an-hour.	No. of Observations Taken.	Percentage to Total.
No Black Smoke	2,597	80·3
One Minute	375	19·0
Two Minutes	12	0·4
Three Minutes	3	0·1
Over Three Minutes	8	0·2
Total Observations	3,232	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 the 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.

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

Canal Boats Acts.

Number of canal boats inspected	127
Number of canal boats conforming to Acts	126
Number of canal boats with one or more infringements	1
Total number of infringements	1
Registration	—
Absence of certificates	—
Dilapidation of certificate	—
Marking	1
Overcrowding	—
Separation of sexes	—
Cleanliness	—
Ventilation	—
Ventilators obstructed	—
Painting	—
Provision of water vessel	—
Water vessels broken	—
Removal of bilge water	—
Boats defective and leaking	—
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	—
Other steps to secure compliance—Letters written to owners	—
Detention of boats for cleansing and disinfection	—
Legal proceedings taken	—
Number of boats on register : Not a Registration Authority.	
Canal boats registered to carry (number of persons)	690
Men found on the boats	247
Women found on the boats	6
Children under 12 years found on the boats	—

Drainage Inspection.

The testing and examination of all existing drainage is carried out by this Department, and the following table gives details of the work done :—

Number of tests made	893
,, applications from householders	11
,, houses affected by the tests	1,528
,, notices and reports issued	595
,, notices and reports complied with	627*
,, drain inlets opened and cleared	1,281

INSANITARY CONDITIONS FOUND.

Defects.

Number of drains wholly and partly choked	798
,, drains defectively constructed	430
,, gully traps badly laid	104
,, drains defectively trapped	43
,, waste pipes defectively trapped or connected to drains	31
,, downspouts connected to drains	94
,, soil pipes with leaking joints or defectively ventilated.	86
,, defective water-closets	171
Total defects	1,757

RECONSTRUCTION OF DRAINS AND THE CONSTRUCTION OF NEW DRAINS.

Number of tests applied	757
,, houses affected	836
,, passage main drains affected	69

*Including notices and reports issued during 1936.

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 diseases by means of high-pressure steam disinfection.

(*b*) As a depôt 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 depôt 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 1937 :—

AMBULANCES.

	Salford Cases.	Out-District Cases.	Total Cases.
Number of journeys removing patients to Hospital	1,422	595	2,017
Number of journeys removing patients from Hospital to their homes	424	61	485
Number of houses visited by ambulances removing bedding for disinfection	450	16	466

VANS.

Number of houses visited by vans returning bedding after disinfection	1,763	146	1,909

Two hundred and forty-eight journeys were made in connection with the treatment of children suffering from scabies. In addition 136 journeys for other purposes were made by ambulances and 2,015 by vans.

DISINFECTIONS.

Number of houses disinfected	1,287
,, rooms disinfected	4,041
,, bundles of clothing and bedding disinfected	7,853*
,, books disinfected	317
,, schools disinfected	9
,, hospitals disinfected (occasions)	22
,, rooms in ships disinfected	4

* Including 2,643 for Hope Hospital and 1,660 in connection with tenants removed from Clearance Areas.

BATHING AND DISINFECTION OF CLOTHING.

Midwives	35
Smallpox convalescents	Nil.
Verminous persons	Nil.
Children suffering from scabies	1,555

The disinfection at the Mode Wheel Disinfecting Station of bedding and clothing from Hope Hospital was continued during 1937.

MOTOR AMBULANCE SERVICES.

The following is a summary of the Motor Ambulance Services provided in Salford during 1937 :—

(1) HEALTH DEPARTMENT—

Number of motor ambulances :—

(*a*) For Infectious Diseases	3
(*b*) ,, Hope Hospital	2

The ambulances under (*a*) are stationed at the Mode Wheel Disinfecting Station, Weaste, and are used principally for conveying cases of infectious disease to and from the Ladywell Sanatorium, the Nab Top Sanatorium, and the homes of Salford residents. They are also used for a similar purpose, so far as the Ladywell Sanatorium only is concerned, in the case of a number of out-districts. In addition, they are used for conveying to their homes : (*a*) school children who have been operated upon for the removal of tonsils and adenoids, and (*b*) school children suffering from scabies who have been bathed at the Mode Wheel Disinfecting Station.

The ambulances under (*b*) are used for the conveyance of patients only, including maternity cases, to and from Hope Hospital.

(2) POLICE DEPARTMENT—

Number of motor ambulances	4

These ambulances are stationed at the Fire Station, Crescent, Salford. They are used primarily for accidents, but are also used occasionally for private cases.

I am of opinion that the ambulance facilities available in Salford are adequate.

PROPAGANDA.

As the firm with whom the Corporation had contracted for the publication of the periodical "Better Health" found itself unable to obtain sufficient advertisements to cover the cost of issue, it was decided to discontinue the circulation of this journal during 1937.

The displays which have been given in the windows on the ground floor of the Health Offices in Regent Road for ten years were continued during 1937.

The Department participated in the National Health Campaign, which was conducted throughout the country during the autumn and winter of 1937-38, and distributed large quantities of posters and literature. The following distributions were made up to 31st December, 1937 :—

Bookmarks (in co-operation with the Chief Librarian)	108,000
Folders (in co-operation with the Director of Education)	70,000
Posters for Schools (in co-operation with the Director of Education)	600
Mounted Showcards for exhibition in Shops and Offices, etc.	1,000
Posters	700

In addition, a series of addresses dealing with Public Health and other subjects was given to various organisations, including in particular the Parents' Fellowships attached to schools in the City, by members of the Staffs of the Public Health and School Medical Departments. These addresses, which were couched as far as possible in non-medical terms, dealt with the following subjects :—

Protection against Diphtheria ;
Treatment of Tuberculosis ;
Eyesight and its care ;
Care of the Teeth ;
Sleep and Diet ;
Food Adulteration, etc.

The addresses were well attended, and the welcome they received was so warm that it is proposed to arrange a programme on similar lines during 1938-39.

Swimming Baths.

Samples of water from the Corporation's Swimming Baths were examined at frequent intervals throughout the year. The results of such examinations are to be found in the reports of the City Pathologist and the City Analyst, which appear on pages 182 and 183 of this volume.

Sanitary Conveniences.

There are 23 conveniences for Males and 5 for Females in the City, under the control of the Health Committee, and also 2 public conveniences for Males, and 2 for Females under the joint control of the Health Committee and Parks 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)	6	....	....	....	....	....	....
Broughton Road	16	....	....	....	....	....	....
Windsor Bridge	6	....	....	....	....	....	....
Stevenson Street	3	....	....	....	....	....	....
Park Lane	5	....	....	....	....	....	....
Broad Street	3	....	....	....	....	....	....
Greengate Arch	6	....	....	....	....	....	....
Broughton Bridge	8	....	....	....	....	....	....
Frederick Road	4	....	....	....	....	....	....
Moor Lane	6	....	....	....	....	....	....
Cemetery Road	6	....	....	....	....	....	....
Cross Lane	5	....	....	....	....	....	....
Langworthy Road	4	....	....	....	....	....	....
Albert Park	6	....	....	....	....	....	....
Crescent, near Victoria Arch.	6	....	....	....	....	....	....
Charlestown Recreation Ground	4	2	....	....	2	....	....
Mandley Park	4	3	....	....	3	....	....

One new public convenience with six urinal stalls has been erected at the corner of Eccles New Road and Cemetery Road.

The Health Committee has also agreed to maintain a four-stall urinal at the rear of the Langworthy Hotel, Langworthy Road, as a public convenience.

TABLE G 3.

CASES HEARD BEFORE THE MAGISTRATES DURING 1937.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
			£ s. d.
For failing to comply with the requirements of Notices under the Public Health Acts, 1875 and 1936, to abate nuisances arising from sanitary defects in dwellinghouses.	2	1 Fined £3 0s. 0d. and order to abate made. 1 Fined £3 0s. 0d. and £2 0s. 0d. costs, and order to abate made.	6 0 0
For contravening the provisions of the Public Health Act, 1875, by exposing for sale meat which was diseased.	1	Dismissed.	—
For failing to comply with the requirements of a Notice under the Public Health Act, 1875, by allowing excessive emission of dense black smoke from a factory chimney.	1	Dismissed on payment of £1 1s. 0d. costs.	—
Appeal to Quarter Sessions against decision in favour of the Corporation made by Stipendiary Magistrates in the case of contravention of the Public Health Act and Salford Improvement Act.	1	Dismissed.	—
For contravening the provisions of the Food and Drugs Act by consigning milk to Salford dealers which, on analysis, was found to be deficient in solids-not-fat.	5	1 Fined £2 0s. 0d. and £2 2s. 0d. costs. 1 Fined £1 0s. 0d. 1 Dismissed. 1 Fined £2 0s. 0d. 1 Fined £1 0s. 0d. and £5 14s. 0d. costs.	6 0 0
For contravening the provisions of the Merchandise Marks Act, 1926, by exposing for sale imported raw tomatoes not bearing an indication of origin.	2	1 Fined £2 0s. 0d. and £1 1s. 0d. costs. 1 Fined £1 0s. 0d. and £1 1s. 0d. costs.	3 0 0
For contravening the provisions of the Merchandise Marks Act, 1926, by exposing for sale imported butter not having an indication of origin.	1	Fined 10s. 0d.	0 10 0
Carried forward	13		£15 10 0

CASES HEARD BEFORE THE MAGISTRATES DURING 1937—*continued.*

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
			£ s. d.
Brought forward	13		15 10 0
For contravening the provisions of the Merchandise Marks Act, 1926, by applying a false trade description in selling turpentine substitute as turpentine.	1	Dismissed.	—
For selling milk to which water had been added contrary to the Milk and Dairies (Amendment) Act, 1922.	1	Dismissed.	—
For consigning milk to a Salford dealer not of the nature, substance and quality of the article demanded.	7	Fined £1 0s. 0d. on each of 7 Summonses and £3 3s. 0d. costs.	7 0 0
For selling bottled milk, which on analysis, was found to be deficient of fat.	1	Fined £3 0s. 0d. and £3 3s. 0d. costs.	3 0 0
For contravention of Article 12 (D) of the Anthrax Order, 1928, by moving through the public streets a carcase infected with Anthrax.	2	Each fined £7 10s. 0d. and 10s. 6d. costs.	15 0 0
For selling cream cheese, which on analysis, was found to be deficient of fat.	1	Fined £2 0s. 0d. and £2 0s. 0d. costs.	2 0 0
For selling accredited milk without a licence as defined by the Milk (Special Designations) Order, 1936, contrary to the Milk Act, 1934.	1	Fined 10s. 0d.	0 10 0
For contravention of Section 8 of the Byelaws relating to Houses-let-in-lodgings by refusing to allow a Sanitary Inspector to enter a registered Sub-let House.	1	Fined £3 0s. 0d. and £1 1s. 0d. costs.	3 0 0
For contravening the Retail Furniture Dealers' Closing Order by keeping a shop open after 8-0 p.m.	2	Dismissed.	—
Carried forward	30		£46 0 0

CASES HEARD BEFORE THE MAGISTRATES DURING 1937—*continued*.

Offence.	No. of Cases.	Decision of Magistrates.	Total Fines (without costs).
			£ s. d.
Brought forward	30		46 0 0
For failing to comply with the requirements of Notices under Section 10 of the Shops Act, 1934, requiring the provision in shops of means to maintain a reasonable temperature, facilities for washing and for the taking of meals.	6	1 Fined £1 0s. 0d. and 5 Dismissed.	1 0 0
For failing to give a shop assistant a half-holiday other than Saturday: being a contravention of the Shops Act, 1912, as modified by the Shops (Sunday Trading Restriction) Act, 1936.	2	Each fined 10s. 0d.	1 0 0
For failing to close a shop for a half-day other than Saturday: being a contravention of the Shops Act, 1912, as modified by the Shops (Sunday Trading Restriction) Act, 1936.	2	Each fined 10s. 0d.	1 0 0
For failing to keep on the Prescribed Form and in the prescribed manner a record of the names of and the hours worked by all persons employed about the business of a shop: being a contravention of Section 7 of the Shops (Sunday Trading Restriction) Act, 1936.	2	Each fined 10s. 0d. Total costs (3 preceding cases) £3 3s. 0d.	1 0 0
Total	42		£50 0 0

Shops Acts, 1912 to 1936.

During the year 1937, three more pieces of legislation in connection with shops came into operation, viz. :—

(1) The Shops Act, 1936, which provided for the application of all the Shops Acts to places where the business of lending books is carried on for the purpose of gain.

(2) The Retail Meat Dealers' Shops (Sunday Closing) Act, 1936, which, with certain exceptions, provided for the Sunday Closing of Butchers' Shops.

(3) The Shops (Sunday Trading Restriction) Act, 1936, which restricted the opening of shops on Sundays, allowed for the opening of Jewish shops (under certain conditions) on Sundays and provided for the compensation in time for Sunday employment in shops.

Such legislation naturally involved a considerable amount of work. The Shops Acts Inspector interviewed hundreds of shopkeepers, giving details of the operation of these Acts, particularly regarding Sunday trading. Their co-operation was sought and the response was gratifying.

Notwithstanding this extra work, the survey of shops in connection with sanitary conditions and the employment of " young persons " was proceeded with, as will be seen by the table in connection with contraventions found and remedied.

I have to thank the Chief Constable and his staff for their co-operation in the enforcement of the early closing of shops and of the restriction in Sunday trading.

To secure compliance with the Acts in so far as early closing, half-day closing, shop assistants' weekly half-holidays, compensatory holidays for Sunday employment and the weekly limitation of hours of employment of " young persons," the supervision of shops was maintained as effectively as possible.

The importance of (control) law in connection with the distributive trade is becoming increasingly apparent. The debates in the House of Commons reflect the interest in the subject, and the desirability of workers in this industry having conditions of work and opportunities for leisure as exists for other workers is obvious.

During December, a plebiscite was taken of occupiers of shops selling groceries and bread and flour confectionery to ascertain whether there was the necessary majority approving the making of a Partial Exemption Order to permit the sale of such commodities on Sundays until 10 a.m. The necessary majority favouring such an order being made was not obtained so that no order was made.

The following tables indicate the work carried out and the supervision maintained to secure compliance with the Shops Acts :—

CONTRAVENTIONS OF SECTION 10 OF THE SHOPS ACT, 1934.

	Particulars.	No. of contraventions found.	No. remedied following communication.
1.	Non-provision of suitable and sufficient means of ventilation	23	15
2.	,, ,, ,, ,, means to maintain a reasonable temperature	64	50
3.	,, ,, ,, ,, sanitary conveniences (or inadequate maintenance of same)	137	89
4.	,, ,, ,, ,, washing facilities (or inadequate maintenance of same)	77	50
5.	,, ,, ,, ,, means of lighting (or inadequate maintenance of same)	26	22
6.	,, ,, ,, ,, facilities for the taking of meals by the employees (or inadequate maintenance of same)	43	29

In respect of the above, six Summonses were issued for non-compliance with Notice.

OTHER LEGAL PROCEEDINGS TAKEN.

	Particulars.	No. of Summonses issued.
1.	For failing to close a shop at 1.0 p.m. on one weekday	2
2.	For contravening an Early Closing Order	2
3.	For failing to give a shop assistant a statutory weekly half-holiday	2
4.	For failing to keep a record in the Prescribed Form of the hours of Sunday employment	2

Inspections.	No. of Summonses issued.
Number of visits paid to shops in connection with half-day closing and Sunday Trading Restriction	8,864
Number of visits paid to shops in connection with early closing	2,194
Number of visits paid to shops in connection with Sunday closing	2,749
Number of shops surveyed in connection with the employment of young persons and in connection with sanitary arrangements, etc	1,003
Number of Certificates of Exemption granted from the provision of sanitary conveniences and washing facilities within shop premises	49
Number of shops occupied by Jews registered under Section 7 for carrying on business on Sunday	21

CONTRAVENTIONS OF SHOPS ACTS, 1912-1936.

Particulars.	Written.	Subsequent compliance.
Non-exhibition of forms and records required in connection with shop assistants, particularly " young persons "	229	207
Non-exhibition of forms and records required in connection with Sunday trading and Sunday employment	96	91
Contraventions of half-day closing	99	99
,, ,, early closing	15	15
,, ,, Sunday trading	54	53
,, ,, of weekly half-holiday for shop assistants	2	2
Contraventions *re* provision of proper meal times for shop assistants	3	2
,, ,, provision of seats for female shop assistants	2	2
,, ,, restriction of maximum weekly working hours for " young persons "	3	3

Housing Conditions.

YEAR ENDED 31ST DECEMBER, 1937.

(*a*) GENERAL STATISTICS.

Area (acres)	**5,202**
Population (1937) (Registrar General's Estimate)	**201,800**
Number of Houses (At 1st April, 1937)	**53,269**
Rateable Value (1937-1938)	**£1,130,906**
Sum represented by a penny rate (Estimate)	**£4,300**

(B) HOUSING STATISTICS.

1. Inspection of dwellinghouses during the year :—

1. (*a*) Total number of dwellinghouses inspected for housing defects (under P.H. or Housing Acts) 7,445

(*b*) Number of inspections made for the purpose 17,672

2. (*a*) Number of dwellinghouses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ..... Nil.

(*b*) Number of inspections made for the purpose ..... Nil.

3. Number of dwellinghouses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 211

4. Number of dwellinghouses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation 5,893

2. Remedy of defects during the year without service of formal Notices :— Number of defective dwellinghouses rendered fit in consequence of informal action by the Local Authority or their officers **2,485**

3. Action under Statutory Powers during the year :—

A. Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936 :

1. Number of dwellinghouses in respect of which notices were served requiring repairs 240

2. Number of dwellinghouses which were rendered fit after service of formal notices :—

(*a*) by owners 122

(*b*) by Local Authority in default of owners ..... Nil.

B. Proceedings under Public Health Acts:

1. Number of dwellinghouses in respect of which notices were served requiring defects to be remedied..... 1,705

2. Number of dwellinghouses in which defects were remedied after service of formal notices :—

   (*a*) by owners..... 1,525

   (*b*) by Local Authority in default of owners..... Nil.

C. Proceedings under Sections 11 and 13 of the Housing Act, 1936 :

1. Number of dwellinghouses in respect of which Demolition Orders were made..... Nil.

2. Number of dwellinghouses demolished in pursuance of Demolition Orders..... Nil.

D. Proceedings under Section 12 of the Housing Act, 1936 :

1. Number of separate tenements or underground rooms in respect of which closing orders were made..... Nil

2. Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit..... Nil.

E. Works executed on Owners' Undertakings (additional to the foregoing items).

During the year, approval was given to schemes submitted by owners of unfit properties in anticipation of Council action under Part II or Part III of the Housing Act, 1936.

The number of houses concerned was 50. Of these 13 were demolished and 37 were made fit.

FITNESS OF HOUSES.

No special difficulties have been found in action under the Public Health Acts. The property owners in general show a disposition to comply with the Notices served under these Acts.

Housing Act, 1936, Part IV—Overcrowding.

(*a*)	(i)	Number of dwellings overcrowded at the end of the year	1,706
	(ii)	Number of families dwelling therein	1,706
	(iii)	Number of persons dwelling therein	9,743
(*b*)		Number of new cases of overcrowding reported during the year	Nil.
(*c*)	(i)	Number of cases of overcrowding relieved during the year	336
	(ii)	Number of persons concerned in such cases	1,974

Clearance Orders and Re-housing.

Fifteen clearance orders were made by the City Council in 1937, involving a total of 161 unfit dwellinghouses.

The areas dealt with were :—

Alport Place Area.
Brownbills Buildings Area.
Church Place Area.
Crewe Place Area.
Dun Street Area.
Essex Street Area.
Factory Lane Area.
Heywood Street Area.
Marriotts Place Area.
Mather Street Area.
Park Street Area.
Silk Street Area.
South Wilton Place Area.
West Union Street Area.
Wilson Street Area.

There were 678 persons occupying the buildings and the number of families concerned was 181.

All the orders were confirmed by the Ministry of Health, one house only being excluded.

These orders became operative on 3rd December, 1937, and removals of displaced families to new accommodation began immediately.

In the earlier months of the year, re-housing of families displaced by the operation of 25 clearance orders made by the Council in 1936 was carried out.

The following is a summary of clearance and re-housing operations during 1937 :—

Number of persons actually displaced	1,571
,, ,, houses vacated	392
,, ,, houses demolished	248
,, ,, new dwellings occupied	391

At the end of the year removal of displaced families was still proceeding.

The new properties are situated at the Langworthy Estate at Weaste (flats), at the Duchy Road and Summerville Estates at Pendleton (houses) and at the Salford Brow Estate at Strangeways (flats). The latter scheme is a public utility society project.

All removals to new dwellings, disinfestation of furniture and household effects by means of hydrocyanic acid gas fumigation and steam disinfection of bedding have been arranged and carried out at the expense of the Council.

Vacated houses have been cleansed from vermin by treatment with hydrocyanic acid gas, prior to demolition.

Removals and fumigations were carried out by Contractors.

Reconditioning of Dwellinghouses under Housing Act, 1936.

Inspections of dwellinghouses have been carried out under the Housing Act, 1936, with a view to the reconditioning of those houses found to be in a general state of disrepair and yet capable of being rendered fit at a reasonable cost, having regard to the estimated value of the houses on completion of the repairs.

Notices were served in respect of 240 houses and of these 122 houses had been rendered fit by the owners at the end of the year.

In each case a complete specification of the works required, giving details of materials to be used, etc., was issued with the Notice.

It is intended to pursue this policy of reconditioning in the case of all suitable property, with a view to a general standard of fitness being attained.

Eradication of Bed Bugs.

During the year measures for disinfestation were carried out in a total of 553 dwellinghouses.

Number of Council houses found to be infested	173
,, ,, other ,, ,, ,, ,,	380
,, ,, Council houses disinfested	173
,, ,, other ,, ,,	380

In the case of Council houses, disinfestation has been carried out by means of liquid spray. Second and third visits were made in order to ascertain whether further incubations had taken place.

Generally speaking, the treatment of spraying with an insecticide has proved effective, particularly in instances where the tenant has made every effort to assist.

All families from Clearance Areas who have been re-housed in Council houses have had their furniture and effects treated *en route* to the new dwellings, hydrocyanic acid gas being applied to furniture in specially constructed vans and all bedding steam disinfected.

Houses vacated as a result of the operation of Clearance Orders were in every case cleansed from vermin prior to demolition by the application of hydrocyanic acid gas.

Treatment by hydrocyanic acid gas has been carried out by an experienced private firm under contract with the Council.

TABLE G. 2.

NEW HOUSES ERECTED AND HOUSES DEMOLISHED IN 1937.

Wards.	Houses and Flats erected.	Houses demolished.
Kersal	61	—
Albert Park	1	—
Mandley Park	35	—
St. Matthias'	—	7
Trinity	—	56
Crescent	1	5
Regent	—	175
Ordsall Park	—	—
Docks	153	—
Charlestown	—	8
St. Thomas'	—	38
St. Paul's	—	—
Langworthy	47	—
Seedley	67	—
Weaste	2	—
Claremont	628	14
	995	303

674 houses have been built by private enterprise.
168 ,, ,, ,, ,, ,, the Corporation.
153 flats ,, ,, ,, ,, ,, ,,

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, 123 applications have been made and in 83 cases certificates were issued.

TABLE C. 4.

REGISTER OF WORK DONE—YEAR ENDING DECEMBER 31ST, 1937.

No. of Complaints received		**4576**
Inspections of	Dwellinghouses	**7524**
	,, ,, (under Housing, &c., Act)	**1210**
	Visits *re* Unhealthy Areas	**1589**
	Schools	**251**
	Factories	**46**
	Canal Boats	**127**
	Common Lodging-houses (Day)	**172**
	,, ,, ,, (Night)	—
	Sub-let ,, ,, (Day)	**892**
	,, ,, ,, (Night)	**133**
	Seamen's Lodging-houses (Day)	**53**
	Van Dwellings	**141**
	Tips	**39**
	Bakehouses (Day)	**304**
	Workshops (Day)	**553**
	,, (Night)	**87**
	Domestic Workshops	**156**
	Restaurant Kitchens	**9**
	Outworkers' Premises	**67**
	Ice Cream Shops	**447**
	,, Stalls	**56**
	Fried Fish Dealers	**346**
	Miscellaneous	**7697**
	Laundries	**4**
	Urinals—Public	**189**
	Stables	**563**
	Re Infectious Diseases	**1065**
	Theatres, Cinemas, &c. (Day)	**82**
	,, ,, (Night)	**30**
	Shops (Shops Act) *re* Half-Day closing and Sunday Trading Restrictions	**8864**
	Shops ,, ,, *re* Early Closing	**2194**
	Shops ,, ,, *re* Sanitary arrangements, etc.	**1003**
		35,893

REGISTER OF WORK DONE.—*continued.*

Re-inspections		17461
Action taken	Sanitary Notices issued	1375
	,, ,, complied with	1237
	,, ,, cancelled	58
	Informal notices issued	1958
	,, ,, complied with	1718
	,, ,, cancelled	140
	Byelaw notices issued	123
	,, ,, complied with	109
	,, ,, cancelled	2
	Salford Improvement Act notices issued	215
	,, ,, ,, complied with	201
	,, ,, ,, cancelled	7
	Ash Accommodation Notices issued	288
	,, ,, ,, complied with	247
	,, ,, ,, cancelled	9
	Workshop Notices issued	7
	,, ,, complied with	6
	,, ,, cancelled	—
	Sanitary Convenience Notices issued	9
	,, ,, ,, complied with	7
	,, ,, ,, cancelled	—
	Section 41 P.H.A. Notices issued	35
	,, ,, ,, complied with	35
	,, ,, ,, cancelled	—
Disinfection—Rooms in Houses, etc. Disinfected		4041
House Drains	Repaired	430
	Reconstructed	757
	Trapped	405
	Downspouts disconnected from	94
	Blockages removed	401
Passages and Yards.	Inlets opened	1281
Water Closets	New, provided	6
	Ventilated	3
Ash Receptacles	New, provided	333
	Bricked up or demolished	94

REGISTER OF WORK DONE.—*continued.*

Limewashed	Lodging-houses	6
	,, Sub-let	38
	,, Seamen's	—
	Bakehouses	75
	Workshops	12
	Workshops (Domestic)	—
	Outworkers' premises	—
	Laundries	1
	Fried Fish Dealers	66
Newly Licensed Common Lodging-houses		9
,, ,, Seamen's ,,		7
Newly Registered	Lodging-houses Sub-let	59
	Workshops	21
	,, (Domestic)	10
	Bakehouses	24
	Second-hand Goods Stores	13
	Ice Cream Shops	14
Accumulations Removed	Manure and Refuse	37
	Stagnant Water	2
Manure Receptacles—New, provided		—
Smoke Nuisance	Observations taken	3232
	Notices served	12
	Cautionary Notices served	22
Passages and Yards	Repaired	180
Bundles of Infected Bedding and Clothing	Stoved	6943
	Destroyed	90
Houses repaired by owners, after Formal Notice		2133
,, ,, ,, ,, ,, Informal ,,		2059

Destruction of Rats and Mice.

I am indebted to the Director of Public Cleansing, Salford, for the following information, namely :—

During the year the ratcatchers made 7,708 visits to dwellinghouses, schools, shops, stores and other premises, whilst 2,261 live rats were caught.

In many cases structural repairs to property were rendered necessary due to damage done by rats to sanitary fittings, floors, etc. These repairs were carried out by the agents and owners of the premises.

The controlled tips and depôts of the Department are kept under constant supervision and means are taken to prevent the aggregation of rats.

In addition to the continuous work carried out by the two ratcatchers employed by the Department the extra efforts in connection with Rat Week included the following :—

Two weeks prior to Rat Week an advertisement was inserted in the local paper notifying the public of this effort, asking for co-operation and stating that assistance will be given free of charge. This was emphasised by an article on the destruction of rats and mice and on information supplied by this Department.

Large posters were displayed on the hoardings in the City. Handbills were distributed from house to house. The Ministry's poster was exhibited in the display window of the Health Department, on the notice boards of the public parks and libraries, in the windows of shops on the main thoroughfares and on the vehicles of the Department.

Not many new complaints were received during Rat Week as the publicity given the work of rat destruction during the last few years has helped to make the activities of the Department well known ; consequently, there is a steady flow of requests for assistance throughout the year.

STATEMENT AS TO HOSPITAL SERVICES AVAILABLE FOR SALFORD RESIDENTS—1937.

A.—HOSPITALS PROVIDED BY THE SALFORD CORPORATION.

Name and Situation of Hospital.	Purpose.	Service.	Beds. Male.	Female.	Total.	Classification.	No.	Arrangements for Employment of Consultants.	Special Departments.	Arrangements for Surgical Operations.	Arrangements for Pathological Examinations.
Hope Hospital, Pendleton, Salford.	General.	General Medical	90	113	203	Medical Superintendent	1	Consultants appointed as follows:— (a) Visiting Physician. (b) Visiting Specialist in Children's Diseases. (c) Visiting Gynæcologist and Obstetrician. (d) Visiting Orthopædic Surgeon. (e) Visiting Surgeon for Diseases of Ear, Nose and Throat. (f) Visiting Radiologist. (g) Visiting Anæsthetist.	X-Ray. Massage. Electro-therapeutics. Ultra-violet radiation. Orthopædic. Pathological. Electro-cardiographic. Out-patients, including Ante and Post-natal Clinics. Ear, Nose and Throat.	Surgical operations for all classes of cases are performed at the Hospital.	All pathological material examined either in the Municipal Laboratory or in the Hope Hospital Laboratory under direction of City Pathologist.
		Surgical	90	52	142	Deputy Medical Superintendent and Resident Surgical Officer	1				
		Children			190	Resident Medical Officer	1				
		Maternity		56	56	Resident Obstetric Officer	1				
		Tuberculosis				Assistant Medical Officers	6				
		Chronic Sick	99	122	221	Matron and Nursing Staff	230				
		Mental	84	68	152						
		Venereal	8	8	16						
		Totals and Annexes (Children)	6	6	12						
		Puerperal Pyrexia									
		Orthopædic	36	14	53						
		Gynæcological		30	30						
		Observation (Ante-natal)	—	25	25						
		Maternity—Cots	—	—	66						
		Total			1,219						
Ladywell Sanatorium, Pendleton, Salford.	Infectious Diseases.	Ordinary Infectious Diseases			217	Medical Superintendent	1	Consultants appointed as follows:— (a) For cases of Puerperal Fever and Pyrexia. (b) Visiting Aural Surgeon. (c) Other Consultants called in as required.	—	Surgical operation for affections of the ear, nose and throat are performed at the Sanatorium.	Pathological examinations are carried out at the Municipal Pathological Laboratory.
		Tuberculosis	30	30	72	Assistant Medical Officers	2				
		Puerperal Fever and Pyrexia	—	7	7	Matron and Nursing Staff	10				
		Total			296						
Nab Top Sanatorium, Marple, Cheshire.	Tuberculosis.		—	62	58	120	Medical Superintendent	1	—	X-Ray.	No facilities provided. Cases requiring surgical treatment are transferred to other institutions.	—
							Matron and Nursing Staff	15				
Irwell Water Park Hospital, Pendlebury.	Smallpox Isolation Hospital.		—	24	40	Staffed as required.		—	—	—	—	—
Total Number of Beds provided by Salford Corporation					1,874							

B.—VOLUNTARY HOSPITALS SITUATED IN SALFORD.

Name and Situation of Hospital.	Purpose.	Service.	Beds. Male.	Female.	Total.	Special Departments.
Salford Royal Hospital, Salford.	General.	General Surgical	87	88	175	X-Ray. Orthopædic. Massage. Ear, Nose and Throat. Genito-Urinary. Cardiological. Pathological. Artificial Sunlight. Physiotherapeutic. Dental. Ophthalmic. Gynæcological. Psychiatric. Diabetic. Massage.
		General Medical	31	33	64	
		Skin and Genito-Urinary				
		Children's Cots, Medical and Surgical	—	—	13	
		Observation Beds	—	—	4	
		Total			256	
Greengate Hospital and Open Air School, Salford.	Children	Rickets	—	—	40	
Total number of beds provided by Voluntary Hospitals in Salford					296	

* Out-Patient Department for Men, Women and Children also provided.

C.—VOLUNTARY HOSPITALS SITUATED OUTSIDE SALFORD BUT USED BY SALFORD RESIDENTS.

Name and Situation of Hospital.	Purpose.	Service.	Beds. Male.	Female.	Total.	Special Departments.
Manchester Royal Infirmary.	General.	General Medical	92	104	196	X-Ray (with Light Therapy and Deep Therapy). Massage (with Diathermy, Electro-therapy, Radiant Heat, etc.); Sunlight. Diabetics. Electrocardiographic. Surgical Tuberculosis. Pernicious Anæmia. Venereal Diseases. Ophthalmic. Skin Diseases. Neurological Surgery. Orthopædics. Gynæcology. Plastic Surgery.
		Surgical (including Orthopædic and Neuro-surgical)	214	156	370	
		Aural	9	8	17	
		Gynæcological	—	18	18	
		Observation	—	—	9	
		Children under 6 (agencies)	—	—	13	
		Reserved for Emergency	—	—	26	
		Total			649	
St. Mary's Hospitals, Manchester.	Maternity, Gynæcological and Children.	Maternity	—	101	101	Radium. Massage. Ante-natal and Post-natal. Hormone Clinic. Artificial Sunlight. Venereal Diseases (Out-Patients only).
		Gynæcological	—	162	162	
		Children	—	—	50	
		Total			313	
Royal Manchester Children's Hospital, Pendlebury, Lancs.	Children.	Medical	55	55	110	X-Ray. Massage (with Electrical and Gymnastic Apparatus). Artificial Sunlight. Orthopædic. Ear, Nose and Throat. Pathological. Dental Clinic } Out-patient Clinics Speech Clinic } in Manchester.
		Surgical	58	58	110	
		Isolation	6	6	12	
		Total			232	
Ancoats Hospital, Manchester.	General.	General Surgical	30	47	77	X-Ray. Massage. Pathological. Cardiographic. Orthopædic. Ear, Nose and Throat. Venereal Diseases. Neurological. Urological.
		General Surgical (Children)	—	—	13	
		General Medical	80	13	43	
		General Medical (Children)	—	—	6	
		Private Wards	—	—	10	
		Total			131	
Manchester Victoria Memorial Jewish Hospital, Cheetham, Manchester.	General.	General Medical	7	11	18	X-Ray. Artificial Sunlight. Gynæcological. Ear, Nose and Throat. Ophthalmic. Massage and Electrical. General Surgical. General Medical. Cardiograph.
		Gynæcological	—	8	8	
		General Surgical	15	15	30	
		Ear, Nose and Throat	5	5	10	
		Ophthalmic	—	—	3	
		Children's	4	4	8	
		Fee Beds	—	—	25	
		Total			102	
Manchester Northern Hospital, Cheetham Hill Road, Manchester.	General.	Medical	12	10	22	Dental. X-Ray. Massage. Artificial Sunlight. Pathological. Genito-Urinary. Ear, Nose and Throat. Electro-Cardiograph.
		Surgical	14	4	18	
		Gynæcological	—	22	22	
		Children— Medical	—	—	35	
		Surgical	—	—	16	
		Total			113	
Manchester and Salford Hospital for Skin Diseases, Quay Street, Manchester.	Skin Diseases.	Skin Cases	74	*80	54	X-Ray. Artificial Sunlight. Venereal Diseases. Tuberculosis of Skin. Private Wards.
		Total			54	
Manchester Ear Hospital, Grosvenor Square, Oxford Road, Manchester.	Diseases of the Ear, Nose and Throat.	Ear, Nose, Throat and Associated Diseases	11	11	22	
			Children		9	
		Total			31	
Dental Hospital of Manchester, Oxford Road, Manchester.	Dental Treatment.		—	—	52	Oral Surgery. Conservation. Prosthetic. Orthodontic. Anæsthetic and Extraction. X-Ray.
Manchester Royal Eye Hospital, Oxford Road, Manchester.	Eye Cases.	Ophthalmic	80	40	120	Pathological. Ophthalmic Neurosurgery. Skin Ray. Pathological Laboratory. Orthoptic. Venereal Diseases.
		Ophthalmic, Children	—	—	20	
		Ophthalmic Neurosurgery (Mothers and Babies)	—	—	3	
		Private Patients	—	—	8	
		Total			100	
Christie Hospital and Holt Radium Institute, Withington, Manchester.	1. To provide medical and surgical advice and relief for persons suffering from Cancer, Precancerous conditions and chronic ulceration. 2. Thoroughly and scientifically to study the disease in all its stages with a view to the discovery of its causes and of means of prevention and cure. 3. Radium and deep X-Ray Treatment.		72	61	133	Private wards for paying patients. Deep X-Ray Therapy. Pathological. Physical. Radium application and research. Out-patients and follow-up department. Record and Statistical department. Gynæcological. Ear, Nose and Throat. Neurological. Urological. Plastic Surgery. Dental. Dermatology
Total number of Beds provided by Voluntary Hospitals, outside Salford, used by Salford Residents					1,926	

* Includes 9 Children.

SUMMARY SHOWING INSTITUTIONAL ACCOMMODATION WHICH MAY BE USED BY SALFORD RESIDENTS.

Service.	Institutions provided by Salford Corporation.	Voluntary Institutions in Salford.	Voluntary Institutions outside Salford, but used by Salford residents.	Total.
General Medical	209	64	278	552
General Surgical	148	178	492	820
Children	246	53	373	672
Maternity	66	—	101	169
Tuberculosis	192	—	—	192
Chronic Sick	221	—	—	221
Mental	152	—	—	152
Ordinary Infectious Diseases	217	—	—	217
Puerperal Fever and Pyrexia	7	—	—	7
Smallpox	40	—	—	40
Venereal Diseases	16	—	—	16
Ear, Nose and Throat	12	—	55	67
Gynæcological	30	—	230	260
Skin Diseases, etc.	—	—	54	54
Ophthalmic Diseases	—	—	166	166
Ophthalmic Neurosurgery	—	—	4	4
Radium Treatment	—	—	115	115
Observation Beds, etc.	55	4	55	74
Orthopædic	53	—	—	53
Fee Beds	—	—	25	25
Private Wards	—	—	10	10
	1,874	296	1,926	3,696

Note.—It should be clearly understood that apart from the accommodation provided by the Salford Corporation, the accommodation referred to in the above summary is available for the residents of Manchester and neighbouring areas.

Name and Situation of Hospital.	Purpose.
Hope Hospital, Pendleton, Salford	General.....
adywell Sanatorium, Pendleton, Salford.	Infectious Diseases .....
ab Top Sanatorium, Marple, Cheshire.	Tuberculosis.....
rinkwater Park Hospital, Prestwich.	Smallpox Isolation Hospital

Total Number of Beds provided by Salford Corporation.....

B.—VOLUNTARY

Name and Situation of Hospital.	Purpose.
Salford Royal Hospital, Salford.	General.....

(C)—GENERAL PROVISION OF HEALTH SERVICES.

Hospital Services.

The people of Salford avail themselves of the hospital accommodation provided by the Salford Corporation and of the voluntarily provided hospitals of both Salford and Manchester. The interleaved tabulation contains particulars of the hospital services available for Salford residents, distinguishing between hospitals provided by the Corporation and voluntary institutions.

Outdoor Assistance to the Poor.

The amount distributed by way of outdoor assistance to the poor in Salford during the year ending March 31st, 1938, was approximately £132,650.

Particulars relating to the Poor Law Medical Out-relief Districts are set out in the appended tabulation :—

MEDICAL OUT-RELIEF DISTRICTS.

No. of District.	Area served.	District Medical Officer.
1.	*District*—Such portion of the former Township of Salford as is comprised within the following boundary :—Commencing at a point in the River Irwell at the Salford Royal Hospital end of the Crescent, easterly along Whitecross Bank and Chapel Street, thence along St. Stephen Street, King Street, Norton Street, and Greengate to the River Irwell at the Salford Bridge ; thence to the left along the River Irwell and the pre-existing Township boundary to the point first named.	Dr. Stanley Hodgson to 20th February, 1937. Dr. S. Snelson from 21st February, 1937.
2.	*District*—All that part of the former Township of Salford comprised within the following boundary :—Commencing at Windsor Bridge, and thence along the Manchester, Bury and Bolton Canal to the pre-existing boundary of the Townships of Salford and Pendleton, along such boundary through Peel Park to the River Irwell, along the River Irwell to a point nearest the Crescent, thence along the Crescent and Chapel Street to St. Stephen Street, along St. Stephen Street, King Street, Norton Street, Greengate and Chapel Street to Salford Bridge, to the right along the River Irwell to the Manchester, Bury and Bolton Canal, and along such Canal to the point first named.	Dr. Stanley Hodgson to 20th February, 1937. Dr. S. Snelson from 21st February, 1937.

MEDICAL OUT-RELIEF DISTRICTS—*continued.*

No. of District.	Area Served.	District Medical Officer.
3.	*District*—All that part of the former Township of Salford comprised within the following boundary, viz.:—Commencing at Regent Bridge, along the centre of Regent Road, Trafford Road, and Broadway, to the site of the old Racecourse, thence along the northern boundary of such site to the Manchester Ship Canal, thence along the said Ship Canal and the River Irwell to the point first named.	Dr. W. Saunderson.
4.	*District*—Commencing at Windsor at the point dividing the former Townships of Pendleton and Salford, thence along the pre-existing Township boundary to the Manchester, Bury and Bolton Canal, along such Canal in a south-easterly direction to the River Irwell, along the River Irwell to Regent Bridge, thence along Regent Road to Trafford Road, along Trafford Road and Broadway and the north-west side of the site of the old Racecourse to the Manchester Ship Canal, along the said Ship Canal to the boundary of the former Townships of Pendleton and Salford; and thence along such boundary to the point first named.	Dr. W. Saunderson.
5.	*District*—The whole of the former Township of Pendleton.	Dr. J. Garlick.
6.	*District*—The whole of the former Township of Broughton.	Dr. J. Libman.

Dr. J. D. Giles was appointed Medical Officer for Outdoor Relief Services on 1st October, 1937. This service is administered by the Public Assistance Committee.

Hospital Accommodation.

Consultations with representatives of Voluntary Hospitals did not take place during 1937, as no additional provision for hospital accommodation was made during the year.

Vaccination.

No primary vaccinations or re-vaccinations were performed by the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917, during 1937.

The Public Vaccinators for Salford and their districts are as follows :—

Description.	District.	Public Vaccinator.
Salford (No. 1) District.	Such part of the Township of Salford as is comprised within the following boundary, namely : Commencing at the former Township boundary between Pendleton and Salford at Broad Street ; along Windsor and the Crescent to Oldfield Road; along Oldfield Road to Regent Road ; along Regent Road to Regent Bridge ; thence in a northerly and westerly direction along the River Irwell to the boundary between the former Townships of Salford and Pendleton near Peel Park ; thence along the boundary between such former Townships to the point first named.	Dr. V. Newton, 227, Oldfield Road Salford, 5.
Salford (No. 2).....	Such part of the Township of Salford as is comprised within the following boundary, namely : Commencing at the boundary of the former Townships of Salford and Pendleton at New Windsor, Salford ; along New Windsor and the Crescent to Oldfield Road ; along Oldfield Road to Regent Road ; along Regent Road to the River Irwell at Regent Bridge ; thence in a southerly and westerly direction along the River Irwell and the Manchester Ship Canal to the boundary between the former Townships of Pendleton and Salford ; thence along the boundary between such former Townships to the point first named.	Dr. W. Saunderson, 1, Haworth Street, Cross Lane, Salford, 5.

Description.	District.	Public Vaccinator.
Pendleton District (Salford Township).	The whole of the former Township of Pendleton.	Dr. E. A. Ferguson, 90, Fitzwarren St., Pendleton.
Broughton District (Salford Township).	The whole of the former Township of Broughton.	Dr. R. B. Fletcher, Whin Knowle, Bury New Road, Salford 7.

Mr. A. Sharrocks was Vaccination Officer for the whole of Salford during 1937.

Particulars as to vaccination carried out in Salford during the year 1937 are as follows :—

PARTICULARS AS TO VACCINATION DURING 1937.

District.	No. of cases in birth lists.	No. of certificates of vaccination received, irrespective of district of birth.	No. of certificates of postponement owing to			No. of statutory declarations under Section 1 of the Vaccination Act, 1907.	No. of certificates of insusceptibility or of having had smallpox.	No. of cases.		No. of entries in list sent to public vaccinator.
			Health of child.	Condition of house.	Prevalence of infectious disease.			Parents removed out of district.	Otherwise not found.	
NORTH.....	824	692	111	....	....	169	1	31	13	228
SOUTH.....	851	663	45	....	....	137	....	9	13	205
WEST.....	1,284	910	63	....	....	257	2	27	21	244
TOTAL.....	2,959	2,265	219	....	....	563	3	67	47	677

SECTION IIA.

Atmospheric Pollution.

Atmospheric Deposit.

Examination of the atmospheric deposit obtained from the four special gauges has been continued throughout the year.

The four deposit gauges which collect the material for analysis are located as follows :—

(1) Peel Park, which is fairly centrally situated within the City.

(2) Ladywell Sanatorium and Isolation Hospital, which is just within the City boundary to the west.

(3) Drinkwater Park Hospital, which is a short distance beyond the City boundary to the north-west.

(4) Nab Top Tuberculosis Sanatorium, Marple, Cheshire, which is some ten miles distant from Manchester Town Hall, in a south-easterly direction.

In last year's report, the amount and character of atmospheric deposit as registered at the four above observation stations were compared with the previous year's (1935) figures, and it was noted that there had been an increase of total deposit in all stations except Marple and, more particularly, at Drinkwater Park. In the latter case, the substantial increase was attributed to an extension in nearby industries : that this increase has been maintained is at once evident from the following table in which a comparison of the figures for the two years 1936 and 1937, are given for all stations :—

DEPOSIT GAUGE OBSERVATIONS—YEARS 1936 AND 1937.

METRIC TONS PER SQUARE KILOMETRE.

Station.	Year.	Insoluble Matter.			Soluble Matter.		Total Solids.	Included in Soluble Matter.			Acidity	p.H.
		Tar	Other Carbonaceous Insolubles.	Insoluble Ash.	Insoluble Loss on Ignition.	Soluble Ash.		Sulphates.	Chlorine.	Ammonia.		
Marple	1936	0·05	0·62	0·76	0·75	1·22	3·40	0·58	0·67	0·02	0·24	4·5
Do.	1937	0·09	0·68	0·70	0·71	0·93	3·11	0·61	0·50	0·03	0·21	4·2
Peel Park	1936	0·26	2·12	4·08	1·54	2·87	10·87	1·05	1·00	0·01	0·33	4·5
Do.	1937	0·17	1·75	2·39	1·43	1·52	7·26	0·90	0·74	0·03	0·24	4·2
Ladywell Sanatorium	1936	0·13	1·98	2·69	1·97	2·95	9·72	1·25	1·25	0·03	0·53	4·2
Do.	1937	0·16	2·30	2·30	1·61	2·19	8·56	0·97	0·88	0·04	0·51	3·6
Drinkwater Park	1936	0·12	1·66	2·33	1·20	2·13	7·44	1·07	1·11	0·03	0·37	4·4
Do.	1937	0·13	1·50	1·97	1·98	2·34	7·92	1·15	1·02	0·05	0·40	3·9

The foregoing tabulation reveals an increase of total deposit at Drinkwater Park. On the other hand, there has been a slight fall in the total amounts recorded at Ladywell and Marple, and a very substantial fall (more than 25 per cent.) at Peel Park. The big fall in the amount of deposit collected at Peel Park may be to a great extent accounted for by the transference of the gauge in April from a site rather close to the public highway, to another site more in the centre of the park ; this transfer was necessitated by the improvement scheme recently carried out there. It is interesting to note that, in this case, the reduction in deposit relates chiefly to the inorganic constituent—that is, the ash, both insoluble and soluble, possibly owing to the less amount of dust from the road reaching the gauge.

Daylight Measurement.

Daylight measurement by the potassium iodide method has been continued as hitherto at the following four stations :—

(1) Regent Road (Health Offices).
(2) Nab Top Tuberculosis Sanatorium, Marple.
(3) Ladywell Sanatorium and Isolation Hospital (Salford and Eccles boundary).
(4) Drinkwater Park Hospital, Prestwich.

In addition, at the Regent Road laboratories, light measurement has been continued by the following alternative methods :—

(1) The Nitrate Method.
(2) The Photographic Method of Dr. Ashworth.
(3) The Photo-electric Method (Integrating Solarimeter).
(4) The Campbell-Stokes Bright Sunshine Recorder.

More detailed information concerning these methods of investigation, together with tabulations and charts setting forth the results, will be found in the City Analyst's section of this report, see pages 185 to 191.

Integrating Solarimeter—a complete year's record having been obtained with this instrument for the first time—a comparison of the results with those obtained at South Kensington (see table on page 191 of this report) is interesting.

The figures represent total radiation from the sun including visible and invisible rays.

In comparison with South Kensington, it will be seen that Salford receives only one-half as much in June and one-seventh as much in December. The amount of solar radiation which gets through the local atmosphere in December

is extremely small, being approximately of the order of two per cent. of that received in June. It may be said that the amount of medicinally active rays which reach us in this dark month is practically nil.

The Progress of Smoke Abatement.

The writer is one of many who, during the last fifteen years, have been waging incessant warfare against smoke pollution. A great deal of propaganda work has been set afoot both locally and in the country as a whole. Extensive investigations into the amount and character of atmospheric pollution have been carried out in the Salford Health Department and important data relating thereto have been supplied regularly during this time to the Department of Scientific and Industrial Research in London, for collation with results furnished by certain other co-operating local authorities. We are much better acquainted with the problems that will have to be solved and the general public is now much more alive to the evil in our midst. Figures show that we have made some progress but, unfortunately, it cannot be claimed that this is more than slight. A very radical alteration in present customs is necessary before substantial improvement can be achieved.

In Salford, by far the most serious part of pollution of the atmosphere comes from domestic fires and, in the vast majority of these, raw coal continues to be burned. Factory chimneys number only 200 approximately and these are mostly connected with boiler furnaces. The Salford Health Committee employs a whole-time Inspector to keep these chimneys under supervision, and any factory chimney emitting dense black smoke for two minutes or more in the half-hour is deemed to have offended. Compared with the amount of smoke emitted from domestic fires, the factory smoke in Salford is small in amount and not nearly so detrimental to health since it contains more ash and far less tar and unburnt hydrocarbon. Moreover, Salford—being in the heart of an industrial area and surrounded by Manchester and other densely populated areas—receives much pollution from these sources. It is felt that any proposals for improvement which take no account of what is by far the most important source of pollution—the domestic fire—can achieve a barely appreciable result.

An active campaign has been carried on continually against the burning of raw coal in the home fires. For long years the Salford Health Department has been heated entirely by coke fires, there being some 60 of these open smokeless fires in the building, which includes clinics and laboratories as well as offices. No difficulty at all has been experienced in the lighting and maintaining of these smokeless fires, and a number of private individuals have been sufficiently impressed as to adopt similar arrangements in their own homes. But, of course, compared with the population of the City, this number is small. Two of the great obstacles that stand in the way of progress are public apathy and a totally inadequate supply of suitable smokeless fuel. There is no doubt that the high temperature gas coke prepared in vertical retorts and unquenched by water—

vertical dry coke—is a highly satisfactory fuel and is sufficiently cheap as to be within reach of the poorer members of the population. The trouble is, the supply is so limited, since it is at present merely a by-product in the manufacture of coal gas.

If smoke pollution is to be abolished, then the only possible way is to eliminate the possibility by prohibiting the use of raw coal. Such action can only be taken when a sufficient supply of smokeless fuel is made available : that means carbonisation on the grand scale—a national matter which, sooner or later, the Government of the country will have to face up to. The desired action will, no doubt be forthcoming when the public demand is sufficiently insistent : we can only hope it may be soon.

SECTION III.

Infectious Diseases.

The number of cases of infectious disease notified during 1937 was 3,454, including 1,315 cases of measles. Although the measles epidemic was of such a severity as to cause serious concern, it was fortunately much less widespread than the epidemics of 1916, 1917 and 1919. It is not possible to make comparisons with later years than 1919 owing to the fact that after that year measles was not notifiable in this area until 15th May, 1936. In coping with the epidemic of 1937 it was found possible to introduce two innovations which, it is believed, were of some assistance in mitigating its severity and afforded experience for use in future epidemics which may occur. The innovations referred to were :—

(*a*) the offering of advice in their own homes to mothers of children suffering from measles by Health Visitors ; and

(*b*) the issue to medical practitioners, free of charge, of Immune Globulin, a preparation which has the effect of modifying the severity of attacks of measles in children who have been exposed to infection.

Circulars announcing the availability of Immune Globulin were issued to practitioners in November, 1937, and, although the response was by no means unanimous, a considerable quantity was issued to 37 individual practitioners and 3 institutions. After the material had been in use for some time I enquired from the practitioners and institutions to whom it had been issued their opinions as to its value. In practically all cases the replies were to the effect that the material was efficacious. The Medical Superintendent of the Ladywell Sanatorium and Isolation Hospital, whose experience of Immune Globulin was probably the greatest in the City, replied as follows :—

" In all cases which came under my observation and which had a " dose of Immune Globulin, the attack was invariably mild, without the " dreaded broncho-pneumonia complications. In judging of the worth of " this product it has to be kept in mind that the Immune Globulin has to " be given early in the first six days of infection, *i.e.*, one or two days at " most after the rash is first noticed, the catarrhal stage, lasting usually at " least four days, being the most infectious stage. It has further to be " remembered that partial or complete immunity according to the dose " lasts only for about a fortnight."

The Salford Royal Hospital authorities replied in the following terms :—

" The use of Immune Globulin in the treatment of measles is efficacious " and, in our opinion, is certainly justifiable."

While no adverse criticisms were received, some practitioners pointed out that as the epidemic was of a mild nature it did not permit of a thorough test of the material, and one must admit the propriety of this attitude. The general consensus of opinion, however, was strongly in favour of Immune Globulin.

The remaining notifications of infectious disease (*i.e.*, those other than measles) numbered only 2,139, a surprisingly low total having regard to the serious epidemics which ravaged a number of neighbouring districts during the later months of 1937. The total was, in fact, the lowest since 1920 and included reduced figures in the case of the majority of the diseases concerned. It was particularly gratifying to note that the notifications of diphtheria were no fewer than 160 less than the average for the five years 1933 to 1937, while the notifications of pulmonary tuberculosis (namely 324) although ten more than in 1936, were so low as to give almost equal satisfaction.

In my report for 1936 I drew attention to the serious increase in cases of primary pneumonia, upon which I considered the foggy weather of December, 1935, had a bearing. This view has been upheld by the fall from 530 in 1936 to 447 in 1937 (in which year better weather conditions prevailed as far as fog was concerned) in notifications of this disease.

Details of the number of cases of infectious disease notified are given in Tables 1 and 2, pages 67 and 68. An additional Table (Table 3), showing the number of cases of infectious disease notified, removed to hospital, and the number of deaths from such diseases, appears on page 70.

An important change in procedure was introduced on 1st December, 1937, when it was decided to discontinue the disinfection of houses in which cases of infectious disease (other than tuberculosis) had occurred. In place of disinfection, the occupiers of the houses affected have been encouraged to thoroughly cleanse their homes and to give especial attention to the room or rooms in which the patient had been nursed. As anticipated, this alteration in procedure has had no adverse effect upon the health of the occupants of the houses concerned. With the exception of the foregoing innovation, the usual methods described in previous reports for the prevention of the spread of infectious diseases were continued. School teachers, in addition, are encouraged to report cases of non-notifiable disease, which are at once investigated by the school medical officers.

In addition, Immune Globulin, Diphtheria Anti-Toxin and Scarlet Fever Anti-Toxin are issued, free of charge, to Medical Practitioners. These arrangements are used to a considerable extent by Salford Medical Practitioners.

Cases of infectious disease which cannot be isolated at home are removed to the Corporation's Infectious Diseases Hospital, the Ladywell Sanatorium and Isolation Hospital (for detailed report upon this Institution, see pages 92 to 114). Bedding and clothing which have been exposed to infection are disinfected at the Corporation's Disinfecting Station at Mode Wheel; details of the work carried out at this Station appear on pages 35 to 37.

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.	Weaste.	Cases removed to Hospital.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.																	
Smallpox	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Diphtheria (including Membranous croup)	531	16	146	278	56	33	2	....	29	34	9	36	28	32	27	49	24	46	44	50	27	18	19	59	525
Erysipelas	103	2	1	5	8	32	42	13	6	3	9	4	2	4	6	4	7	5	8	9	8	8	6	14	63
Scarlet Fever	470	3	137	280	31	17	1	1	37	19	16	42	43	29	23	39	36	28	29	22	18	21	26	42	435
Typhus Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Enteric Fever	8	....	....	1	2	....	5	....	2	....	....	....	....	3	....	1	....	....	....	2	....	....	....	....	7
Continued fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Relapsing fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Puerperal fever	5	....	....	....	....	5	....	....	....	....	....	....	....	....	1	....	....	....	....	1	1	1	....	1	5
Puerperal Pyrexia	54	....	....	....	25	29	....	....	2	4	2	7	6	2	4	3	5	6	3	....	1	1	6	2	21
Cholera	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cerebro-Spinal Meningitis	16	2	2	1	6	4	1	....	....	1	....	3	1	....	2	1	....	....	1	1	....	1	4	1	6
Acute-Poliomyelitis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anthrax	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
Glanders	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ophthalmia Neonatorum	9	9	....	....	....	....	....	....	2	1	....	2	1	....	....	1	1	....	....	1	....	....	....	....	1
Pulmonary tuberc'lsis	324	....	....	19	97	113	81	14	24	18	25	35	11	14	17	23	19	21	24	25	21	14	17	16	502
Other forms of tuberculosis	93	3	7	33	22	22	4	2	7	5	3	12	1	3	6	7	8	4	8	9	3	2	9	6	65
Malaria	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dysentery	7	....	6	....	....	1	....	....	....	....	1	....	....	....	1	....	....	2	....	....	....	....	2	1	1
Acute Primary Pneumonia	447	33	105	83	41	93	69	23	35	29	12	55	29	11	18	22	17	30	37	42	30	13	46	21	29
Influenzal Pneumonia	66	....	1	6	10	19	28	2	4	3	3	9	2	2	9	5	2	3	2	3	1	2	7	9	....
Encephalitis Leth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Acute Polio Encephalitis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pemphigus Neonatorum	5	5	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	1	....	1	....	....
Measles	1315	98	847	364	3	2	1	....	64	95	13	120	70	16	46	59	201	192	98	83	41	22	147	48	119
Total	**3454**	**171**	**1252**	**1070**	**301**	**371**	**234**	**55**	**212**	**212**	**93**	**325**	**196**	**116**	**161**	**214**	**320**	**337**	**255**	**248**	**152**	**103**	**290**	**220**	**1780**

TABLE I. 2.

SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASE NOTIFIED TO THE HEALTH DEPARTMENT DURING THE YEARS 1883 TO 1937.

Year.	Small-pox.	Scarlet Fever.	Diphtheria.	Fever.					Erysipelas.	Cholera.	Plague.	Anthrax.	Glanders.	Cerebro-Spinal Meningitis.	Acute Poliomyelitis.	Ophthalmia Neonatorum.	Measles.	Tuber-culosis.		Total.
				Enteric.	Typhus.	Con-tinued.	Relapsing.	Puerperal.										Pul-monary.	Non-Pul-monary.	
1883	6	805	81	293	14	....	....	21	....	....	....	....	....	....	....	....	....	....	....	1220
1884	5	1154	99	422	35	....	....	14	....	....	....	....	....	....	....	....	....	....	....	1729
1885	11	632	54	205	32	....	....	15	....	....	....	....	....	....	....	....	....	....	....	949
1886	....	1536	41	288	5	....	....	12	....	....	....	....	....	....	....	....	....	....	....	1882
1887	4	1427	83	368	7	....	....	11	....	....	....	....	....	....	....	....	....	....	....	1900
Average 5 years	**5**	**1111**	**72**	**315**	**19**	....	....	**15**	....	....	....	....	....	....	....	....	....	....	....	**1537**
1888	52	1128	175	572	31	....	....	26	....	....	....	....	....	....	....	....	....	....	....	1984
1889	....	1283	691	485	3	....	....	14	....	....	....	....	....	....	....	....	....	....	....	2476
1890	....	985	704	383	6	4	....	22	76	....	....	....	....	....	....	....	....	....	....	2180
1891	....	483	231	377	1	6	....	13	53	....	....	....	....	....	....	....	....	....	....	1164
1892	7	865	231	347	5	5	....	26	86	....	....	....	....	....	....	....	....	....	....	1572
Average 5 years	**12**	**948**	**406**	**433**	**9**	**3**	....	**20**	**43**	....	....	....	....	....	....	....	....	....	....	**1874**
1893	168	865	261	563	5	12	....	30	147	....	....	....	....	....	....	....	....	....	....	2051
1894	35	1043	242	316	1	14	....	21	130	....	....	....	....	....	....	....	....	....	....	1802
1895	4	1167	194	382	....	11	....	19	111	....	....	....	....	....	....	....	....	....	....	1888
1896	2	1579	158	291	7	12	....	24	114	....	....	....	....	....	....	....	....	....	....	2187
1897	....	714	103	291	....	14	....	13	121	....	....	....	....	....	....	....	....	....	....	1256
Average 5 years	**42**	**1074**	**192**	**369**	**3**	**13**	....	**21**	**125**	....	....	....	....	....	....	....	....	....	....	**1836**
1898	....	659	97	367	16	14	....	31	146	....	....	....	....	....	....	....	....	....	....	1330
1899	....	723	184	273	3	20	....	26	153	....	....	....	....	....	....	....	....	....	....	1382
1900	6	1317	309	335	2	8	....	21	179	....	....	....	....	....	....	....	....	....	....	2177
1901	....	1320	420	317	1	8	....	33	230	....	....	....	....	....	....	....	....	....	....	2329
1902	23	780	292	207	43	6	....	16	164	....	....	....	....	....	....	....	....	....	....	1531
Average 5 years	**6**	**960**	**260**	**300**	**13**	**11**	....	**25**	**174**	....	....	....	....	....	....	....	....	....	....	**1750**
1903	175	737	335	178	....	1	....	13	161	....	....	....	....	....	....	....	....	....	....	1600
1904	57	1043	422	202	10	7	....	21	168	....	....	....	....	....	....	....	....	....	....	1930
1905	3	960	363	142	....	7	....	26	176	....	....	....	....	....	....	....	....	....	....	1677
						1		21	142											1725

Year.	†Chicken-p	Small-po	Scarlet Fe	Diphtheri	Enteric.	Typhus.	Con-tinued.	Puerperal.	Puerperal Py	Pemphig Neonator	Erysipel	Anthra	Cerebro-Sp Meningi	Acute Poliomye	Ophthalı Neonator	*Measl	Pul-monary.	Non-Pul-monary.	Trench F	Malari	Acute P Encepha	Dysente	Acute Pri Pneumo	Influen Pneumo	Encepha Letharg	Total
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	....	1	29	....	....	1073	....	....	....	....	....	....	....	....	2206
Average 5 years	....	....	**1056**	**428**	**123**	....	**3**	**25**	....	....	**167**	....	....	....	....	....	**716**	....	....	....	....	....	....	....	....	**2532**
1913	....	4	1224	336	113	....	1	17	....	....	203	3	4	2	....	....	1206	503	....	....	....	....	....	....	....	3616
1914	....	1	2336	352	63	....	....	20	....	....	248	1	3	5	80	....	1126	236	....	....	....	....	....	....	....	4471
1915	....	1	997	236	84	....	....	23	....	....	172	....	9	7	97	....	816	195	....	....	....	....	....	....	....	2637
1916	....	8	442	204	47	....	....	13	....	....	124	....	9	1	60	2065	745	241	....	....	....	....	....	....	....	3959
1917	....	....	200	183	40	....	....	2	....	....	91	....	2	2	43	3100	575	213	....	....	....	....	....	....	....	4401
Average 5 years	....	**3**	**1040**	**252**	**69**	....	**1**	**15**	....	....	**167**	**1**	**5**	**3**	**70**	**2582**	**893**	**278**	....	....	....	....	....	....	....	**3817**
1918	....	....	289	148	42	....	....	17	....	....	92	....	2	2	53	766	556	143	....	....	....	....	....	....	....	2110
1919	....	4	663	211	20	....	....	32	....	....	131	....	6	3	85	2689	583	107	2	117	....	56	....	365	4	5078
1920	....	1	1124	334	49	....	1	40	....	....	135	....	10	1	116	....	574	120	....	42	....	8	....	230	6	2791
1921	....	....	1746	313	41	....	2	19	....	....	146	....	9	....	81	....	553	102	....	11	....	1	....	394	7	3425
1922	....	....	1275	359	37	....	....	25	....	....	141	....	4	....	72	....	510	101	....	6	....	....	....	426	1	2957
Average 5 years	....	**1**	**1019**	**273**	**37**	....	**1**	**26**	....	....	**129**	....	**6**	**1**	**81**	**1727**	**555**	**115**	**1**	**35**	....	**13**	....	**283**	**4**	**3272**
1923	....	....	868	304	27	....	....	22	....	....	98	1	5	1	57	....	547	125	....	4	....	1	114	86	8	2268
1924	....	....	403	286	26	....	....	18	....	....	89	....	4	1	56	....	557	87	....	1	2	1	461	138	59	2189
1925	1145	....	510	376	30	....	....	17	....	....	134	....	2	1	60	....	507	132	....	1	1	....	409	132	27	3484
1926	....	....	720	533	10	....	....	20	12	24	140	....	3	4	50	....	532	123	....	1	4	....	363	99	13	2651
1927	....	1	631	507	9	....	....	7	27	16	120	....	5	4	48	....	573	148	....	2	....	2	465	158	17	2740
Average 5 years exclud'g chicken pox	....	**1**	**626**	**401**	**20**	....	....	**17**	**20**	**20**	**116**	**1**	**4**	**2**	**54**	....	**543**	**123**	....	**2**	**1**	**1**	**362**	**123**	**25**	**2437**
1928	....	5	822	425	20	....	1	19	28	11	139	....	13	....	55	....	454	166	....	1	....	....	458	80	12	2709
1929	....	....	635	678	9	....	....	16	18	10	150	....	5	2	35	....	522	112	....	....	....	....	658	168	9	3027
1930	....	7	679	736	25	....	1	13	30	6	158	....	2	....	33	....	454	130	....	....	....	....	422	49	8	2753
1931	....	....	478	582	7	....	....	18	25	27	113	....	4	....	13	....	446	139	....	....	....	....	486	120	3	2461
1932	....	....	423	727	16	....	....	23	23	21	99	....	7	4	16	....	472	124	....	....	1	2	466	43	3	2470
Average 5 years	....	**2**	**607**	**630**	**15**	....	**1**	**18**	**25**	**15**	**132**	....	**6**	**1**	**30**	....	**470**	**134**	....	**1**	**1**	**1**	**498**	**92**	**7**	**2684**
1933	....	....	582	759	7	....	....	21	38	6	125	....	13	1	18	....	464	122	....	....	....	1	423	124	2	2706
1934	....	....	547	888	3	....	....	17	32	5	122	....	14	....	14	....	425	135	....	1	....	....	494	15	3	2715
1935	....	....	587	690	8	....	....	19	27	9	114	....	11	....	28	....	366	93	....	....	....	2	430	45	1	2430
1936	....	....	543	589	3	....	....	11	18	14	86	....	22	5	17	205	314	103	....	....	....	....	530	28	....	2488
1937	....	....	470	531	8	....	....	‡5	54	5	103	1	16	....	9	1315	324	93	....	....	....	7	447	66	....	3454
Average 5 years	....	....	**546**	**691**	**6**	....	....	**15**	**34**	**8**	**110**	**1**	**15**	**1**	**17**	**760**	**379**	**109**	....	**1**	....	**2**	**465**	**56**	**1**	**2759**

* Measles notifiable in Salford 1916 to 1919, and from May 15th, 1936. †Chicken-pox notifiable in Salford, January 22nd to December 31st, 1925.
‡ Not notifiable after October 1st, 1937.

TABLE I. 3.

NUMBER OF CASES OF INFECTIOUS DISEASE NOTIFIED, NUMBER REMOVED TO HOSPITAL, AND THE NUMBER OF DEATHS FROM SUCH DISEASES DURING THE YEAR 1937.

DISEASE.	CASES NOTIFIED. AGE GROUPS.													Number Removed to Hospital.	Total Deaths.
	Under 1	1–2	2–3	3–4	4–5	5–10	10–15	15–20	20–35	35–45	45–65	Over 65	Total.		
Diphtheria	16	14	40	45	47	183	95	38	43	8	2	—	531	525	12
Scarlet Fever	3	13	36	47	41	201	79	23	24	1	1	1	470	435	1
Measles	98	170	187	274	216	353	11	3	2	—	1	—	1,315	119	12
Erysipelas	2	1	—	—	—	4	1	3	20	17	42	13	103	63	3
Pneumonia—Primary	33	44	25	18	18	64	18	24	65	46	69	23	447	29	238
Pneumonia—Influenzal	—	1	—	—	—	2	4	4	17	8	28	2	66	—	
Puerperal Pyrexia	—	—	—	—	—	—	—	2	44	8	—	—	54	21	1
Puerperal Fever (till October, 1937)	—	—	—	—	—	—	—	—	4	1	—	—	5	5	2
Cerebro-Spinal Meningitis	2	—	—	2	—	—	1	5	3	2	1	—	16	6	7
Enteric Fever	—	—	—	—	—	1	—	2	—	—	5	—	8	7	—
Dysentery	—	1	1	1	3	—	—	—	—	1	—	—	7	1	—
Ophthalmia Neonatorum	9	—	—	—	—	—	—	—	—	—	—	—	9	1	—
Pemphigus Neonatorum	5	—	—	—	—	—	—	—	—	—	—	—	5	—	—
Anthrax	—	—	—	—	—	—	—	—	1	—	—	—	1	1	—
Tuberculosis—Pulmonary	—	—	—	—	—	4	15	48	120	42	81	14	324	*502	178
Tuberculosis—Non-Pulmonary	3	2	—	—	5	16	17	19	18	7	4	2	93	65	27
TOTAL	171	246	289	387	330	828	241	171	361	141	234	55	3,454	1,780	481

*Including 30 Observation Cases.

TUBERCULOSIS DISPENSARY.

Annual Report for 1937.

The Tuberculosis Dispensary is situated at Nos. 145 and 147, Regent Road, Salford, and consists of two consulting rooms with waiting and dressing rooms attached, X-Ray and dark rooms and a room set apart and specially fitted up for the performance of Artificial Pneumothorax Refills, Gas Replacements, etc., which is necessary owing to the increasing number of patients undergoing collapse therapy. There are no branch dispensaries or visiting stations. The Staff consists of two Medical Officers, five Health Visitors and three Clerks.

In addition to the Dispensary work the Tuberculosis Officers are responsible for the treatment of Tuberculous patients at Ladywell Sanatorium (72 beds) and the Senior Tuberculosis Officer visits the Municipal (Hope) Hospital every week for the purpose of consulting with the Medical Staff as to the diagnosis of suspected cases of Tuberculosis and to recommend the most suitable treatment.

Since the advent of Hope Hospital to the control of the Health Committee of the City Council in April, 1935, it has at last become possible to bring about the centralised control of all cases of Tuberculosis.

During 1936 it was decided to close the wards at Hope Hospital to cases of Pulmonary Tuberculosis and transfer them to Ladywell Sanatorium. All known cases of this type requiring Hospital treatment are now admitted to Ladywell Sanatorium only and any case of Pulmonary Tuberculosis found in Hope Hospital is transferred as soon as possible.

(a) Patients Referred for Examination.

Eight hundred and three (803) patients (including non-pulmonary cases) were referred to the Tuberculosis Officers for examination by General Practitioners, School Medical Officers, and local Hospitals during 1937. Although the Tuberculosis Officers now see more early cases of disease than formerly, there are still far too many patients seen for the first time where the disease is so advanced that no treatment can be of lasting value. It is only by the co-operation of the General Practitioners that the Tuberculosis Officers can deal with cases in their earliest and, therefore, most curable stage.

The relations between the General Practitioners of the City and the Dispensary Medical Staff are most cordial and every encouragement is given to send all suspected cases to the Dispensary for examination. A full report of the condition found after physical and X-Ray examination is sent to the Doctor concerned, and it has been possible to give invaluable assistance in diagnosing not only lesions of the chest and other organs caused by tuberculosis, but many other non tuberculous lesions of the chest. This is of great value to Practitioners in the treatment of such cases.

A large majority of the patients referred for examination are seen before notification.

Since the regular use of X-ray examinations it has often been found that a definite tuberculous lesion can be present in a patient's chest without causing any symptoms noticeable to the person affected. When such lesions are found it is sometimes extremely difficult or impossible to make the patient understand the necessity for entering a Sanatorium, or at least giving up work for a time until there is X-ray evidence of definite retrogression of the lesion. It is even more remarkable that Pulmonary Tuberculosis can reach widespread distribution in the lungs without producing a sufficient degree of illness to cause the person to seek the advice of a Doctor. Consequently the disease has often reached an advanced stage before they are seen by a General Practitioner or Hospital. At the same time there is no doubt that the thought of loss of employment prevents many patients from seeking early advice.

Improvement in this respect can only be brought about by propaganda work and all opportunities are taken by Tuberculosis Officers to give lectures and talks to various local associations and by window displays at the Health Office to bring before the Public a knowledge of the early signs of tuberculosis.

At the same time it cannot be too strongly emphasised that inadequate medical examination when the patient consults his Doctor is bound to result in failure to recognise tuberculosis at an early or curable stage. The percentage of cases of Pulmonary Tuberculosis not notified before death during 1937 is 9·65, an increase on last year's figures, but it is gratifying to note that there is a substantial decrease in those fatal cases notified within three months of death.

A point of first importance, and one that is frequently neglected, is the sending of samples of patient's sputum for examination for the presence of tubercle bacilli in all cases of persistent cough which do not yield early to ordinary treatment.

It is satisfactory to note that improvement is still maintained in the sending of sputa for examination. One thousand two hundred and ninety-eight (1298) samples of sputum were examined in 1937.

All sputum examinations desired by Medical Practitioners are made free of charge at the Municipal Pathological Laboratory and special sterile metal containers are provided for the collection of specimens.

(b) Routine Procedure.

When a patient is notified to this Department by a Medical 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 desirability of separate sleeping accommodation, etc., are advised, and instructions given regarding periodical disinfection of walls, bedding and utensils.

The examination of contacts, especially in the case of adolescents, is of the first importance and every endeavour is made by the Health Visitors to induce all contacts to attend at the Dispensary for examination. Unfortunately most of these above school age are working and can only be examined at an evening clinic as they refuse to take time off work and so lose money for an examination which they consider to be of little importance. We consider that X-Ray examination of contacts should also be carried out and this is done at the Dispensary in all cases.

The routine examination of all child contacts is of much less importance than in the case of adolescents but this is carried out as far as possible. Three hundred and fifty-one (351) contacts were examined last year. Nine of these were found to be suffering from pulmonary tuberculosis, and one from non-pulmonary disease.

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.

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 poor circumstances and recommended by the Tuberculosis Officers as being suitable for the granting of extra nourishment, arrangements are made with milk dealers in the City for milk and eggs to be supplied each day.

The usual types of cases receiving extra nourishment 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.

Although unemployment has improved during the past year there have been many patients requiring extra nourishment and although the amount of money allowed has been increased for this purpose the sum is still inadequate to assist all who require it.

It is found that when patients are discharged from the Sanatorium where they have been receiving adequate nourishment to homes where the food supply is below normal, they soon begin to lose weight, their resistance is lowered, and the disease is very liable to become active again.

(c) X-Ray Examination.

The efficiency of a Tuberculosis Dispensary is greatly enhanced by its equipment with a modern X-Ray installation. A powerful set (100 M.A. single valve unit) is installed at the Dispensary, with all necessary accessories, and X-Ray examinations are made in large numbers.

Every new case sent for investigation is carefully screened after physical examination, and in all cases a skiagram of the chest or other part is taken.

This method of examination is an invaluable aid, not only for purposes of diagnosis, but in obtaining information as to the real extent of the disease in the lungs, bones or joints of the patient. It is also of great value in determining the results of treatment. Two thousand three hundred and sixty-three (2363) X-Ray examinations were made last year. The introduction of paper films which cost only 50 per cent. of the ordinary films is reducing the expense of X-Ray work and for certain purposes they give admirable results. X-Ray examinations have been found of great value to General Practitioners in the differentiation of other chronic diseases of the lung simulating tuberculosis, many of which in the past have been diagnosed as cases of pulmonary tuberculosis. It should also be noted that considerable time is now saved in making a definite diagnosis of chest diseases, and doubtful cases are not required to be kept under observation for periods of longer than one or two months before a final decision can be made.

Much public money and loss of the patients' time is saved also by obviating the sending of suspected cases to the Sanatorium for periods of observation where the physical signs in the lungs simulate those of pulmonary tuberculosis. By means of the X-Rays the differential diagnosis of such cases is made enormously easier.

The great value to the Medical Officers of X-Ray examination of the chest has been markedly shown by the large number of cases gradually removed from the Dispensary Register which had many years ago been diagnosed as cases of pulmonary tuberculosis on physical signs only. This has been possible owing to a more accurate diagnosis by X-Ray examination.

In the X-Ray Department a reducing camera was installed in 1930, and when a radiogram showing tuberculous disease is taken, a reduced sized photographic copy is sent to the General Practitioner. In order that he may have an accurate knowledge of the condition and extent of the disease, careful notes describing the lesions are filled in on the back of the photograph.

Letters of appreciation have been received from Medical Practitioners regarding this development, which is undoubtedly of great assistance to the doctor attending the patient.

(d) Treatment by Artificial Pneumothorax.

The greatest advance of recent years in the treatment of pulmonary tuberculosis is the more universal use of Artificial Pneumothorax or collapse of the lung.

This method of treatment is now well established and is in regular use.

Primary inductions are carried out both at Ladywell and Nab Top Sanatoria. Refills are continued there for six months or longer according to the time the patient is able to remain in the Sanatorium.

Usually after six months, in straightforward cases, the patient can return home, and the refills are continued at the Dispensary. At the end of 9-12 months patients return to work and have refills at intervals of two to four weeks, according to absorption of air.

No trouble has been experienced during the past year in obtaining the attendance of patients who are working and the opportunity is taken here to express appreciation of the action of employers in allowing their employees to attend for refills when required. As the collapse of the lung must be kept up for a period of from two to four years the number of patients requiring refills is constantly growing, and a special room is set apart for the Dispensary treatment of those patients undergoing collapse therapy. The room is fitted with all necessary apparatus for refills, gas replacements, etc.

The ideal case for treatment by collapse therapy is one in which the disease is confined entirely to one lung so far as can be ascertained from an X-Ray film of the chest.

Provided that the whole lung collapses completely without adhesions, arrest of the disease is obtained after three to four years' treatment in the great majority of cases.

But in those cases in which collapse is imperfect and adhesions are present, pleural effusions are very liable to form when the prognosis of the case is completely altered and a cure is much less likely to be obtained.

Our experience has also taught us that in those patients who have some disease in the contra-lateral lung there is a considerable likelihood of this disease extending and becoming active at a later date. This is especially so in patients who for economic reasons are obliged to return to work too soon and as a consequence too much work is thrown on the non-collapsed lung.

So many of these patients have died through active spread in the contra-lateral lung that we now choose our cases for collapse treatment more conservatively than at first.

At the present time we do not recommend collapse therapy unless the lesion on the less diseased side is quite small and confined to one zone of the lung.

In a few patients, arrest of the lesion on one side has had to be followed by collapse of the other lung owing to extension of the disease and this has been accomplished successfully.

There is no doubt that collapse therapy has completely altered the prognosis of Pulmonary Tuberculosis in suitable cases.

Analysis of Cases Given Artificial Pneumothorax Treatment.

During the past year forty-eight (48) new cases commenced treatment by Artificial Pneumothorax (eighteen (18) at Ladywell Sanatorium) and (thirty (30) at Nab Top Sanatorium). Forty-nine (49) patients continued their refills at the Dispensary, nineteen (19) of whom are working with completely quiescent disease. The number of Artificial Pneumothorax refills carried out at the Dispensary, Ladywell, and Nab Top Sanatoria during the past year was as follows:—

Tuberculosis Dispensary	621
Ladywell Sanatorium	162
Nab Top Sanatorium	448
Total Number of Refills	1,231

Other Forms of Treatment for Pulmonary Tuberculosis.

1. Treatment by Gold Salts. (Gold Thiosulphate).

These preparations are employed dissolved in distilled water for the small doses and Gluconyl (Calcium Gluconate) for the larger doses.

The treatment is commenced with .05 gram, and gradually increased to .5 gram. until 4.5 grams. have been given. This constitutes one course and is repeated if necessary. The use of Gluconyl as a vehicle for gold salts has been found to greatly reduce the risk of certain complications arising such as skin rashes, diarrhœa, albuminuria, conjunctivitis and stomatitis.

Type of case suitable for Treatment by Gold Salts.

(*a*) Patients undergoing collapse treatment of one lung in whom exacerbation of an early lesion in the other lung takes place. Good results have been obtained in some cases and X-Ray examination has shown that the spread of disease has been checked with subsequent fibrosis. In some cases considerable resolution of the disease has taken place; the X-Rays showing marked clearing of the lung.

In a few patients little benefit has been obtained owing to complications arising. Three patients in this category have received gold injections.

(*b*) Patients with the upper portions of both lungs about equally affected are not suitable for collapse therapy and when ordinary sanatorium treatment has little effect the injection of Gold Salts does in some cases afford considerable benefit. The sputum becomes negative and fibrosis of the lesion commences. In fifty per cent. of our cases little or no benefit was obtained.

Twenty patients of this type have received gold injections.

(e) 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 should be furnished every three months by the attending Medical Practitioners on Form G.P. 36. These patients are examined from time to time by one of the Tuberculosis Officers, and a report furnished to the Practitioner concerned.

(f) Dispensary Treatment.

Non-insured patients suffering from chronic disease who are unsuitable for Sanatorium treatment or who have received Institutional treatment and are now ambulant, and who are too poor to pay a General Practitioner, are treated at the Dispensary by Cod Liver Oil Emulsions or suitable drugs.

The condition of these persons depends to a large extent on the home conditions, the facilities for obtaining suitable food and the general habits of the patient. Their disease appears to remain stationary for long periods, especially when they are of middle age or over and when the acute stage of the disease is past.

(g) Primary Tuberculous Pleurisy.

Owing probably to the increasing resistance of the race to Tuberculosis a larger number of patients infected with the Tubercle Bacillus first show this by developing a primary Tuberculous pleurisy without any physical or X-ray evidence of a lesion in the lungs.

Consequently many more cases of primary tuberculous pleurisy have been referred by General Practitioners during the past year to the Tuberculosis Officers, who have also been asked to see a considerable number at the Hope Hospital.

It is now recognised by experienced Tuberculosis workers that the majority of primary pleurises and certainly those with effusion (except

a few which may be due to Syphilis or New Growth) should be regarded as due to the Tubercle Bacillus and the patient given adequate treatment before returning to work.

Samples of the effusion from the cases of primary pleurisy passing through our hands have been submitted to the laboratory for guinea pig inoculation and the great majority have been returned positive.

In former years many patients who had suffered from primary pleurisy at some previous date returned to work after a few weeks' treatment at home, and all of them developed active disease in one or both lungs after a varying interval of time. It was evident that the disease had been latent over this period, and owing to the patients' resistance becoming lowered in some way the Tubercle Bacillus had again become active.

All these patients are now urged to undergo Sanatorium treatment until all signs of the disease have disappeared. The majority accept this advice, but some refuse as they feel so well after a few weeks rest at home or in Hospital.

We are of opinion that all patients with primary tuberculous pleurisy should undergo Sanatorium treatment until all X-Ray evidence of the disease has disappeared. This will, as far as is possible, prevent the development of active pulmonary tuberculosis at a later date.

(h) Non-pulmonary Tuberculosis.

The total number of primary and informal notifications of non-pulmonary or surgical tuberculosis received during 1937 was ninety-three (93), fifty (50) adults and forty-three (43) children of school age. These are made up of cases suffering from disease of glands, bones, joints, abdomen, meninges and other forms. The majority of these patients are not seen at the Dispensary as they are usually sent direct by the General Medical Practitioners to the local Hospitals for diagnosis and treatment. A certain number are sent in the first instance to the Dispensary by General Practitioners when the diagnosis is doubtful and in the case of children many are referred by the School Medical Officers.

Cases requiring surgical treatment are sent by the Dispensary Medical Officers to the Municipal Hospital in most instances, but some are first seen at Salford Royal Hospital. Where Sanatorium treatment is likely to be of benefit the patients are sent by the Tuberculosis Officers and at the request of Hospital Medical Officers to Nab Top Sanatorium. When considered suitable, patients are referred for treatment at the Artificial Sunlight Clinic.

ARTIFICIAL SUNLIGHT.

Five sessions per week are allotted to the Tuberculosis Department for the treatment of non-pulmonary tuberculosis in the Artificial Sunlight Clinic. The equipment consists of :—

Two Carbon Arc Lamps of the Westminster type.

One Jesionek Mercury Vapour Lamp.

Cases suitable for this form of treatment are :—

(*a*) Tuberculosis of the skin.

(*b*) Tuberculous glands, especially those with discharging sinuses.

(*c*) Abdominal Tuberculosis.

(*d*) Tuberculosis of bones and joints.

All these forms of non-pulmonary disease derive great benefit, except those showing marked changes in the bones or joints of old standing.

A large number of children of school age have been given courses of Artificial Sunlight at the request of the School Medical Officers. These have been cases of General Debility or recurring Bronchial Catarrh and especially when these came from tuberculous households. Combined with treatment at an Open-air School much benefit has been shown by these children.

EXAMINATION AND TREATMENT OF CHILDREN DURING 1937.

(a) Contacts.

During the year 1937, one hundred and forty-seven (147) children were examined as contacts at the Tuberculosis Dispensary.

One was found to have non-pulmonary tuberculosis.

(b) Pulmonary Disease in Children.

1. Tuberculous.

One hundred and twenty-nine (129) children of school age were referred to the Dispensary in 1937 for examination by the School Medical Officers, General Practitioners and Medical Officers of local Hospitals and Dispensaries.

Twelve (12) children were diagnosed as suffering from tuberculous disease of the chest. Of the above twelve cases, one (1) came from a home in which a positive adult case of pulmonary tuberculosis had occurred during the past two years.

The adult type of pulmonary tuberculosis is rare in children of school age and only five patients were found to be suffering from this type. Each had definite physical and X-Ray evidence of the disease with a positive sputum. One patient was a case of tuberculous pleurisy with effusion, positive on guinea pig inoculation. Six patients showed hilar gland infection on X-Ray examination.

Nine (9) of the above children were admitted for treatment to Nab Top Sanatorium and two to the Ladywell Sanatorium. At the Nab Top Sanatorium there is an Open Air School in which all children under treatment can continue their education as soon as they are considered fit to attend by the Medical Superintendent.

2. NON-TUBERCULOUS.

Chronic non-tuberculous pulmonary disease in children is very common and is usually a sequela of an attack of pneumonia or repeated bronchitis following measles or whooping cough. It should be recognised that measles in particular is liable to cause marked alteration in the epithelium of the bronchial mucosa and the stroma of the lungs which is followed by fibrotic changes. Broncho or lobar pneumonia in children frequently fails to resolve completely and goes on to produce pulmonary fibrosis.

These children are extremely susceptible to the polluted atmosphere of industrial towns and easily take cold, resulting in recurrent attacks of bronchitis. The pulmonary fibrosis is increased and finally bronchiectasis may supervene. A considerable number of these children are referred to the Tuberculosis Medical Officers for physical and X-Ray examination of the chest because the physical signs resemble those of tuberculous lung disease. Many of these children find considerable benefit by attending an Open-Air School and we have also found that treatment at the Artificial Sunlight Clinic is useful in increasing their resistance.

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. Twelve of the beds which are in rather exposed shelters are not used during the six winter months.

At the Ladywell Sanatorium there are 72 beds set apart for the treatment of tuberculosis. Many cases are being admitted to the Ladywell Sanatorium while the temperature remains above normal; subsequently, on becoming afebrile, they are transferred to the Nab Top Sanatorium, Marple, for open-air sanatorium treatment. It has been found that many cases of quite

moderate severity do badly at an open-air sanatorium such as Nab Top, where they are almost completely in the open air, but when admitted to the Ladywell Sanatorium, in which, while there is an abundance of fresh air, the patient is not actually living and sleeping in the open air, excellent progress is made, and the patient's temperature rapidly falls. Numbers of these patients have been transferred from the Nab Top Sanatorium, where they had been in bed continually for several months with no apparent improvement, and on transfer to the Ladywell Sanatorium immediate improvement with a fall of temperature has been noticed. It is, consequently, of great value to have two Institutions of different type for the treatment of pulmonary tuberculosis.

The Ladywell Sanatorium is also largely used for the isolation of advanced cases; such isolation is undoubtedly of great value in lessening the danger of massive infection in the homes, but is detracted from by the difficulty of keeping the patients in hospital indefinitely.

The need for an X-Ray equipment at Ladywell Sanatorium has become more and more necessary and it is, therefore, proposed to remove the present installation from the Dispensary and erect the outfit at Ladywell.

Hitherto patients have had to be brought every week from the Sanatorium by ambulance to the Dispensary for X-Ray examination at great inconvenience.

It will then be possible to erect a much larger installation of the latest type at the Tuberculosis Dispensary where the bulk of the primary diagnosis of cases is carried out.

Owing to the increasing number of cases requiring treatment by Artificial Pneumothorax a certain number of beds in Ladywell Sanatorium have had to be utilised during the past few years for this type of case. The Medical Superintendent at Nab Top Sanatorium, Marple (where there is no Assistant Medical Officer), has not been able to cope with the whole number of patients requiring collapse therapy. Consequently, eighteen (18) patients have undergone this form of treatment at Ladywell Sanatorium and have progressed equally as well as those at Nab Top Sanatorium.

(b) 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 lesions. A large number of these cases were approved for Artificial Sunlight treatment and there is no doubt that this method has a very beneficial effect on the lesions, recovery being much more rapid than in cases treated by local applications only. It is, however, necessary in order to obtain the maximum benefit that the patients should attend daily for Artificial Sunlight treatment.

The number of visits paid by patients to the Skin Hospital for treatment during 1937 was two hundred and two (202), and the total number of tuberculous skin cases treated was twenty-two (22).

It was decided to treat all suitable cases at our own Artificial Sunlight Clinic and accordingly the existing accommodation was increased and an additional carbon arc lamp installed in April, 1934. In this way patients, who had previously been treated at the Manchester and Salford Hospital for Skin Diseases, now attend our own Sunlight Clinic where the treatment is carried out at a much cheaper rate than hitherto. During 1937, one hundred and thirty-five (135) patients have received treatment at the Clinic with a total number of attendances of four thousand two hundred and seventy-three (4273).

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.

It has been found that in obstinate cases of advanced disease it is sufficient to warn the patient that compulsory powers can be put in force on application to a magistrate.

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

TABLE 1.

SUMMARY OF WORK DONE AT THE TUBERCULOSIS DISPENSARY IN 1937.

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	132	94	5	7	9	18	14	6	141	112	19	13
(*b*) Doubtfully tuberculous	—	—	—	—	—	—	—	—	6	4	1	—
(*c*) Non-tuberculous	—	—	—	—	—	—	—	—	211	200	53	43
B. Contacts examined during the year—												
(*a*) Definitely tuberculous	2	7	—	—	—	—	—	1	2	7	—	1
(*b*) Doubtfully tuberculous	—	—	—	—	—	—	—	—	—	—	—	—
(*c*) Non-tuberculous	—	—	—	—	—	—	—	—	69	126	64	82
C. Cases written off Dispensary Register as—												
(*a*) Recovered	24	27	3	—	3	3	13	8	27	30	16	8
(*b*) Diagnosis not confirmed or non-tuberculous	—	—	—	—	—	—	—	—	278	328	118	125
D. Number of persons on Dispensary Register on December 31st—												
(*a*) Diagnosis completed	460	346	27	17	47	63	67	49	507	409	94	66
(*b*) Diagnosis not completed	—	—	—	—	—	—	—	—	6	4	1	—

1. No. of persons on Dispensary Register on January 1st	1169	8. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes	6112
2. No. of patients transferred from other areas and "lost sight of" cases returned	40	9. No. of—	
3. No. of patients transferred to other areas and cases "lost sight of"	169	(*a*) Specimens of sputum, &c., examined	647
4. Died during the year (Dispensary cases)	177	(*b*) X-Ray examinations made in connection with Dispensary work	2363
5. No. of attendances at Dispensary (including contacts)	5072	10. No. of "TB plus" cases on Dispensary Register on December 31st	497
6. No. of consultations with medical practitioners—		11. No. of insured persons under Domiciliary treatment on December 31st	509
(*a*) Personal	4	12. No. of "Recovered cases" restored to Dispensary Register	2
(*b*) Other	731		
7. No. of visits by Tuberculosis Officers to homes	45		

TABLE 2.

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

	Number.	Per-centage
Not Notified before death	17	9·659
Notified within three months of death	34	19·318
,, from three months to one year before death	32	18·181
,, from one year to two years before death	18	10·227
Over two years	75	42·615

Total number of deaths, 176.

Ratio of non-notified cases to total fatal cases, 17—176.

TABLE 3.

NEW CASES AND MORTALITY DURING 1937.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0	....	....	1	2	....	....	1	1
1	....	....	3	4	....	....	1	1
5	2	2	10	6	....	1	2	....
10	6	9	9	8	....	....	1	2
15	22	26	8	11	6	9	2	3
20	19	30	1	2	12	20	1	....
25	39	32	7	8	21	18	2	1
35	25	17	3	4	18	15	1	1
45	36	13	....	1	21	6	1	1
55	22	10	1	2	11	5	1	3
65 and upwards	8	6	1	1	9	4	1	1
Totals	179	145	44	49	98	78	14	14

TABLE 4.

OCCUPATIONS OF THE 324 CASES OF PULMONARY TUBERCULOSIS NOTIFIED.

MALES.

1. Joiners, House Decorators and Building Trades	5	15. Greengrocers	1
2. Carters and Hawkers	3	16. Bakers	2
3. Labourers and Navvies	24	17. Employees in Motor Trades	5
4. Butchers	1	18. Porters	2
5. Clerks and Typists	8	19. Painters	4
6. Makers of Wearing Apparel.	8	20. Warehousemen	8
7. Colliers	2	21. Newsagents	2
8. Mechanics and Engineering Workers	35	22. Scholars	6
9. Seamen	3	23. Shop Assistants	3
10. Railway Workers	3	24. Errand Boys	4
11. Printers and Bookbinding Trades	4	25. Miscellaneous Occupations	23
12. Dyers and Bleachers	4	26. No Occupation	12
13. Cotton Workers	5		
14. Electricians	2	Total	179

FEMALES.

1. Clerks and Typists	3	9. Shop Assistants	3
2. Makers of Wearing Apparel.	24	10. Boxmakers	3
3. Rubber Workers	2	11. Domestic Servants	5
4. Cotton Workers	8	12. Packers	3
5. Nurses	3	13. Miscellaneous Occupations	13
6. Housewives	58	14. No Occupations	7
7. Charwomen and Laundresses	3		
8. Scholars	10	Total	145

During the year 1937, 93 new notifications of non-pulmonary tuberculosis have been received.

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	14	4	2	—	5	1	26
10 to 20 years	9	9	6	3	8	1	36
20 to 30 ,,	4	4	2	—	—	—	10
30 to 40 ,,	3	—	1	2	—	4	10
Over 40 ,,	3	2	1	1	1	3	11
Totals	33	19	12	6	14	9	93

NAB TOP SANATORIUM.

Annual Report.

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

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

ACCOMMODATION.—From April 1st to September 30th each year there is accommodation in the Sanatorium for 120 patients (62 adult males, 42 adult females, 8 male children, and 8 female children).

From October 1st to March 31st, accommodation is slightly less, namely 108 (50 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.

In 1937, forty-one (41) patients were treated by means of Artificial Pneumothorax. Of these thirty (30) were induced at the Sanatorium and refills were carried out on the remaining cases who had been induced elsewhere or at Marple in 1936. In all, 448 refills were given during the year. The average duration of stay of these patients was 165 days, as compared with an average stay of 127 days for the whole Institution. It is of interest to note that of the 225 patients admitted during 1937, 56 were undergoing treatment for the second time at Nab Top Sanatorium, 10 for the third time, 5 for the fourth time, and in one case for a fifth course of treatment. Whilst the great majority of cases of Artificial Pneumothorax showed marked improvement, and in a few cases almost a miraculous degree of improvement, it is to be regretted that this method of treatment cannot be applied to every case, but unless suitable cases are chosen, *i.e.*, with disease confined to one lung, or at most with a slight degree of disease in the other lung, much harm would be done by an indiscriminate use of such treatment. About 10 to 15 per cent. of Artificial Pneumothorax cases develop a pleural effusion, due to an adherent pleura or to an adhesion and these cases

never do so well as the fluid-free cases. The great majority of patients having this treatment and who continue with refills at the Chest Dispensary after leaving the Sanatorium do exceedingly well and are mostly able to carry on with their ordinary occupation during the treatment, which is a great advantage to the patient. Of all the modern methods of treatment Artificial Pneumothorax has, up to the present, given the best results and is likely to remain in favour permanently as a curative method.

The X-ray plant at the Sanatorium is much in use and although rather out-of-date, is yet quite reliable for the work it has to do and gives all the results required. In 1937, X-ray photographs and over 250 screenings were taken.

Treatment by Nordalin and by Gold Salts is also in use at the Sanatorium. Last year forty-seven (47) patients were treated by these methods and whilst a few cases did quite well it cannot be said that these methods of treatment are really successful.

If the reader will refer to the section devoted to the work of the Municipal Chest Clinic in the Annual Report of the Medical Officer of Health an excellent résumé of treatment by these three methods by Dr. E. N. Ramsbottom will be found in his report of the year's work at the Chest Dispensary.

In my report of last year attention was drawn to the decrease in the number of admissions during the year and especially during the winter months when the number of in-patients was at its lowest. It is gratifying to know that during 1937 there has been a decided improvement and whereas in December, 1936, the patients numbered only 43, in 1937 they rose to 73. I have been greatly struck by the fact that a large percentage of patients admitted for treatment during 1937 were over 40 years of age. This is in direct contradiction to what has been experienced in previous years when the majority of patients were of a much younger age. I understand that this is not peculiar to this Institution alone, but has been found by Tuberculosis Officers to be general throughout the country.

I am exceedingly glad to state that the two recreation rooms mentioned in the report last year are now an established fact. The rooms which were formally opened on 27th January, 1938, are large, bright and airy and the wall space is taken up practically all the way round by windows, thus ensuring the maximum of fresh air and light. These rooms are provided with all the social amenities; card-tables, darts and indoor games are provided and the patients can write or play games with comfort. The men's recreation room is also provided with a billiard table. Each recreation room has been provided with its own wireless

installation whereby patients may listen to any programme they so desire. These rooms have already proved an inestimable boon and are greatly appreciated by the patients. The rooms are open from 3.30 to 4.30 and from 6.0 to 8.0 p.m. In inclement weather they are open from 2.0 p.m. instead of 3.30 p.m. and are heated by coal fires which tend to make them much more cheerful and home-like than if heated by pipes.

The school under the guidance of Miss Gardner is still doing good work and the sixteen children who, on an average, attend the school gain much from an educational standpoint whilst they also make physical gains. The three " R " 's are not the only things that matter. Handicraft and gardening take up a good part of the time, the latter especially in the spring and summer, and nature walks and rambles are much appreciated.

A fair proportion of the vegetables used by the Sanatorium is grown in the grounds, and in this work to some extent patients are able to help.

At present the recreations are much as in former years. Bowls and putting for the men and croquet for the women provide most of the recreation in the summer and the lawns are in constant demand for these games. In the winter months whist drives and concerts are held frequently.

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

EDUCATION.—The Medical Superintendent 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.

An open-air 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 Medical Superintendent. It may be of interest to know that during the last two years a large number of prizes have been won by the School Children for educational subjects and handicrafts in competition with children from ordinary Day Schools in the Manchester area.

Appended is a table showing the number of admissions, etc., and the number of patient-days during the year 1937 :—

TABLE A—(Nab Top Sanatorium).

SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF "PATIENT-DAYS" DURING THE YEAR 1937.

	Total Adults.		Children under 15.			Totals.		
	Males	Females	Males	Females	Both	Males	Females	Both
Number of Patients admitted prior to 1937 who remained in Sanatorium for some part of 1937	19	11	9	4	13	28	15	43
Number of "Patient-days" in 1937 for patients admitted prior to 1937 who remained in Sanatorium for some part of 1937	2683	1051	849	783	1632	3532	1834	5366
Total admissions, 1937	96	91	21	17	38	117	108	225
Total discharges and deaths, 1937	85	80	24	14	38	109	94	203
Number of "Patient-days" for persons admitted during 1937	9535	10411	1742	1891	3633	11277	12302	23579
Total number of "Patient-days" for 1937	12218	11462	2591	2674	5265	14809	14136	28945
Average number of Patients in Sanatorium each day during 1937	33·5	31·4	7·1	7·3	14·4	40·6	38·7	79·3

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

TABLE B.—PATIENTS DISCHARGED FROM NAB TOP SANATORIUM DURING 1937.

	Condition at Time of Discharge.	Duration of Residential Treatment in Institution.											
		Under 3 Months, but exceeding 28 days.			3 to 6 Months.			6 to 12 Months.			Over 12 Months.		
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Pulmonary Tuberculosis	Quiescent	1	....	....	2	1	5	1	....	....	....	....	2
	Not Quiescent	30	26	3	21	35	6	3	5	1	3	....	1
	Died	....	....	....	....	1	....	....	....	....	1	....	....
	Totals	31	26	3	23	37	11	4	5	1	4	....	3
Non-Pulmonary Tuberculosis	Quiescent	1	....	....	....	....	1	1	....	1	....	....	1
	Not Quiescent	3	2	2	1	2	4	....	1	....	....	....	....
	Died	....	....	....	....	....	....	....	....	....	....	....	....
	Totals	4	2	2	1	2	5	1	1	1	....	....	1

		Under 4 weeks.			Over 4 weeks.		
Observation for Purposes of Diagnosis	Tuberculous	1	....	4	1	1	3
	Non-Tuberculous	1	....	....	2	1	1
	Doubtful	....	1	....	....	....	....

LADYWELL SANATORIUM.

TABLE SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF "PATIENT-DAYS" FOR 1937.

TUBERCULOSIS CASES.

	Males.	Females.	Totals.
Total Number of Admissions during 1937	148	119	267
Number of Persons Admitted prior to 1937 who remained in Hospital for some part of 1937	27	27	54
Total Number of Discharges and Deaths during 1937	141	126	267
Patients in Hospital on the 31st December, 1937	34	20	54
Number of "Patient-days" for Persons Admitted during 1937	8102	7590	15692
Number of "Patient-days" (in 1937) for Persons Admitted prior to 1937 who remained in Hospital for some part of 1937	1397	2125	3522
Total Number of "Patient-days" for 1937	9499	9715	19214
Average Number of Patients in Hospital each day during 1937	26·03	26·62	52·65

LADYWELL SANATORIUM AND ISOLATION HOSPITAL.

Report for the Year 1937.

At the beginning of the year there were 241 cases remaining in Hospital; these, with the 2,180 admitted during the year, made a total of 2,421 cases under treatment. Of this total 1,998 were discharged, 151 died and 272 were in Hospital at the end of the year. The number of cases treated, 2,421, compares with 2,452 in 1936, and with 2,446 the average of the cases treated for the five years ended December 31st, 1936.

The cases treated were as follows :—

Scarlet Fever	616
Mixed Infections	25
Measles	117
Enteric Fever	8
Diphtheria	696
Erysipelas	83
Puerperal Fever	34
Tuberculosis	303
Other Diseases	539
	2,421

The number of cases admitted from Out-districts was 517, as compared with 425 in 1936. The daily average number of patients in 1937 was 229·9; the highest being 288 on January 17th and the lowest 173 on May 15th and 16th; 2,180 patients were admitted during the year, as compared with 2,226 in 1936 and with 2,194 the average for the five years ended December 31st, 1936. The following summary shows the diagnosis of the cases before admission and after observation in Hospital :—

	Diagnosis before Admission	Diagnosis after Observation
Scarlet Fever	611	555
Mixed Infections	10	24
Measles	119	117
Enteric Fever	12	8
Diphtheria	784	594
Erysipelas	95	77
Puerperal Fever	37	32
Tuberculosis	267	249
Other Diseases	245	524
	2,180	2,180

Details of the alterations in diagnosis will be found in the Tables V and VI, pages 112 and 113. A tabulation of cases classified as "Other Diseases" will be found on page 106.

Mixed Diseases.—Twenty-six of the patients discharged were found to be suffering from two distinct diseases, as follows :—

Diphtheria and Chicken Pox	3
Diphtheria and Pneumonia	1
Diphtheria and Scarlet Fever	6
Diphtheria and Whooping Cough	4
? Erysipelas and Herpes Zoster	1
Measles and Diphtheria	1
Scarlet Fever and Chicken Pox	6
Scarlet Fever and Measles	1
Scarlet Fever and Osteomyelitis	1
Scarlet Fever and Whooping Cough	1
Tonsillitis and Whooping Cough	1
	26

Deaths from Mixed Diseases.—Nil.

The average stay in Hospital for all mixed diseases cases discharged well in 1937 was 48·04 days.

Cross-Infection.—This has always been very difficult to prevent, but the position will be improved by the building of a new Cubicle Block containing 32 beds (the erection of which began early in 1938) and the cubicling of two wards in addition. On completion of these it will be possible to deal with cross-infections in a more thorough manner.

The number of patients discharged in 1937 who contracted another infection was as follows :—

Sent in as :—	Secondary Infection.	
Diphtheria	Chicken Pox	2
Diphtheria	Scarlet Fever	1
Scarlet Fever	Chicken Pox	4
Scarlet Fever	Diphtheria	3
		10

The average stay in Hospital for the 10 cross-infected cases discharged well in 1937 was 65·5 days.

The total number of cases discharged in 1937 was as follows :—

Disease.	Number.
Scarlet Fever	550
Mixed Infections	24
Measles	88
Enteric Fever	5
Diphtheria	580
Erysipelas	71
Puerperal Fever	32
Tuberculosis	158
Other Diseases	490
	1,998

The average stay in Hospital for all cases discharged well during 1937 was :— for scarlet fever 35·3 days ; for mixed infections 48·0 ; for measles 21·9 ; for enteric fever 49·8 ; for diphtheria 50·6 ; for erysipelas 22·2 ; for puerperal fever 42·7 ; for tuberculosis 79·0 ; for other diseases 21·9.

Deaths.—The total number of fatal cases in 1937 was :—

Disease.	Number.
Scarlet Fever (septic)	2
Measles	7
Enteric Fever	2
Diphtheria	17
Erysipelas	2
Puerperal Fever	2
Tuberculosis	91
Broncho-pneumonia	5
Cancer (lungs)	2
Cerebro-spinal Fever	3
Encephalitis	1
Meningococcal Meningitis	1
Pemphigus (acute)	2
Premature Baby and Marasmus	1
Septicæmia (staphylococcal)	1
Tuberculous Meningitis	1
Whooping Cough	11
	151

The average stay in Hospital for all fatal cases, excepting advanced tuberculosis was 10·0 days. The average stay for advanced tuberculosis cases was 86·3 days.

The daily average number of patients in Hospital in 1937 was 229·9, as compared with 238·0 in 1936, and with 245·1 the daily average for the five years ended December 31st, 1936.

There were remaining in Hospital on December 31st, 1937, 272 cases, as compared with 241 last year. The cases remaining on 31st December, 1937, were :—scarlet fever 65 ; measles 22 ; diphtheria 99 ; enteric fever 1 ; erysipelas 10 ; tuberculosis 54 ; and other diseases 21.

The daily average number of Out-district patients was 54·3. Ninety-two of the cases remaining were from Out-districts, as compared with 78 the year before.

DETAILED INFORMATION ABOUT SOME DISEASES

Scarlet Fever

The number of cases admitted was 555, as against 573 in 1936. 611 cases were certified as having scarlet fever, but in 73 cases the diagnosis had to be revised. In addition, 3 cases admitted as mixed infections, 1 as measles and 13 as diphtheria proved to be scarlet fever. 550 cases were discharged well during the year, as against 561 last year. There were 2 deaths from this disease.

Details of the 2 fatal cases of scarlet fever :—

Male aged 4 years, Septic Scarlet Fever, with abscesses neck (R. and L.) incised.

Male aged 4 months, Scarlet Fever died in convulsions 30 hours after admission.

The type of the disease was mild. Scarlatinal antitoxin was given intramuscularly in 5-10 cc. doses to all but the very mildest cases. The more important complications were as follows :—

	Cases Affected.	Percentage of Discharged Cases.
Adenitis and Abscess (3)	24	4·36
Rhinitis	6	1·09
Otorrhœa and Otitis Media (10)	25	4·54
Relapse	3	·54

Other complications were as follows :—Abscess 3 ; albuminuria 1 ; bronchitis 3 ; dermatitis 3 ; furunculosis 1 ; herpes zoster 2 ; impetigo 1 ; lymphangitis 1 ; nephritis 1 ; paronychia 1 ; pyuria 1 ; rheumatic carditis (o.a.) 1 ; tonsillitis 1 ; whitlow 4.

Seven cases contracted another infection whilst in Hospital :—chicken pox 4 ; diphtheria 3.

The average stay in Hospital for all cases discharged well was 35·3 days, and for the 1 fatal case 15 days.

The following table indicates the period of residence of the 543 cases of scarlet fever uncomplicated with another disease who were discharged well in 1937 :—

Week of Discharge	Number of days in Residence when Discharged.							Number of cases in each Day.							No. of Cases in each week.
Under fourth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Fourth	22	23	24	25	26	27	28	....	1	....	3	7	33	86	130
Fifth	29	30	31	32	33	34	35	71	75	53	46	38	29	5	317
Sixth	36	37	38	39	40	41	42	6	7	10	4	7	3	3	40
Seventh	43	44	45	46	47	48	49	7	5	2	5	....	...	3	22
Eighth	50	51	52	53	54	55	56	1	4	1	4	1	1	....	12
Ninth	57	58	59	60	61	62	63	....	1	2	1	....	....	2	6
Tenth	64	65	66	67	68	69	70	2	1	....	1	1	1	....	6
Over Tenth	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7

Total Number of Cases 543

RETURN CASES.—Information about these is usually obtainable from Salford only. 4 such cases were reported. This gives a return rate of ·90 per cent. for Salford.

Schick Test in Scarlet Fever and Other Diseases.

The following table shows the age distribution of patients suffering from scarlet fever and other diseases who underwent the Schick test :—

	Age Periods.												Total
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	
Positive	....	....	1	2	....	1	2	2	2	....	1	7	18
Negative	....	....	3	3	1	3	1	9	5	8	7	28	68
Totals	....	....	4	5	1	4	3	11	7	8	8	35	86

Immunised : 3 doses 55, 2 doses 49, 1 dose 5.

Diphtheria.

784 cases were admitted certified as diphtheria, but in 199 cases the diagnosis had to be revised; in addition 3 cases admitted as scarlet fever, 1 as measles, 1 as enteric fever, and 4 other diseases proved to be diphtheria. The disease continued to show a fairly severe type as shown by the large proportion of severe cases. In a large number (148) of the most severe cases part of the antitoxin was given intravenously, in many instances repeatedly.

There were 17 deaths from this disease.

Type of Disease.

Of the discharged cases, 467 were faucial, 8 laryngeal, 12 nasal, 5 faucial and laryngeal, 3 faucial and nasal. There were also 102 cases of bacteriological diphtheria.

Faucial Diphtheria.

In 452 cases, including 15 fatal ones, the throat was affected.

Mild.—191 cases were mild, the deposit on the throat being localised to the tonsils with little or no toxæmia. The average amount of serum given was 13,881 units to the discharged cases. 17 cases had antitoxin before admission.

Complications and Sequelae.—Albuminuria 1; blepharitis 1; coryza 1; impetigo 1; otitis media 2; palatal paralysis 4; rhinitis 3; scabies (o.a.) 3; tonsillitis 4.

Moderate.—In 114 cases the membrane was more extensive and was accompanied by toxæmia. The average amount of serum given was 31,698 units. 6 cases received antitoxin before admission.

Complications and Sequelae.—Albuminuria (slight) 1; epilepsy (o.a.) 1; palatal paralysis 5; palatal paralysis, cardiac irregularity 1; palatal paresis 3; paronychia 1; rhinitis 1; scabies (o.a.) 2; seborrhœic dermatitis 1; serum rash 1; tonsillitis 2.

One case contracted Chicken Pox and one Scarlet Fever.

Severe.—147 cases, including 15 fatal ones, were of the severe type. The average amount of serum given for the 132 cases discharged was 78,873 units, and for the 15 fatal cases 92,533 units. 9 of the discharged cases and 3 of the fatal cases received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Abscess (buttock) 1; albuminuria 4; alveolar abscess 1; cervical adenitis and paralysis of accommodation 1; conjunctivitis, tonsillitis and rt. otorrhœa 1; erysipelas 1; otorrhœa and blepharitis 1; otitis media 4; otitis media and bilateral conjunctivitis 1; palatal paralysis 45; paralysis of accommodation 2; paresis of extremities, albuminuria 1; paronychia 1; pharyngeal paralysis 4; pharyngeal paralysis, abscess (thigh) incised, alveolar abscess (incised) 1; pharyngeal and diaphragmatic paralysis, paralysis of accommodation 1; rt. otorrhœa and cervical adenitis 1; serum rash 2; strasbismus 1; strasbismus, otitis media 1; tonsillitis 2.

One case contracted Chicken Pox.

COMPLICATIONS OF FATAL CASES.—Anæmia (o.a.) 1; circulatory failure 10; palatal, pharyngeal, diaphragmatic paralysis 1.

Laryngeal Diphtheria.

In 8 cases the larynx was involved, all recovered.

MILD.—In 6 cases the laryngeal obstruction was slight. The average amount of serum given was 20,000 units.

MODERATE.—In 2 cases the laryngeal obstruction was moderately severe. The average amount of serum given was 40,000 units.

COMPLICATIONS AND SEQUELAE.—Nil.

Faucial and Laryngeal Diphtheria.

In 4 cases, including 1 fatal case, the fauces and larynx were involved.

MODERATE.—The 3 moderate cases received 42,666 units of antitoxin.

COMPLICATIONS AND SEQUELAE.—Nil.

SEVERE.—1 severe case received 72,000 units of antitoxin, was in Hospital 52 days, and recovered after tracheotomy. The other severe case received 40,000 units of antitoxin but ended fatally.

COMPLICATIONS AND SEQUELAE.—Nil.

Nasal Diphtheria.

There were 12 cases of this type.

MILD.—The average amount of serum given to the 8 cases was 9,143 units; 1 case received antitoxin before admission.

COMPLICATIONS AND SEQUELAE.—Nil.

MODERATE.—The 4 moderate cases received an average of 27,000 units of serum.

COMPLICATIONS AND SEQUELAE.—Nil.

Faucial and Nasal Diphtheria.

There were 3 cases of this type of diphtheria.

MILD.—The average amount of serum given to the 2 cases was 14,000 units.

COMPLICATIONS AND SEQUELAE.—Nil.

SEVERE.—The 1 severe case, which proved fatal, received 32,000 units of antitoxin, and had 4,000 units of antitoxin before admission.

COMPLICATION OF FATAL CASE.—Circulatory paralysis.

The following table summarises the sites of membrane in the total clinical cases discharged :—

Sites of Membrane.	Mild.		Moderate.		Severe.		Total.	
	Recovered	Died	Recovered	Died	Recovered	Died	Recovered	Died
Faucial	191	....	114	....	147	15	452	15
Laryngeal	6	....	2	....	....	....	8	....
Faucial and Laryngeal	....	....	3	....	1	1	4	1
Nasal	8	....	4	....	....	....	12	....
Faucial and Nasal	2	....	....	....	....	1	2	1
Totals	207	....	123	....	148	17	478	17

DIPHTHERITIC PARALYSIS.—46 or 9·6 per cent. of the clinical cases discharged had paralysis in one form or another whilst in Hospital.

COMPLICATIONS.—110 or 23·0 per cent. of the recovered cases developed one or more complications. This figure does not include the serum rashes.

TRACHEOTOMY was performed in 1 instance, recovery following.

FATALITY RATE.—17 or 2·49 per cent. of the clinical cases admitted proved fatal.

ANTITOXIN.—27 or 5·6 per cent. of the cases discharged and 3 of the fatal cases had antitoxin before admission to the Hospital. The average amount of serum given in Hospital in the recovered cases was 32,410 units and 85,868 units in the fatal cases. In addition, 148 cases, including 14 fatal cases, had part of the serum injected intravenously.

CROSS-INFECTION.—3 cases contracted other infection whilst in Hospital :— Chicken pox 2 ; scarlet fever 1.

AVERAGE STAY.—The average stay in Hospital for all cases discharged well was 50·6 days, and for the fatal cases 10·4 days.

Dick Test in Diphtheria.

The Dick test was performed in 434 cases of diphtheria. 175 of these were positive and 259 negative. The positive reactors were inoculated with scarlet fever prophylactic at intervals of 4 days (500, 2,000, 6,000, 15,000 skin test doses).

	Age Periods.												
	Under 1 Yr.	1	2	3	4	5	6	7	8	9	10	Over 10	Totals
Positive....	1	....	9	20	18	18	20	15	17	12	11	34	175
Negative .	4	1	15	13	15	30	23	19	18	15	15	91	259
Totals...	5	1	24	33	33	48	43	34	35	27	26	125	434

Enteric Fever.

Twelve cases were certified as having enteric fever, but 1 case proved to be diphtheria, 2 cases enteritis, and 1 case broncho-pneumonia.

The average stay in Hospital for all cases discharged well was 49·8 days, and for the 2 fatal cases 17·5 days.

COMPLICATIONS OF THE DISCHARGED CASES.—Hæmorrhage 1.
COMPLICATIONS OF THE FATAL CASES :—

Man aged 31, broncho-pneumonia (o.a.) and abscess (lung).

Woman aged 32, broncho-pneumonia and empyema.

Puerperal Fever.

Thirty-seven cases were admitted, but in 6 cases the diagnosis was revised, proving to be :—influenza 1 ; pneumonia 1 ; pyelitis 1 ; sepsis (face) 1 ; septic abortion 1 ; septic miscarriage 1.

There were 2 deaths from this disease.

The 32 discharged cases were classified as follows :—Puerperal fever 15 ; puerperal sepsis 16 ; puerperal septicæmia 1 ; and the 2 fatal cases as puerperal septicæmia.

The patient who recovered from septicæmia showed a good growth of hæmolytic streptococci from the blood on two occasions. She was given 150 cc. of Scarlatinal Antitoxin in two doses intravenously and Prontosil intramuscularly and by mouth. Complications were double phlegmasia, abscesses in one breast and pelvic cellulitis. Complete recovery was made after three months and ten days in Hospital.

The average stay in Hospital for the discharged cases was 42·7 days, and for the 2 fatal cases 6 days.

Complications in Discharged Cases.—Anæmia 1 ; bronchitis 2 ; mammary abscess (incision) 1 ; pelvic cellulitis 2 ; phlegmasia alba dolens 3 ; pyelitis 1.

There were 25 babies admitted with their mothers.

Erysipelas.

Ninety-five cases were admitted, but in 18 instances the diagnosis was altered.

Two cases terminated fatally.

The average stay in Hospital for the discharged cases was 22·2 days and for the 2 fatal cases 12·5 days.

Complications of the Discharged Cases.—Cellulitis 2 ; chronic dermatitis face 1 ; chronic rodent ulcer (scalp) o.a. 1 ; corneal ulcer, abscess (incision) 1 ; cellulitis (scalp) incision 1 ; thrombosis (leg) 1 ; tonsillitis 1 ; ulceration left cornea (o.a.) 1.

Complications of the Fatal Cases :—

A man aged 25 years, chronic nephritis, uræmia, pleurisy.

A woman aged 45 years, acute nephritis.

Measles.

Measles was prevalent during November and December, when 70 cases were admitted out of the year's total of 117.

119 cases were certified as measles, but in 12 instances the diagnosis had to be revised; in addition, 1 case sent in as scarlet fever, 3 as mixed infections, 2 as diphtheria, and 4 other diseases proved to be measles.

There were 7 deaths from this disease.

The average stay in Hospital for the discharged cases was 21·9 days, and for fatal cases 8·29 days.

Complications of the Discharged Cases:—Broncho-pneumonia 5; broncho-pneumonia, abscess (thigh) incision 1; broncho-pneumonia, enteritis 1; broncho-pneumonia, otorrhœa 1; impetigo 2; impetigo, otorrhœa, abscess incised 1; laryngitis, otorrhœa 1; marasmus 1; otorrhœa 1; otorrhœa, erysipelas (leg) 1; otitis media, impetigo 1; pyelitis 1; whitlow 1.

Complications of Fatal Cases:—Broncho-pneumonia 7; broncho-pneumonia, otorrhœa 1.

Staff.—On December 31st, 1937, the resident staff of the Sanatorium and Isolation Hospital consisted of the following:—

Medical Superintendent	1
Assistant Medical Officers	2
City Bacteriologist	1
Matron	1
Assistant Matron and Home Sister	1
Stores Sister	1
Sister Tutor	1
Night Sister	1
Ward Sisters	9
Staff Nurses	16
Assistant Nurses	5
Probationers	32
Cook	1
Assistant Cook	1
Domestics	35
Laundress	1
Lodge Porters	2
Total Resident Staff	111

The Non-Resident Staff consisted of :—

Visiting Aural Surgeon	1
Tuberculosis Officers	2
Clerk	1
Junior Clerks	2
Engineer	1
Plumber	1
Joiner	1
Firemen	3
Gardener	1
Assistant Gardeners	2
Porters	6
Seamstresses	2
Cleaners	4
Total Non-Resident Staff	27

HEALTH OF STAFF.—The following were the illnesses :—Abdominal pains 6 ; abscess (axillæ) 2 ; bleeding after teeth extraction 1 ; chest pains 1 ; colds 11 ; diphtheria 2 ; ear ache 3 ; gastro-enteritis 1 ; influenza 13 ; laryngitis 1 ; lumber pains 1 ; lysol burns 2 ; pleurisy 1 ; rheumatism 2 ; scalds 2 ; septic fingers 1 ; septic foot 1 ; septic lips 1 ; sore feet 1 ; sore throat 22 ; stiffness of wrist 1 ; varicose veins (legs) 1 ; whooping cough, 1.

The staff lost 682 working days through illness.

The staff, both nurses and maids, are tested by the Schick and Dick Tests, and, if positive, immunised against diphtheria and scarlet fever.

Thirty-three were Schick tested and 13 were positive—these were inoculated with three doses of Toxoid at fortnightly intervals, and on retest 1 proved to be negative and 1 faintly positive, the remaining 11 left.

Thirty-three were tested by the Dick test, 6 being positive—these were inoculated with 500, 2,000, 6,000, 15,000 skin test doses of Scarlatinal toxin, and retest a month later proved 2 to be negative, and 1 to be very faintly positive, the remaining 3 left.

One nurse was Schick positive on joining ; after three doses of Diphtheria prophylactic but before the final Schick test she contracted diphtheria (faucial) in a moderate form, and made a complete recovery in 37 days.

WORK OF THE TRAINING SCHOOL.—During the year 8 nurses passed the Preliminary, and 12 the Final State examinations. The usual course of lectures was given by the Medical Staff and the Sister Tutor.

Operating Theatre.

The number of operations in the theatre was 8, all requiring general anæsthesia ; minor operations are not included ; numerous incisions, aspirations, etc., were done in the wards, mostly requiring local anæsthesia only.

Particulars of the operations in the theatre are :—

Disease.	Complications.	Operation.	Recov.	Died.	Total.
Diphtheria	—	Tonsillectomy and adenoidectomy	6	—	6
Diphtheria and Scarlet Fever	Broncho-pneumonia, chicken pox, bilateral otitis media ..	Schwartze Mastoid	1	—	1
Scarlet Fever.....	Otitis media mastoiditis	Schwartze Mastoid	1	—	1
			8	—	8

Bed Isolation Ward.

This ward contains 16 beds. Each patient is nursed separately from the others and nothing which has been in contact with the patient or anything from his bed is allowed to touch any other patient or bed unless it has been sterilised. This sterilisation is done by steam if possible, or by disinfection with liquid disinfectants. Nurses have to wear separate gowns, and scrub their hands every time they attend a patient.

Free ventilation is also insisted upon.

All diseases, except early Measles or Chicken Pox, were admitted. The ward was busy all through the year, the demand for isolation being always great.

260 cases were admitted during the year, as against 244 in 1936.

The following is a table of the diseases :—

Sent in as :—		Diagnosis after observation :—	
Scarlet Fever	58	Scarlet Fever.....	22
		Coryza.....	1
		Dermatitis	1
		Diphtheria	1
		Erythema	8

Sent in as :—		Diagnosis after observation :—	
Scarlet Fever		Influenza	4
		Observation	1
		Pneumonia	2
		Rubella	4
		Scarlet Fever and Diphtheria	2
		Scarlet Fever and Whooping Cough	1
		Septic Rash	1
		Tonsillitis	9
		Urticaria	1
Diphtheria	119	Diphtheria	59
		Bronchitis	2
		Coryza	1
		Diphtheria and Chicken Pox	1
		Diphtheria and Scabies	1
		Diphtheria and Scarlet Fever	1
		Empyema (chest)	1
		Erysipelas	1
		Gastro-enteritis	1
		Glandular Fever	1
		Laryngitis	2
		Measles	1
		Mother (with baby)	1
		Peritonsillar abscess	1
		Scarlet Fever	7
		Septic Scarlet Fever	1
		Septic throat	1
		Sore throat	2
		Stomatitis	2
		Sinusitis	1
		Tonsillitis	31
Erysipelas	11	Erysipelas	7
		Erysipelas and Herpes Zoster	1
		Impetiginous rash	1
		Impetigo	1
		Pemphigus	1
Whooping Cough	10	Whooping Cough	7
		Bronchitis	2
		Whooping Cough and Diphtheria	1
Mumps	3	Mumps	1
		Adenitis	1
		Broncho-pneumonia	1
Measles	17	Measles	15
		Abscess (neck)	1
		Influenza	1
Enteric Fever	8	Enteric Fever	6
		Broncho-pneumonia	1
		Enteritis	1
Chicken Pox	10	Chicken Pox	4
		Chicken Pox and Impetigo	1
		Dermatitis	2
		Erythema Nodosum	1
		Impetigo	2
Cerebro Spinal Fever	9	Cerebro Spinal Fever	7
		Meningismus	1
		Tuberculous Meningitis	1
Meningitis	6	Cerebro Spinal Fever	3
		Facial Paralysis	1
		Muscular Rheumatism	1
		Otitis media	1

Sent in as :—		Diagnosis after observation :—	
Scarlet Fever and Pneumonia	1	Bronchitis	1
Septic throat	1	Tonsillitis	1
Septicæmia	1	Drug rash	1
Encephalitis Lethargica	1	Encephalitis Lethargica	1
Enteritis	1	Enteritis	1
Diphtheria and Scarlet Fever	1	Tonsillitis	1
Continued Fever and Para-Typhoid	1	Diphtheria	1
Dysentery	1	Dysentery	1
Retropharyngeal abscess	1	Retropharyngeal abscess	1
	260		260

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

Abdominal pain	1	Mumps	1
Abscess	3	Muscular rheumatism	1
Abscess (nose)	1	Observation	19
Acute pharyngitis	1	Ophthalmia Neonatorum	1
Adenitis	1	Otitis media	4
Anthrax	1	Pemphigus	2
Backache	1	Pemphigus vulgaris	1
Blepharitis	1	Peritonsillar abscess	7
Bronchitis	13	Pneumonia	7
Broncho-pneumonia	3	Premature baby and marasmus	1
Carbuncle	2	Proctitis	1
Carcinoma (lungs)	2	Pyelitis	2
Cellulitis	2	Retropharyngeal abscess	1
Cerebral abscess	1	Rheumatism	2
Cerebro Spinal Fever	15	Rhinitis	4
Chicken Pox	28	Rubella	8
Colitis	4	Scabies	4
Coryza	2	Scald (right foot)	1
Croup	1	Scald (right leg)	2
Dermatitis	4	Sciatica	1
Drug rash	1	Sepsis (face)	1
Dysentery	1	Septic abortion	1
Eczema	1	Septic bunion (foot)	2
Empyema	1	Septic finger	1
Encephalitis	1	Septic miscarriage	1
Enteritis	4	Septic rash	2
Erythema	24	Septic skin	1
Erythema nodosum	1	Septic sore	1
Facial paralysis	1	Septic throat	2
Gastritis	2	Septicæmia (staphylococcal)	1
Gastro-enteritis	2	Sinusitis	3
Glandular Fever	1	Sore throat	5
Head injury	1	Stomatitis	4
Herpes	2	Sudaminal rash	1
Herpes Ophthalmicus	1	Tonsillitis	151
Herpes Zoster	1	T.B. Meningitis	1
Impetiginous rash	1	Urticaria	2
Impetigo	6	Vincent's angina	6
Influenza	19	Whooping cough	78
Laryngitis	5	With mother	25
Meningismus	1		
Mother (with baby)	1		524

TABLE I.

STATEMENT OF THE NUMBER OF PATIENTS UNDER TREATMENT IN LADYWELL SANATORIUM AND ISOLATION HOSPITAL IN 1937.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
1.—PATIENTS REMAINING IN HOSPITAL ON DECEMBER 31ST, 1936, AFFECTED WITH :					
Scarlet Fever	12	18	10	22	62
Mixed Infections	....	....	....	....	....
Measles	....	....	....	....	....
Enteric Fever	....	....	....	....	....
Diphtheria	17	33	15	37	102
Erysipelas	....	3	....	3	6
Puerperal Fever	....	....	....	2	2
Tuberculosis	....	27	....	27	54
Other Diseases	5	3	3	4	15
Totals	34	84	28	95	241
2.—ADMITTED DURING THE YEAR ENDED DECEMBER 31ST, 1937, AFFECTED WITH :					
Scarlet Fever	125	137	112	181	555
Mixed Infections	6	5	9	4	24
Measles	55	8	48	6	117
Enteric Fever	....	4	....	4	8
Diphtheria	123	157	85	229	594
Erysipelas	1	42	2	32	77
Puerperal Fever	....	....	....	32	32
Tuberculosis	....	139	....	110	249
Other Diseases	127	101	115	181	524
Totals	437	593	371	779	2180
Totals under treatment, 1937	471	677	399	874	2421
3.—OF THE ABOVE THERE WERE DISCHARGED RECOVERED FROM :					
Scarlet Fever	118	138	109	185	550
Mixed Infections	6	5	9	4	24
Measles	43	3	39	3	88
Enteric Fever	....	2	....	3	5
Diphtheria	116	154	82	228	580
Erysipelas	1	39	2	29	71
Puerperal Fever	....	....	....	32	32
Tuberculosis	....	77	....	81	158
Other Diseases	111	97	103	179	490
Totals	395	515	344	744	1998

TABLE I.—continued.

STATEMENT OF NUMBER OF PATIENTS.—continued.

	Males.		Females.		Totals.
	Under 5 years.	Over 5 years.	Under 5 years.	Over 5 years.	
4.—DIED FROM :					
Scarlet Fever	2	....	....	....	2
Mixed Infections	....	....	....	....	....
Measles	4	....	3	....	7
Enteric Fever	....	1	....	1	2
Diphtheria	5	4	4	4	17
Erysipelas	....	1	....	1	2
Puerperal Fever	....	....	....	2	2
Tuberculosis	....	55	....	36	91
Other Diseases	10	7	8	3	28
Totals	21	68	15	47	151
5.—REMAINING IN HOSPITAL ON DECEMBER 31ST, 1937, AFFECTED WITH :					
Scarlet Fever	17	17	13	18	65
Mixed Infections	....	....	....	....	....
Measles	8	5	6	3	22
Enteric Fever	....	1	....	....	1
Diphtheria	19	32	14	34	99
Erysipelas	....	5	....	5	10
Puerperal Fever	....	....	....	....	....
Tuberculosis	....	34	....	20	54
Other Diseases	11	....	7	3	21
Totals	55	94	40	83	272

TABLE II.

MONTHLY STATEMENT OF PATIENTS FOR THE YEAR ENDED DECEMBER 31ST, 1937; TOGETHER WITH A COMPARISON WITH THE YEAR 1936, AND WITH THE MEAN OF THE FIVE (5) AND FIFTY-FOUR (54) YEARS ENDED DECEMBER 31ST, 1936.

Month.	Admissions, 1937.	Admissions, 1936.	Mean of Admissions, 5 years, 1932-1936.	Mean of Admissions, 54 years, 1883-1936.	Daily Average No. of Patients in Hospital, 1937.	Daily Average No. of Patients in Hospital, 1936.	Mean of Daily Average No. of Patients in Hospital, 5 years, 1932-1936.	Mean of Daily Average No. of Patients in Hospital, 54 years, 1883-1936.
January.....	193	230	202·0	127·3	269·4	246·1	256·5	156·7
February.....	172	232	192·4	107·3	266·0	249·4	266·6	150·4
March.....	163	220	196·2	114·0	243·3	258·9	263·3	188·8
April.....	187	141	173·4	106·0	235·4	224·5	252·7	135·6
May.....	133	163	174·4	110·0	194·2	213·6	238·5	132·9
June.....	176	175	156·4	107·0	199·7	206·7	219·2	127·3
July.....	169	179	156·6	115·0	202·3	241·3	220·3	135·1
August.....	147	179	150·8	112·5	191·6	230·2	210·1	136·6
September.....	179	161	176·6	135·2	206·6	225·0	218·9	150·5
October.....	196	189	225·2	160·3	230·0	240·4	253·9	171·8
November.....	236	185	209·0	148·4	260·4	274·9	280·2	184·0
December.....	229	172	181·6	131·0	259·8	245·7	263·5	171·7
Totals.....	2180	2226	....	....	....	....	....	....
M'thly Averages	181·8	185·5	182·9	122·8	229·9	238·0	245·3	153·4

TABLE III.

SHOWING THE NUMBER OF ADMISSIONS OF THE PRINCIPAL INFECTIOUS DISEASES FOR THE YEAR ENDED DECEMBER 31ST, 1937; ALSO A COMPARISON WITH THE YEAR 1936, AND WITH THE MEAN OF THE FIVE YEARS AND FIFTY-FOUR YEARS ENDED DECEMBER 31ST, 1936.

Month.	Scarlet Fever.	Mixed Infections.	Measles.	Enteric Fever.	Typhus Fever.	Diphtheria.	Erysipelas.	Puerperal Fever.	Smallpox.	Tuberculosis.	Other Diseases.	Totals.
January	51	....	....	1	....	67	5	3	....	29	37	193
February	36	1	....	1	....	58	4	....	....	21	51	172
March	54	1	....	....	....	33	7	1	....	19	48	163
April	43	1	3	1	....	58	4	4	....	22	51	187
May	41	2	2	....	....	27	3	2	....	17	39	133
June	37	3	5	....	....	48	7	5	....	22	49	176
July	37	2	14	....	....	47	4	3	....	22	40	169
August	33	3	12	3	....	33	4	4	....	17	38	147
September	54	2	3	....	....	45	4	3	....	27	41	179
October	60	2	8	1	....	53	8	5	....	21	38	196
November	56	4	41	1	....	54	11	2	....	18	49	236
December	53	3	29	....	....	71	16	....	....	14	43	229
Totals, 1937	555	24	117	8	....	594	77	32	....	249	524	2180
Totals, 1936	573	35	186	6	....	630	58	11	....	287	440	2226
Increase, 1937	....	....	....	2	....	....	19	21	....	....	84	126
Decrease, 1937	18	11	69	....	....	36	....	....	....	38	....	172
Mean of 5 years 1932–1936	578·2	39·8	101·8	8·0	....	754·6	65·5	22·0	....	269·0	355·6	2194·4
Mean of 54 years— 1883–1936	795·7	8·7	13·9	102·4	3·9	276·2	37·7	12·4	11·1	79·2	152·8	1494·3

TABLE IV.

ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1936.	No. of Cases Treated.	No. of Cases Admitted.	No. of Cases Discharged.	No. of Deaths.	No. of Cases Remaining on Dec. 31st, 1937.
Scarlet Fever.....	62	617	555	550	2	65
Mixed Infections.	....	24	24	24	....	....
Measles	....	117	117	88	7	22
Enteric Fever	....	8	8	5	2	1
Diphtheria.....	102	696	594	580	17	99
Erysipelas.....	6	83	77	71	2	10
Puerperal Fever	2	34	32	32	2	....
Tuberculosis.....	54	303	249	158	91	54
Other Diseases....	15	539	524	490	28	21
Totals.....	241	*2421	†2180	1998	151	‡272
Corresponding figures, 1936	2452		2226	2028	183	241
Average, five years 1932-36	2446		2194·4	2049·2	146·2	250·4

CASES FROM "OUT-DISTRICTS."

1937	*595	†517	‡92
Corresponding figures, 1936	477	425	78

TABLE V.—Diseases Admitted.

HOSPITAL. DIAGNOSIS.

CASES SENT IN AS	Total sent in.	Scarlet fever.	Mixed infections.	Measles.	Enteric fever.	Diphtheria.	Erysipelas.	Puerperal fever.	Tuberculosis.
Scarlet Fever	611	538	4	1		3			
Mixed Infections	10	3	1	3					
Measles	119	1	2	107		1			
Enteric Fever	12				8	1			
Diphtheria	784	13	12	2		585			
Erysipelas	93	1					77		
Puerperal Fever	37							31	
Tuberculosis	267	1							249
Other Diseases	245	3		4		4	1	1	
Abdominal pain.	1								
Abscess.	3	2							
Abscess (nose)	1								
Acute pharyngitis	1						1		
Adenitis	1	1							
Anthrax	1	1							
Backache	1								
Blepharitis	1						1		
Bronchitis.	13	4	1			2			
Broncho-pneumonia.	3	1		1	1				
Carbuncle.	2	1					1		
Carcinoma (lungs).	2			2					
Cellulitis.	2						2		
Cerebral abscess.	1	1							
Cerebro Spinal fever.	15	15							
Chicken pox.	28	25				1			
Colitis.	4	4							
Coryza.	2					1			
Croup.	1	1							
Dermatitis.	4	2					1		
Drug rash.	1	1							
Dysentery.	1	1							
Eczema.	1								
Empyema	1					1			
Encephalitis.	1	1							
Enteritis.	4	2			2				
Erythema	26	1	2						
Erythema nodosum.	1	1							
Facial paralysis	1	1							
Gastritis.	2	2							
Gastro-enteritis.	2	2				1			
Glandular Fever.	1	1				1			
Head injury.	1	1							
Herpes.	2	1					2		
Herpes Ophthalmicus	1	1					1		
Herpes Zoster.	1	1					1		
Impetiginous rash.	1	1					1		
Impetigo.	6	4	2				2		
Influenza.	19	5				1		1	
Laryngitis.	5	1	1			4			
Meningismus.	1	1							
Mother (with baby)	1					1			
Mumps	1	1							
Muscular Rheumatism.	1	1							
Observation.	19	2				6	1		10
Ophthalmia neonatorum.	1	1							
Otitis Media.	4	4					1		
Pemphigus.	2	1	1				1		
Pemphigus vulgaris.	1	1							
Peritonsillar abscess.	7	3				2			
Pneumonia.	7	3				1		1	
Premature baby and marasmus.	1								
Pyelitis.	2	1						1	
Proctitis.	1	1							
Retropharyngeal abscess.	1	1							
Rheumatism.	2	1				1			
Rhinitis.	4	1				3			
Rubella.	5	2							
Scabies.	4	1			3				
Scald (right foot).	1	1							
Scald (right leg).	2	2							
Sciatica.	1	1							
Sepsis (face).	1							1	
Septic abortion.	1							1	
Septic bunion (foot).	2	2							
Septic finger.	1	1							
Septic miscarriage.	1							1	
Septic rash.	2	1							
Septic skin.	1						1		
Septic sore	1	1							
Septic throat.	2					2			
Septicaemia (staphylococcal)	1								
Sinusitis.	1	1							
Sore throat.	3	1				1	1		
Stomatitis.	4	1			1	2			
Sudaminal rash.	1	1							
Tonsillitis.	135	7	2			126			
T.B. Meningitis	1	1							
Urticaria.	2	2							
Vincent's angina.	6	1				5			
Whooping cough.	28	26							
With mother.	25								

TABLE VI.

Sent in as :—		After Observation :—	
Abdominal pain	1	Abdominal pain	1
Abscess	3	Abscess	2
		Septic Finger	1
Anthrax	1	Anthrax	1
Backache	1	Backache	1
Broncho-pneumonia	3	Bronchitis	1
		Measles	2
Burn (right leg)	1	Burn (right leg)	1
Cancrum Oris	1	Stomatitis	1
Carbuncle	1	Carbuncle	1
Cerebro Spinal Fever	13	Cerebro Spinal Fever	9
		Tuberculous Meningitis	1
		Head injury	1
		Meningismus	1
		Muscular Rheumatism	1
Chicken Pox	34	Chicken Pox	26
		Chicken Pox and Impetigo	1
		Dermatitis	2
		Erythema nodosum	1
		Impetigo	2
		Scabies	1
		Septicæmia (staphylococcal)	1
Coryza	4	Bronchitis	1
		Influenza	2
		Sinusitis	1
Croup	1	Croup	1
Dysentery	6	Dysentery	1
		Colitis	4
		Proctitis	1
Encephalitis Lethargica	2	Encephalitis Lethargica	1
		Cerebral abscess	1
Enteritis	1	Enteritis	1
Gastritis	1	Gastritis	1
Impetigo	1	Impetigo	1
Infectious rash	1	Erythema	1
Influenza	9	Influenza	8
		Pleurisy	1
Membranous Croup	2	Diphtheria	1
		Whooping Cough	1
Meningitis	9	Cerebro Spinal Fever	6
		Facial paralysis	1
		Measles	1
		Otitis media suppurativa	1
Mumps	3	Mumps	1
		Adenitis	1
		Broncho-pneumonia	1
Observation	3	Diphtheria	2
		Gastritis	1
Ophthalmia Neonatorum	1	Ophthalmia Neonatorum	1
Pemphigus	1	Acute Pemphigus	1
Pertussis	1	Measles	1
Pneumonia	2	Broncho-pneumonia	1
		Whooping Cough	1
Retropharyngeal abscess	1	Retropharyngeal abscess	1
Rheumatism	1	Rheumatism	1
Right otorrhœa	3	Otitis media	3

TABLE VI.—continued.

Sent in as :—		After Observation :—	
Rubella	2	Rubella	1
		Erythema	1
Scalded foot	2	Scalded foot	2
Sciatica	1	Sciatica	1
Septic heel	2	Septic heel	2
Septicæmia	3	Drug rash	1
		Septic rash	1
		Pyelitis	1
Smallpox	1	Pemphigus vulgaris	1
Sore throat	12	Sore throat	1
		Diphtheria	1
		Influenza	3
		Tonsillitis	6
		Vincent's angina	1
Tonsillitis	1	Tonsillitis	1
Ulcer (arm)	1	Septic sore (forearm)	1
Whooping Cough	80	Whooping Cough	75
		Bronchitis	2
		Laryngitis	1
		Whooping Cough and Diphtheria	2
With baby	1	Puerperal Sepsis	1
With mother	27	With mother	25
		Premature baby Marasmus	1
		Whooping Cough	1
	245		245

Immunisation against Diphtheria.

The following statistics relate to the work in connection with immunisation carried out in the Department during the whole of 1937.

PERSONS COMPLETING THE COURSE DURING 1937.

	Number of persons.
Public Clinics	—
Maternity and Child Welfare Clinics and Centres	364
Various Schools	52
Ladywell Sanatorium.—Patients	56
Staff	13
	485

ATTENDANCES AT CLINICS AND SCHOOLS DURING 1937.

	Number of attendances.
Public Clinics	—
Maternity and Child Welfare Clinics and Centres	1,301
Various Schools	108
	1,409

The above figures represent a large decrease in the number of persons protected under the immunisation scheme as compared with 1936. To a certain extent this falling off was due to the fact that it was not found possible to employ a whole-time medical officer and staff for any portion of the year, but to no less a degree it was due to difficulty in obtaining a flow of applicants, in spite of personal persuasion by Health Visitors and others. Having regard to the relatively high degree of immunisation already attained in Salford, it cannot be expected that a large number of new applicants will be forthcoming every year, especially in the absence of serious epidemics of diphtheria, which, after all, appear to produce more effect upon parents than any other form of advocacy yet developed. But it is the writer's intention to proceed in spreading the gospel of immunisation as widely and continuously as possible, in the hope that ultimately its adoption for their children will be recognised by the vast majority of parents as one of their essential duties.

SECTION IIIA.

Venereal Diseases Scheme.

ANNUAL REPORT, 1937.

The Annual Return to the Ministry of Health, Form V.D. (R), embraces the calendar year from 1st January to 31st December, 1937. This form is attached to the present report.

New Cases.

There were 1,868 new cases dealt with during the year under review. Out of this number, 937 were found to be suffering from venereal diseases, and the remaining 931 cases were found to be suffering from conditions other than venereal. Legally, venereal diseases comprise Syphilis, Gonorrhœa and Chancroid. The number of non-venereal patients is almost equal to that of venereal patients. This is a satisfactory feature of the Venereal Diseases Scheme ; as it indicates that a large number of persons, who suspect that they may have contracted disease, take advantage of the facilities provided for diagnosis.

The patients labelled " Non-Venereal " are those who (*a*) have once had V.D. (*b*) have run the risk of V.D. (*c*) suspect they may have V.D., or (*d*) those who wish to be investigated regarding V.D. prior to marriage, and come to the Salford Clinic in order to be tested. If venereal disease is found to be present, then the patient is re-diagnosed as such. The tests may occupy many weeks.

There are also cases of Phimosis, Paraphimosis, Balanitis, Venereal Warts and other conditions usually acquired by sexual intercourse, which are not officially classified as Venereal Diseases. In all these instances the patients are kept under observation until the incubation periods of Gonorrhœa, Chancroid and Syphilis have passed. In addition, a fair number of men, having exposed themselves to the risk of infection, come to the Clinic for preventive treatment. These patients are also labelled " Non-Venereal " cases.

The new cases embrace the items 3 and 4 of the Annual Return to the Ministry of Health, Form V.D. (R.). In Table I, new cases are tabulated during the past 10 years, *i.e.*, since the opening of the Clinic in April, 1928.

TABLE I.
(New Cases).

Year.	V.D. Cases.	Non-V.D. Cases.	Total Cases.
1928	880	340	1,220
1929	1,261	704	1,965
1930	1,233	1,067	2,300
1931	1,125	1,071	2,196
1932	1,055	1,063	2,118
1933	1,079	999	2,078
1934	1,062	909	1,971
1935	976	904	1,880
1936	1,020	941	1,961
1937	937	931	1,868
Total	10,628	8,929	19,557

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

In Table II venereal cases are further analysed under their disease headings, and the percentage rate indicated. It will be seen from this table that the lowest number of Syphilis cases was obtained in 1937. The number of new cases suffering from Syphilis was a little over half the number shown in 1930. This is in agreement with the findings throughout the country. That is to say, there has been a gradual diminution of the new cases of Syphilis, particularly fresh infections, during the past ten years.

The reduction of new cases suffering from Gonorrhœa is not so marked as in Syphilis. The average number of patients with gonorrhœal infection during the past ten years has been 691, the highest number was 776 (1930), and the lowest 599 (1928).

TABLE II.
(Venereal Patients Only).

Year.	Disease.				Percentage.			
	Sy.	G.	Ch.	N.V.	Sy.	G.	Ch.	N.V.
1928	266	599	15	340	21.8	49.0	1.00	28.2
1929	439	743	20	701	23.0	39.0	1.00	37.0
1930	437	776	20	1,067	19.0	33.7	0.80	46.5
1931	424	699	2	1,071	19.3	31.8	0.09	48.8
1932	413	639	3	1,063	19.4	30.1	0.10	50.4
1933	338	722	19	999	21.1	34.7	0.90	52.3
1934	262	721	79	909	13.2	36.5	4.00	46.3
1935	259	678	39	904	13.8	36.0	2.10	48.1
1936	283	673	64	941	14.4	34.4	3.30	47.9
1937	238	660	39	931	12.7	35.3	2.10	49.9
Total	3,359	6,910	300	8,926	17.1	35.4	1.5	46.0

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

Sex Incidence.

There were 743 male and 194 female new patients suffering from venereal diseases. Compared with 1936, there has been a decrease in the number of male and female patients. The annual incidence of new venereal cases, classified according to sex, during the past ten years is shown in Table III. It will be seen from this table, that for every woman suffering from venereal disease, there are nearly four men with the same condition.

TABLE III.

(Sex Incidence).

Year.	Males.	Females.	Percentage	
			Males.	Females.
1928	761	119	86.5	13.5
1929	1,080	181	85.7	14.3
1930	1,002	231	81.3	18.7
1931	920	205	81.8	18.2
1932	810	245	76.8	23.2
1933	822	257	76.2	23.8
1934	825	237	75.6	24.4
1935	741	235	75.9	24.1
1936	790	230	77.5	22.5
1937	743	194	79.3	20.7
Total	8,494	2,134	79.9	20.1

This Table embraces Items 3 and 4 of V.D. (R.) Forms for years shown.

Fresh Infections and Old Infections.

A " Fresh Infection " is defined as one in which the disease is less than twelve months old, and an " Old Infection " is one where it has been in existence for more than a year.

The figures in Table IV represent a very satisfactory state of affairs. Thus, of 6,928 new male cases of venereal disease during the past nine years, 6,039 or 88.9 per cent., were infections of less than twelve months duration.

TABLE IV.

(Males).

Year.	Fresh Infections.				Old Infections.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	32	639	20	691	23	18	—	41
1930.....	192	575	20	787	134	81	—	215
1931.....	148	564	2	714	96	21	—	117
1932.....	201	466	3	670	107	11	—	118
1933.....	97	511	19	627	106	19	—	125
1934.....	86	489	77	652	72	15	—	87
1935.....	94	490	38	622	50	13	—	63
1936.....	122	474	60	656	67	3	—	70
1937.....	90	493	37	620	54	2	—	56
Total	1,062	4,701	276	6,039	709	183	—	889

The corresponding figures for female cases will be found in Table V.

These figures do not include cases shown in Columns 2 and 4 of Form V.D. (R.) or Congenital Cases of Syphilis.

TABLE V.

(Females).

Year.	Fresh Infections.				Old Infections.			
	Sy.	Gon.	Ch.	Total.	Sy.	Gon.	Ch.	Total.
1929.....	74	86	—	160	21	—	—	21
1930.....	53	99	—	152	58	21	—	79
1931.....	51	74	—	125	52	9	—	61
1932.....	39	103	—	142	61	15	—	76
1933.....	38	144	—	182	40	14	—	54
1934.....	23	145	—	168	33	20	—	53
1935.....	25	136	—	161	33	13	—	46
1936.....	37	158	—	195	22	5	—	27
1937.....	21	129	—	150	30	3	—	33
Total	361	1,074	—	1,435	350	100	—	450

These figures do not include cases shown in Columns 2 and 4 of Forms V.D. (R.) or Congenital Cases of Syphilis.

It will be seen from Table V that out of 1,885 new female cases during the past nine years, 1,435, or 76.1 per cent., were infections of no longer duration than one year.

If all the new cases are taken together; it is found that out of all new cases of venereal diseases dealt with from 1929 to 1937 inclusive, 84.8 were fresh infections. This indicates that a high proportion of persons, suffering from venereal disease in its early and curable stage, take advantage of the services offered by the Salford Municipal (V.D.) Clinic.

Attendances.

The total number of attendances since the clinic opened is 873,721. The average number of total attendances per annum is 87,372, the highest number being in 1932 and the lowest in 1928. The attendances during the year under review are lower than those in 1936. This is due to the decrease in the number of new cases during 1937.

TABLE VI.
(Attendances).

Year.	Intermediate.	Medical Officer.	Total Attendances.
1928	26,155	9,348	35,503
1929	44,443	26,163	70,606
1930	53,958	38,996	92,954
1931	60,216	40,706	100,922
1932	58,981	42,485	101,466
1933	55,700	39,028	94,728
1934	59,739	36,767	96,506
1935	55,321	34,656	89,977
1936	60,267	37,530	97,797
1937	56,669	36,593	93,262
Total	531,449	342,272	873,721

Defaulters.

There were 372 patients suffering from venereal disease who ceased to attend. This number makes a defaulter rate of 11.2 per centum. The actual number of dangerous defaulters, that is those in the infectious stage, was 237, or 7.2 per cent. The others ceased attending during the non-infectious stage, or during tests of cure. The number of dangerous defaulters is important. These are the patients responsible for the spread of the diseases, and are potential candidates for the prolonged misery and suffering characterised by the later stages of Syphilis and Gonorrhœa. These are the cases upon whom compulsory measures should be applied, if such existed, as in their cases the methods of education and persuasion have failed. In the majority of cases, the " Follow

Up " letters sent to these dangerous defaulters have been returned marked " Not Known." It is possible that some of them obtain treatment elsewhere, but it is almost certain that many of them do not. Table VII shows the figures of defaulters for the past ten years.

TABLE VII.
(Defaulters).

Year.	Defaulters.		
	Dangerous.	Others.	Total.
1928	40	293	333
1929	275	121	396
1930	237	222	459
1931	295	127	422
1932	290	118	408
1933	320	131	451
1934	292	150	442
1935	207	173	380
1936	210	163	373
1937	237	135	372
Total	2,403	1,633	4,036

Syphilis.

The new cases of Syphilis during the year 1937 are analysed as follows :—

TABLE VIII.
(Degrees of Syphilis Cases, 1937).

Stage.	Degree.	Male.	Female.	Total.
Acute	I. Sero-neg. primary	19	2	21
	II. Sero-pos. primary	36	8	44
	III. Early secondary	4	—	4
	IV. Late secondary	15	9	24
	Total Acute Stage	74	19	93
Chronic	V. Endosyphilis	35	19	54
	VI. Tertiary and Visceral	20	7	27
	VII. Neurosyphilis	15	6	21
	VIII. Congenital syphilis	7	6	13
	Total Chronic Stage	77	38	115
	Grand Total	151	57	208

This Table embraces Item 3 of V.D. (R.) for 1937.

It will be seen from Table VIII that Sero-positive Primary Syphilis heads the list in the acute stage of the male sex, and that the numbers of Primary and Secondary Syphilis are almost the same in the female sex. There were actually 93 patients suffering from acute-infectious stages of Syphilis, and 115 suffering from Syphilis in the chronic stages. The Endo-syphilitic patients head the list of chronic cases in both sexes. These cases have had Syphilis in the past, but have had no treatment or have had insufficient treatment to cure them completely. Their predominant sign is a strongly positive Wassermann reaction of the blood.

It is necessary to point out, that cases dealt with for the first time in the Municipal Clinic that are known to have received treatment at this or other centres, are not included in Table VIII.

As stated above, there were 93 patients with fresh infections of Syphilis, and of this number 74 were males and 19 females. There are 45 fewer cases of fresh infections in this year, as compared with 1936.

These fresh cases of Syphilis are very important from a public health point of view. They can be completely cured, and they are also rendered quickly non-infectious by treatment.

The actual number of fresh Syphilis cases is decreasing throughout the country, and this indicates that the V.D. Scheme is producing good results. In spite of this, the actual cases of fresh infection occur, and there is still room for much improvement in the results.

It is therefore important to know how, when and by whom did these 93 fresh infections of Syphilis acquire the disease. The investigations at this clinic show that they all acquired the disease by sexual intercourse. There was not a single case of extra-genital sore. Nearly 91 per cent. were in the prime of life—16 to 40 years of age—54.84 per cent. were single and 40.86 per cent. married, and nearly 25 per cent. acquired Syphilis outside the British Isles.

In Table IX age groups of early infections of Syphilis are analysed. The greatest number of patients who acquired this disease were between 26 and 40 years of age. The same ratio applies to Gonorrhœa. This shows that the majority of persons acquire Syphilis and Gonorrhœa during their active sexual life.

TABLE IX.

AGE GROUPS. **(Fresh Infections of Syphilis, 1937).**

Ages.	Numbers.		Total.	Percentage.		Total Per cent.
	M.	F.		M.	F.	
16 to 25 years	26	6	32	35.13	31.58	34.40
26 to 40 years	41	12	53	55.41	63.16	56.99
41 to 50 years	2	1	3	2.70	5.26	3.24
51 to 70 years	5	—	5	6.76	—	5.37
Total	74	19	93	100.00	100.00	100.00

This Table embraces the figures shown in Item 3 of Form V.D. (R.), 1937.

Marital Status.

There were 51 single persons with fresh infections of Syphilis, 38 married and 4 widowed. Four husbands contracted Syphilis from their wives, and seven wives contracted this disease from their respective husbands. This indicates that education and enlightenment of the public regarding venereal diseases and sexual matters is of primary importance, and should be carried out constantly. In Table X cases of fresh infections of Syphilis are tabulated according to their marital status.

TABLE X.

(Fresh Infections of Syphilis, 1937).

MARITAL STATUS.

	Numbers.			Percentage.		
	M.	F.	Total.	M.	F.	Total Per cent.
Married	27	11	38	36.49	57.89	40.86
Single	45	6	51	60.80	31.58	54.84
Widowed	2	2	4	2.71	10.53	4.30
Total	74	19	93	100.00	100.00	100.00

This Table embraces the figures shown in Item 3 of Form V.D. (R.), 1937.

District where Infection of Syphilis was Contracted.

It is significant to note that of 93 fresh infections of Syphilis, 27.95 per cent. of these patients contracted the disease in the districts which the clinic serves, and 23.65 per cent. acquired it abroad.

TABLE XI.

(Fresh Infections of Syphilis, 1937).

DISTRICT WHERE INFECTION TOOK PLACE.

	Numbers.			Percentage.		
District.	M.	F.	Total.	M.	F.	Total Per cent.
Salford	9	2	11	12.17	10.53	11.82
Manchester	15	—	15	20.27	—	16.13
Lancashire County	7	—	7	9.46	—	7.53
Other parts of British Isles	7	—	7	9.46	—	7.53
Abroad	22	—	22	29.72	—	23.65
No Information	14	17	31	18.92	89.47	33.34
Total	74	19	93	100.00	100.00	100.00

This Table embraces the figures shown in Item 3 of Form V.D. (R.), 1937.

By whom Infected.

The majority of men contract Syphilis from prostitutes. This does not apply to Gonorrhœa, as investigation shows that the majority of men acquire this disease from amateurs. Table XII shows the source of infection in 93 cases of fresh Syphilis during the year 1937.

TABLE XII.
(Fresh Infections of Syphilis, 1937).

By Whom Infected.

	Numbers.			Percentage.		
	M.	F.	Total.	M.	F.	Total Per cent.
Prostitute	34	—	34	45.95	—	36.57
Amateur	26	—	26	35.13	—	27.96
Marital Partner	4	7	11	5.41	36.84	11.82
Regular Partner	4	1	5	5.41	5.26	5.37
Source not known	6	11	17	8.10	57.90	18.28
Total	74	19	93	100.00	100.00	100.00

This Table embraces the figures shown in Item 3 of Form V.D. (R.), 1937.

Alcohol and Venereal Diseases.

It is an established fact that alcohol contributes to the contraction of Syphilis and Gonorrhœa, particularly in male patients. Alcohol taken in moderation is a form of food that does not require previous digestion. If taken in excess, it first of all stimulates the nervous system, and then depresses it. It increases sexual desire. Under the influence of alcohol the functions of judgment and self-control disappear, and the emotions are given free play.

Of a total of 477 cases of Gonorrhœa, 311 men were either drunk or had had alcohol immediately before they contracted the disease.

As far as fresh infections of Syphilis in the male sex are concerned, 41.89 per cent. were drunk, and 29.73 per cent. had had alcohol at the time of infection.

TABLE XIII.
(Fresh Infections of Syphilis, 1937).

	Numbers.			Percentage.		
Condition on Infection.	M.	F.	Total.	M.	F.	Total Per cent.
Drunk	31	—	31	41.89	—	33.34
Had some Alcohol	22	—	22	29.73	—	23.65
Sober	11	1	12	14.86	5.26	12.90
Not known	10	18	28	13.52	94.74	30.11
Total	74	19	93	100.00	100.00	100.00

This Table embraces the figures shown in Item 3 of Form V.D. (R.), 1937.

The Treatment of Syphilis.

The two potent remedies, Neoarsphenamine and Bismuth, are given alternately. There are no rest periods, and these preparations are given continuously until the efficiency index of 70 is obtained. This has been the method in use since this clinic opened, and the results in early Syphilis are very good. Patients suffering from the early stages of Syphilis, who fail to reach the efficiency index of 70, usually fall into one of the following categories :

1. Those developing intolerance to Arseno-benzol preparations—(Dermatitis and Jaundice).
2. Irregular attenders.
3. Defaulters.

The remedial agents in routine use for the treatment of acute Syphilis are Stabilarsan, Novarsenobillon and lipo-soluble Bismuth preparations. The agents used for the treatment of the chronic stages of Syphilis are Novarsenobillon, Stabilarsan, Neosilver-Salvarsan, Tryparsamide, Stovarsol and Chlorostab, the last-named being a Bismuth preparation. These remedies are prescribed according to the stage of the disease, and the condition of the patient.

In addition to the above preparations, Collosol Iodine 0.8 per cent. and Collosol Mercury Sulphide are used as adjuvants. Collosol Iodine is given intravenously in 5 c.c. doses, twice weekly for four weeks. Collosol Mercury Sulphide is given intramuscularly, in 5 c.c. doses for from four to eight weeks. It is not as potent as the lipo-soluble Bismuth preparations, though it clears the lesions quickly. Its chief use is in acute cases of Syphilis which are sensitive to neoarsphenamine preparations, and which have developed Arsenobenzol Dermatitis. In addition, it is a useful alternative to Arsenobenzol and Bismuth Therapy in chronic stages of Syphilis. It eases the agonizing pains in patients suffering from Tabes Dorsalis.

Gonorrhoea.

In 1937 there were 622 fresh cases of Gonorrhœa, 493 male and 129 female patients. Compared with 1936, there is an increase of 19 male patients and a decrease of 29 females.

The average number of male and female patients suffering from Gonorrhœa in both stages—fresh and old infections—during the past ten years, has been 691. It will be observed from Table II that there has not been much improvement in the incidence of Gonorrhœa in the community which this clinic serves. There are many reasons for this state of affairs. The first and most important is that there is no specific drug for Gonorrhœa, and thus it differs from Syphilis in that it is not possible to render the patient quickly non-infectious. The

treatment of Gonorrhœa does not render the patient non-infectious until the last gonococcus is eradicated from his tissues. The chief disseminator of Gonorrhœa is the patient who defaults from treatment too soon, and considers himself cured. In addition, there are women who are suffering from Gonorrhœa and declare they are well, refuse a thorough investigation or rely on one negative smear examination. These live in a state of false security until Salpyngitis appears on the scene.

Treatment of Gonorrhoea in the Male Sex.

As soon as the diagnosis of Gonorrhœa is established, and if the anterior urethra only is affected, treatment is commenced according to the following Scheme :—

Treatment of Anterior Gonococcal Urethritis in the Male.

Week.	Irrigations.	Instillations.	Additional Treatment.
1	Pot. Permang. 1 in 10,000.	Nil.	Nil.
2	Pot. Permang. 1 in 5,000.	Silver Nucleinate 2%	Nil.
3	Pot. Permang. 1 in 3,300.	Silver Nucleinate 5%	Nil.
4	Hg. Oxycyanide 1 in 10,000.	Nil.	Massage over sound if urine clear.
5	Hg. Oxycyanide 1 in 5,000.	Nil.	Massage over sound
6	Hg. Oxycyanide 1 in 3,300.	Nil.	Do.
7	Chloramine "T" 1 in 10,000.	Nil.	Do.
8	Chloramine "T" 1 in 5,000.	Nil.	Nil.
9	Commencement of Tests for Cure.	—	—

The above routine course of treatment has been in use during the past two years. If a patient attends regularly, and smears and urines are negative, the above routine is shortened to 4 or 6 weeks of treatment. The majority of good attenders pass the necessary tests of cure. On the other hand, if the patient develops complications, the routine is modified. This method has given good results in the past, but with the advent of Sulphanilamide the treatment of Gonorrhœa will be modified in future.

The routine treatment for cases of Posterior Urethritis has been as follows :—

TREATMENT OF POSTERIOR GONOCOCCAL URETHRITIS IN THE MALE.

Week.	Irrigations.	Instillations.	Additional Treatment.
1	Pot. Permang. 1 in 20,000.	Nil.	Mist Chlor. Co. t.d.s.
2	Pot. Permang. 1 in 20,000.	Ag. Neucleinate 2%	Do.
3	Pot. Permang. 1 in 10,000.	Do.	Do.
4	Pot. Permang. 1 in 5,000.	Ag. Neucleinate 5%	Nil.
5	Pot. Permang. 1 in 3,300.	Do.	Nil.
6	Hg. Oxycyanide 1 in 10,000.	Nil.	Prostatic massage if urine clear.
7	Hg. Oxycyanide 1 in 5,000.	Nil.	Do.
8	Hg. Oxycyanide 1 in 3,300.	Nil.	Do.
9	Chloramine "T" 1 in 10,000.	Nil.	Massage over sound.
10	Chloramine "T" 1 in 5,000.	Nil.	Do.
11	Tests for Cure of Gonorrhœa.	—	—

The above routine has been applied during the past six years with slight modifications. If the posterior urethritis clears up within a week the routine treatment for anterior urethritis is adopted, and massage of the prostate gland given. The routine has been used more or less as a guide. Some patients have been cured in a shorter time than is indicated in the schedules, whilst others have taken longer. Taking everything into consideration, the results have been satisfactory.

It will be observed that vaccines find no place in the therapy of Gonorrhœa in the Salford Municipal Clinic. It is considered that vaccines are of no therapeutic value in the routine treatment. The only indication for vaccine therapy in Gonorrhœa is in Gonorrhœal Arthritis. When this complication appears, the patient is admitted to Hospital and Arthigon given intravenously; the temperature taken every half-hour, and usually the results are very good. About four to six injections are given. Whether it is the fever or the vaccine in Arthigon that is responsible for the cure of Gonorrhœal Arthritis it is difficult to say, yet the fact remains that clinical results are excellent.

During the first four years of the opening of the Municipal Clinic, vaccines were used a great deal in the treatment of Gonorrhœa, Detoxicated Vaccines and vaccines made from the local strains of gonococci were in routine use.

In 1932 and 1933 two hundred cases were investigated. One hundred had vaccines weekly, the others had local treatment. It was found that cases that were given vaccine therapy took on the average approximately one week longer to cure than those that were given local treatment only. The conclusion is that vaccines do not benefit gonorrhœal patients, but may possibly even do harm.

Treatment of Gonorrhoea with Sulphanilamide.

Many substances and methods have been tried in the Salford Municipal Clinic during the past ten years, in order to improve the treatment of Gonorrhœa. The number of these preparations is great and much careful research work has been done in this way, but the results are not satisfactory.

The most satisfactory that has been tried is a preparation known as Sulphanilamide. Over one hundred cases have been very carefully treated and observed during the past eight months. The method of treatment has been as follows :—

1. All fresh cases of Gonorrhœa who have not had previous treatment have been put on Sulphanilamide.

2. The clinical diagnosis of Gonorrhœa in every case has been confirmed by microscope and other laboratory methods.

3. Patients are given one gramme of Sulphanilamide orally three times daily for three weeks, and also have daily irrigations of Pot. Permang. 1 in 10,000. Daily smears are taken and the urine examined and charted each day for three weeks. No supply of drug is given for more than one day at a time. The patients are instructed to avoid any medicine containing sulphur, and foods such as eggs, onions and garlic. The average amount of Sulphanilamide given to a patient is about 60 grammes.

Some of the results of the above treatment are brilliant, others are not satisfactory. Sulphanilamide is not a specific for the Gonococcus, and the best results are obtained when the drug is given in high toxic dosage. It clears the discharge and eases Dysuria, but takes time to kill the last Gonococcus in the patients' tissues.

All the hundred cases have completed their treatment, and are now undergoing tests for cure. When they have completed the tests for cure we shall be in a position to assess the value of Sulphanilamide in the treatment of Gonorrhœa in the male. The time factor is a most important consideration in any scheme of tests of cure for Gonorrhœa. In the Salford Municipal Clinic no case of male

Gonorrhœa is discharged as cured unless he has been observed for at least three months after the cessation of treatment, and during which time thorough investigation and provocative procedures have been carried out.

The just and proper criticism to the majority of papers published on the excellent results obtained in treating Gonorrhœa with Sulphanilamide is that the time of observation has been too short—(from one day to two weeks)—and that provocative procedures have not been applied sufficiently.

Tests of Cure of Gonorrhoea in the Male.

Whether a patient is on Salford routine, or under special treatment, he is not placed on tests of cure until he feels normal, there is no urethral discharge, the smears are negative and he has had treatment for three or four weeks at least. If his posterior urethra has been affected, he must have massage of the prostate gland. When it is considered that he has a reasonable chance of being cured the treatment is stopped for a week, the patient is advised to have a glass of beer and to look for the discharge the day after. He is also encouraged to attend daily for smears, which are taken and examined. On the eight day of observation, if all the smears are negative, he is given Aolan intradermally; and on the ninth day a urethral smear is taken, the prostate and seminal vesicles massaged and the excretion examined under the microscope. If these smears are negative the patient is marked to attend on the third week of observation, when urethroscopic examination is carried out and sounds are passed. If he passes this examination, Aolan is given again in the fourth week, urethral smears taken the day after, prostatic and vesicular excretion collected, cultured and examined under the microscope. On the fifth week 1 per cent. Silver Nitrate-Solution is instilled into the posterior and anterior urethra, and the smears examined for two days afterwards. At the end of the third month the patient is examined, and a Gonococcal Complement Fixation Test on his blood is carried out. If all these tests prove to be negative, the patient is discharged and considered as cured.

With the exception of sexual intercourse and sexual excitement, Aolan is one of the best provocatives when a case is being tested for the cure of Gonorrhœa. Time and time again, cases of Gonorrhœa are seen in this clinic in which other provocative agents have failed to bring the gonococcus out of its "Nest," and Aolan has succeeded in bringing direct evidence of Gonorrhœal infections. There are cases on record in this clinic with symptoms of Gonorrhœal inflammation of the fibrous tissue of the muscles, with negative Complement Fixation Tests for Gonorrhœa and urethral smears, in which the presence of Gonococci has been demonstrated after Aolan provocation.

The mode of action of Aolan, which is a milk protein, is not understood, but its usefulness as a provocative for Gonorrhœa is greatly appreciated. It is given intradermally; three small blisters are raised in the skin of the forearm using about half a c.c. of the material, smears from the urethra, prostate and seminal vesicles being taken and examined the following day.

In the case of female patients, Aolan is given intradermally as soon as the menstrual period is finished, and smears are taken from the urethra and cervix for three days in succession after the injection. It is found that Aolan is equally good as a provocative in female patients as in males.

Gonorrhoeal Complement Fixation Test.

This test has been in routine use for the past three years, and over 3,000 have been carried out annually in the Salford Public Health Laboratory by Dr. G. J. Crawford.

No case of Gonorrhœa is considered as cured in this clinic unless, in addition to other tests, the G.C.F.T. is negative, yet the value of this test is doubtful. It fails when it is most needed. It fails when other methods succeed. It is positive when there is no shadow of doubt that the patient is free from Gonorrhœa; it can be positive for years in some patients who are perfectly normal in their sexual mode of life, and who have undergone other tests which are repeatedly negative. It is completely negative when there are obvious unmistakable positive smears and cultures. Of course, some authorities say, the patient is draining freely in such cases. It is negative, or there is only a trace of fixation, in patients who are not draining freely, who have had some focus in the prostate gland and vesiculæ seminalis, or even a Tyson's gland.

The G.C.F.T. is positive after exhibition of Gonorrhœal vaccines for therapeutic or diagnostic purposes. It does not become negative in all cases after six weeks, as stated by some authors. In short, the value of this test is not yet known. Its introduction has caused a great deal of worry and confusion to medical men and patients.

The experience of this test at the Salford Municipal Clinic is that it is not always in agreement with the clinical findings and other diagnostic procedures, and more reliance is placed on smears and cultures.

Gonorrhoea in Women.

The questions of diagnosis, treatment and of knowing when a woman is cured of Gonorrhœa are really the major problems, and the most important ones in the campaign against this disease in both sexes. A great deal of work and thought has been devoted to Gonorrhœa, in order to improve the treatment of this disease in the female sex. It is a fact that, in spite of so many tests, so many methods and so many therapeutic agents, the diagnosis and treatment of Gonorrhœa in the female sex requires not only an enthusiastic medical and nursing staff, but also the heart of a Lion and the patience of Job.

A fair number of women come to be examined on account of the fact that their husbands or sexual partners are attending the Male Department for the treatment of Gonorrhœa. Usually these women do not complain of anything, and

the results of clinical examinations vary greatly. Some present obvious signs and symptoms of clinical Gonorrhœa, yet the examination of smears has to be repeated before the diagnosis is established, whilst others show no signs or symptoms and yet there is no difficulty in finding gram-negative intracellular diplococci in the cervical smears. A third group has to be examined and re-examined, and the menstrual period awaited before the diagnosis is made. In some cases provocative Aolan has to be given before the diagnosis is established. One or two negative smears, or one negative culture, is not sufficient evidence to assure a woman that she is absolutely free from Gonorrhœa. As for the Gonorrhœal Complement Fixation Test, this does not help much in the case of women.

There is yet another group of women, whose first indication of Gonorrhœa is Salpingitis. They are usually admitted into hospitals by their doctors, and referred to the clinic for further treatment on their discharge.

Treatment of Gonorrhoea in the Female.

It is just as serious to diagnose Gonorrhœa in a woman when it is absent, as to miss the diagnosis when it is present. Once there is no shadow of doubt that a woman is suffering from Gonorrhœa, she is placed on the following treatment :—

(1) Daily bladder irrigations with Pot. Permang. 1 in 1,000 at 100° F. followed by vaginal douche with the same solution, using two pints of fluid for each procedure.

(2) Daily swabbing and cleaning of the cervix with Sol. Acid Boric 4 per cent. and Sol. Liquor. Potassae 20 per cent. ; drying of the cervix and vagina with cotton wool, and inserting a tampon soaked in a suitable application.

Cervical Applications.

1ST MONTH .... After douching, irrigation, swabbing and drying, the cervix is painted with Suspensol Iodine Oil (Blythswood). A tampon soaked in Suspensol Iodine Oil is placed in the vagina against the cervix for four hours.

2ND MONTH .. Silver Nucleinate 5 per cent. is used instead of Suspensol Iodine Oil.

3RD MONTH.... Silver Nucleinate is replaced by 15 per cent. Ichthyol in Glycerine.

4TH MONTH.... Monsol 5 per cent. in Glycerine is used.

If smears are negative at the end of four months' treatment, the patient is placed on tests for cure. If the smears are positive, full Chloramine "T" treatment is given.

Chloramine "T" Treatment.

Bladder irrigation with a saturated solution of Sod. Bicarb., followed by an irrigation of two pints of Chloramine "T" Solution 1 per cent. diluted to 1 in 40.

Vaginal douche with saturated solution of Sod. Bicarb. This is followed by vaginal douche with two pints of Chloramine "T" Solution.

Cervix is swabbed with a 1 per cent. solution of Chloramine "T" and dried with cotton wool. A single layer of gauze, 1 yard long and 6 inches wide, is folded until 2 inches wide, saturated in one of the following glycerine solutions, and packed into the vagina :—

1st Week..... 15 per cent. Ichthyol in Glycerine.
2nd Week .... 10 per cent. Borax in Glycerine.
3rd Week .... 15 per cent. Ichthyol in Glycerine.
4th Week .... 5 per cent. Monsol in Glycerine.

Pack is left in for 12 to 24 hours.

Tests of Cure of Gonorrhoea in the Female.

Smears from the urethra and cervix are taken monthly, after the menstrual period, for six months.

At the end of the third month of observation, Aolan is given after menstruation, and smears examined for three successive days.

At the end of the sixth month, after the menstrual period, smears after Aolan are examined, a culture is done and Gonorrhœal Complement Fixation Test carried out.

No treatment is given during the observation periods.

A few female patients have been treated with Sulphanilamide. The results of this therapy are not so good as those shown in the male patients. Toxic effects are more common in the female patients than in the male.

Chancroid.

There were 37 patients suffering from Chancroid during 1937, all of which were males. There were five British seamen, and four foreign. These patients are observed whenever possible for three months, in order to exclude Syphilis. Dark ground examination is carried out on all these cases before treatment is commenced. The usual local treatment is the daily soaking of the penis in warm Pot. Permanganate Solution, followed by the application of Pulv. Iodoformi. If this treatment does not cure the condition, Dmelcos Vaccine is given intravenously.

Preventive Treatment for Venereal Diseases.

There were 85 male patients who applied for this form of treatment within 24 hours of exposure. This shows an increase of 16 patients in 1937, as compared with the year 1936.

The method of dealing with these patients is fully dealt with in the 1936 Annual Report.

In-patients.

There are two wards at Hope Hospital, Pendleton, equipped for the treatment of Venereal Diseases. The female ward, C2.X., has been in use since June, 1931. It contains eight beds and has a Treatment Room attached to it.

The Male Ward, E2.X., was opened on the 1st April, 1936. It contains eight beds and a Treatment Room.

Full use has been made of these wards during the year, and they have been of great service to the patients suffering from Venereal Diseases.

The number of patient-days was 3,440. The actual number of patients admitted was 123 and the average number of days spent in hospital 28. The V.D. Medical Officer visits Hope Hospital twice weekly, and in addition to the work in the V.D. wards a large number of patients in general wards are referred to him every week for examination and advice. He is frequently called upon to examine and treat patients suffering from skin diseases in the general wards.

V.D. Pathology.

The Wassermann and Kahn Tests are carried out by Dr. G. J. Crawford at the City of Salford Public Health Laboratory. His reports have been accurate and in agreement with the clinical findings. He has also been carrying out Complement Fixation Tests and Cultures for Gonorrhœa.

Dark ground examinations for Treponema Pallidum and smears for Gonococcus are carried out in the Municipal Clinic. There were 82 dark ground examinations for Treponema Pallidum and 6,904 smears for Gonococcus examined during the year 1937.

General.

The facilities for out-patient treatment are adequate. There has been a great demand for in-patient accommodation in the female department during 1937, and the number of beds had to be increased from six to eight. The reason

for this is that female patients stay longer in hospital, especially pregnant unmarried girls and girls on police court probation, who cannot attend for out-patient treatment.

There were 20 medical practitioners who attended the Municipal Clinic for instruction in the diagnosis and modern treatment of Venereal Diseases during the year 1937. Six of these qualified for the Ministry of Health Certificate.

APPENDIX I.

RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED THE 31ST DECEMBER, 1937.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
nber of cases on 1st January er treatment or observation	379	169	16	—	376	177	272	44	1,043	390	1,433
nber of cases removed from register during any previous r which returned during the r under report for treatment observation of the same in- tion	7	4	—	—	1	—	—	—	8	4	12
mber of cases dealt with for first time during the year ter report (exclusive of cases ter Item 4) suffering from—											
yphilis, primary	55	10	—	—	—	—	—	—	55	10	65
,, secondary	19	9	—	—	—	—	—	—	19	9	28
,, latent in 1st year of infection*	16	2	—	—	—	—	—	—	16	2	18
,, all later stages	54	30	—	—	—	—	—	—	54	30	84
,, congenital	7	6	—	—	—	—	—	—	7	6	13
Soft Chancre	—	—	37	—	—	—	—	—	37	—	37
Gonorrhœa, 1st year of in- fection	—	—	—	—	493	129	—	—	493	129	622
Gonorrhœa, later	—	—	—	—	2	3	—	—	2	3	5
Conditions other than venereal	—	—	—	—	—	—	775	148	775	148	923
umber of cases dealt with for first time during the year der report known to have eived treatment for the same ection, or to have been under servation at other Centres	27	3	2	—	31	2	7	1	67	6	73
TALS OF ITEMS 1, 2, 3 AND 4	564	233	55	—	903	311	1,054	193	2,576	737	3,313
umber of cases discharged ter completion of treatment d final tests of cure or after agnosis as non-venereal	14	1	31	—	271	76	825	158	1,141	235	1,376
umber of cases which ceased attend before completion of eatment and were, on first tendance, suffering from :—											
Syphilis, primary	25	1	—	—	—	—	—	—	25	1	26
,, secondary	6	10	—	—	—	—	—	—	6	10	16
,, latent in 1st year of infection*	5	1	—	—	—	—	—	—	5	1	6
,, all later stages	44	16	—	—	—	—	—	—	44	16	60
,, congenital	4	19	—	—	—	—	—	—	4	19	23
Soft Chancre	—	—	4	—	—	—	—	—	4	—	4
Gonorrhœa, 1st year of in- fection	—	—	—	—	54	46	—	—	54	46	100
Gonorrhœa, later	—	—	—	—	—	2	—	—	—	2	2
Number of cases which ceased o attend after completion of reatment but before final tests f cure	14	7	—	—	92	22	—	—	106	29	135
Number of cases transferred to ther Centres or to institutions r to care of private practitioners	97	13	7	—	110	27	4	1	218	41	259
Number of cases remaining nder treatment or observation n 31st December	355	165	13	—	376	138	225	34	969	337	1,306
TOTALS OF ITEMS 5, 6, 7, 8 AND 9 e totals should agree with those of Items 1, 2, 3 and 4)	564	233	55	—	903	311	1,054	193	2,576	737	3,313
Number of cases in the follow- ng stages of syphilis included in tem 6 which failed to complete ne course of treatment :—											
Syphilis, primary	11	1	—	—	—	—	—	—	11	1	12
,, secondary	1	—	—	—	—	—	—	—	1	—	1
,, latent in 1st year of infection*	—	—	—	—	—	—	—	—	—	—	—
,, all later stages	13	6	—	—	—	—	—	—	13	6	19
,, congenital	1	3	—	—	—	—	—	—	1	3	4
Number of attendances :—											
(a) for individual attention of the medical officers	12,541	5,812	209	—	10,650	2,966	3,868	547	27,268	9,325	36,593
(b) for intermediate treatment, e.g., irrigation, dressing	1,589	478	302	—	37,910	11,864	4,450	76	44,251	12,418	56,669
TOTAL ATTENDANCES	14,130	6,290	511	—	48,560	14,830	8,318	623	71,519	21,743	93,262

APPENDIX I.—*Continued.*

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR END 31ST DECEMBER, 1937.

	Syphilis.		Soft Chancre.		Gonorrhœa.		Conditions other than venereal.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
12. In-patients :—										
(*a*) Total number of persons admitted for treatment during the year	30	15	3	—	25	35	12	3	70	53
(*b*) Aggregate number of "in-patient days" of treatment given	872	412	97	—	511	1,290	222	36	1,702	1,738

	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Totals.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
13. Number of cases of congenital syphilis in Item 3 above classified according to age periods	3	2	1	—	—	3	3	1	7	

	Arsenical		Mercury.	Bismuth.
	Approved Arsenobenzene Compounds.	Others		
14.—				
(*a*) Names of Chief preparations used in the treatment of Syphilis	Stabilarsan, and Novarsenobillon.	Tryparsamide	Colloidol Mercury Sulphide.	Chlorostab and Bivatol
(*b*) Total number of injections given (out-patients and in-patients)	5,811	37	492	6,773

	Microscopical.		Cultural for Gonorrhœa	Serum		Cerebro-spinal fluid	Oth diag Ve Di
	for Syphilis	for Gonorrhœa		for Syphilis	for Gonorrhœa		
15. Pathological Work :—							
(*a*) Number of specimens examined at, and by the medical officer of, the Treatment centre	82	6,904	—	—	—	—	
(*b*) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory	—	—	61	3,241*	1,247§	2‡	

* Wasserman & Kahn Tests.
§ Gonococcal Complement Fixation Tests.
† Meinicke Tests.
‡ Carried Out at the Hope Hospital Laboratory.

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Salford	Manchester	Lancs.	Cheshire	Bolton	Oldham	Seamen, British	Seamen, Foreign	Other Areas	
A. Number of cases from each area included under the following headings in Item 3										
Syphilis	93	38	36	2	—	2	10	22	5	
Soft Chancre	15	6	5	1	—	—	5	4	1	
Gonorrhœa	263	146	135	24	6	4	11	22	16	
Conditions other than venereal	347	247	192	31	9	6	21	39	31	
TOTAL	718	437	368	58	15	12	47	87	53	
B. Total number of attendances of all patients residing in each area	43,225	21,919	20,303	3,087	995	351	926	378	2,078	
C. Aggregate number of "In-patient days" of all patients residing in each area	2,039	176	523	162	2	—	151	153	234	

SECTION IV.

Report Relating to the

Meat and Food Inspection, Milk Supply, and the Diseases of Animals Acts.

Inspection of Meat and other Food.

The examination of meat and other foods is controlled by Inspectors who are qualified to carry out these duties. The Inspectors are responsible for the examination of all meat and other foods sold or exposed or deposited or in preparation for sale, and it is their duty to ensure that no food sold in the City is unsound, unwholesome or diseased.

This, however, is impossible without the co-operation of the public, who should, at all times, insist on food which they know has not been exposed to such contamination as flies or dust.

There is still room for improvement in the handling of food by the vendor before sale, and the purchaser should be satisfied as to the vendor's cleanliness before buying.

The sale of unwrapped bread shows little sign of diminishing, but it is to be hoped that there will be a more general demand for wrapped bread.

There are 269 retail butchers' shops in the City, and 639 visits of inspection have been made during the year. Generally speaking, the retail meat shops are kept in a satisfactory manner, but occasionally complaints have had to be made as to general untidiness, such as allowing rubbish to accumulate on the floor or benches.

In a few instances, unsound meat was found, but in no case did the facts warrant proceedings being taken, the occupiers being allowed to surrender the meat for destruction.

In many instances, the method of marking meat is not strictly in accordance with the provisions of the Merchandise Marks (Imported Goods) No. 7 Order, which calls for the marking of imported meat " Foreign," " Empire " or the country of origin. The offenders have been warned that a further contravention would be reported to the Health Committee with a view to a summons being issued.

Food Preparing Premises.

A register of these premises is kept, and they are controlled by Food Preparing Byelaws, which require a high standard of cleanliness and sanitation. The majority of these premises are concerned with the preparation of meat products, such as Brawn, Black Puddings, Sausages, Pies, etc.

One hundred and twenty-four visits of inspection have been made during the year, and attention has been paid to the cleanliness of the premises, utensils and persons working there, and especially to the quality and methods of handling the meat.

In some cases, fault was found regarding the general untidiness of the premises, but in no case was it necessary to take legal proceedings.

Offensive Trades.

The following is a list of the offensive trades in the City. There have been no complaints arising from these trades.

Nature of Trades.	
Tripe Dressing	4
Soap Works	2
Tanneries	1
Skin Dressers	1
Gut Scrapers	1
Total	9

Slaughterhouses.

There are four licensed private slaughterhouses and one public slaughterhouse in the City. Two of the private slaughterhouses are used for killing pigs only. The public slaughterhouse is divided into booths, one booth being retained for casual slaughtering of cattle and sheep, two others let to private butchers, and one used for horse slaughtering.

The slaughterhouses are visited at all times when slaughtering takes place, and all carcases of animals slaughtered in the City are examined.

The number of visits made by the Inspectors during the year was 1,992, and the number of carcases inspected :—

Cattle	1,240
Sheep	11,780
Pigs	17,103

The Slaughter of Animals Act, 1933.

The requirements of this Act necessitate strict attention being paid to the way in which animals are treated while awaiting slaughter, and to ensure that humane methods of slaughter are used. The Act states that no person shall slaughter animals in a slaughterhouse unless he is licensed by the Local Authority and, in this connection, sixty licences have been granted.

Open Air Market.

This market is held on Mondays and Fridays each week, Bank Holidays excepted. Such articles as Fish, Fruit, Vegetables, Poultry, Rabbits, Meat, etc., are regularly exposed for sale.

Eight hundred and eighteen inspections of stalls were made during the year, and special attention was paid to the stalls where meat was exposed for sale, to ensure that the provisions of the Public Health (Meat) Regulations, 1924, with regard to the screening of the top, back and sides of the stall to prevent contamination, were being complied with.

On the whole, the quality and soundness of the articles sold are good. In a few instances, a surrender of fruit has been made by Stallholders to the Inspector when the Inspector has considered the fruit unsound. In another instance, a seizure of diseased meat was made and a summons issued against the Stallholder for exposing the said meat for sale.

TABLE OF MONTHLY SEIZURES OF DISEASED AND UNSOUND FOOD DISCOVERED DURING ROUTINE INSPECTION, AND OF FOOD SURRENDERED BY THE OWNERS THEREOF DURING 1937.

Month.	No. of seizures.	Beef lbs.	Mutton lbs.	Pork lbs.	Veal lbs.	Miscel. lbs.	Totals lbs.
January	330	2,693	136	12,176	—	2	15,007
February	184	1,434	204	6,968	—	—	8,606
March	239	62	208	7,836	—	168	8,274
April	267	2,892	408	14,608	—	10	17,918
May	697	811	—	38,712	—	—	39,523
June	182	1,020	—	9,114	—	—	10,134
July	543	1,072	—	28,598	—	—	29,670
August	174	258	17	7,841	—	14	8,130
September	212	1,559	—	9,972	—	—	11,531
October	229	366	235	8,152	—	112	8,865
November	233	257	—	8,924	—	—	9,181
December	335	2,486	68	13,193	—	—	15,747
Totals	3,625	14,910	1,276	166,094	—	306	182,586

The miscellaneous articles condemned were :—

Apples	234 lbs.
Plums	56 lbs.
Currants	14 lbs.
Chickens	2 lbs.

TABLE SHOWING AMOUNT OF FOOD CONDEMNED FROM VARIOUS CAUSES DURING 1937.

No. of Seizures.	Cause of Seizure.	Weight in lbs.
1,795	Tuberculosis	88,830
884	Swine Fever	61,462
253	Pleurisy	2,715
191	Cirrhosis	952
97	Congestion	3,777
89	Pneumonia	1,146
70	Necrosis	280
55	Cystic	438
31	Unsound	1,450
30	Moribund	7,730
19	Abscess	303
19	Distomatosis	230
14	Swine Erysipelas	2,828
11	Dropsy	1,954
8	Decomposed	518
7	Fevered	1,710
7	Emaciation	1,414
7	Injury	590
7	Immature	42
5	Jaundice	1,010
5	Septicæmia	476
4	Contaminated	56
3	Pyæmia	606
3	Peritonitis	446
3	Nephritis	405
2	Rickets	404
2	Pericarditis	6
1	Malignant Tumour	202
1	Mastitis	202
1	Milk Fever	202
1	Septic Metritis	202
3,625		182,586

Of the total weight of meat seized, 39 tons, 13 cwt. and 14 lbs. or 48·65% was seized on account of tuberculosis.

The Milk Supply.

With the exception of a very small quantity of milk, all the milk sold in the City is produced at farms outside the district, so that the supervision consists chiefly of sampling and inspection of dairies.

The number of farms supplying milk direct to Salford is approximately 400, and these are situated in Lancashire, Cheshire, Derbyshire, Yorkshire and Staffordshire. There is also a large quantity of pasteurised and raw milk retailed in the City by dairymen with registered premises in adjoining towns.

There are 777 registered retail purveyors of milk, including 636 persons who retail bottled milk only. The improvement in the type of shop from which loose milk is sold has been maintained. It is hoped that, by removing from the register the shops of the mixed business type which sell loose milk in conjunction with other articles, to confine the sale of loose milk to shops selling only milk and dairy produce.

The registered retail purveyors of milk are classified as follows :—

Milk depôts and small dairies	54
Retail milk shops selling other articles in conjunction with milk	59
Shops selling bottled milk in conjunction with other articles	636
Retail milk dealers selling milk in the City, who have registered dairies outside the City	28

Nine hundred and eighteen visits to dairies and milk shops have been made during the year. Special attention is paid to the methods of cleansing and sterilising utensils, the storage of milk, the sterilising of milk bottles and the general structure and sanitary condition of the premises.

The continued increase of the sale of bottled milk calls for strict supervision of this section of the dairy, in order to ensure the efficient sterilisation of all bottles before being used. In this connection, 79 milk bottles from dairies have been tested during the year for efficiency of sterilisation ; of these, 18, or 23 per cent. were found to be improperly sterilised. In each instance, the dairyman concerned was cautioned and a further test made at a later date, when a marked improvement was noted. The percentage of milk bottles improperly sterilised during 1937 was lower than that of the previous year, and it is the aim of this Department to maintain this improvement.

Though, on the whole, the methods of production, transport, storage and distribution of milk, and the sterilisation of cans and utensils have continued satisfactory, frequent sampling and testing is at all times necessary.

Milk Act, 1934.

During the year, legal proceedings were successfully taken against a farmer for unlawfully selling milk as " accredited " without holding a licence under the Milk (Special Designations) Order, 1936, authorising him to do so.

Milk (Special Designations) Order, 1936.

The special designations which may be used in relation to milk under this Order are " Tuberculin Tested," " Accredited " and " Pasteurised."

These grades of milk may be shortly described as follows :—

Tuberculin Tested Milk is milk from cows which have passed a veterinary examination and a tuberculin test ; it is bottled on the farm or elsewhere ; and may be raw or pasteurised. If it is bottled on the farm, it may be described as Tuberculin Tested Milk (Certified). If pasteurised, it is described as Tuberculin Tested Milk (Pasteurised). The milk must contain no coliform bacilli in 1/100 of a millilitre and, if raw, the milk must satisfy the prescribed methylene blue reduction test while, if pasteurised, it must not contain more than 30,000 bacteria per millilitre.

Accredited Milk is raw milk from cows which have passed a veterinary examination ; it is bottled on the farm or elsewhere. It must satisfy the same bacteriological tests as raw Tuberculin Tested milk.

Pasteurised Milk is milk which has been retained at a temperature of 145°-150° for at least thirty minutes ; and does not contain more than 100,000 bacteria per millilitre.

The following 64 licences were granted during 1937 to use special designations under the above Order :—

14 Dealers' Licence to sell milk as " Tuberculin Tested."
7 ,, ,, ,, ,, " Accredited."
23 ,, ,, ,, ,, " Pasteurised."
6 Supplementary Licence to sell milk as " Tuberculin Tested."
4 ,, ,, ,, ,, " Accredited."
6 ,, ,, ,, ,, " Pasteurised."
2 Licences in respect of Pasteurising Establishments.
2 Licences in respect of " Bottling Establishments " with regard to " Tuberculin Tested " and " Accredited " milks.

School Milk.

As in previous years, milk has been supplied every day, excepting when there has been no school, to school children under the Milk Marketing Board's scheme.

One of the conditions is that the milk supplied should be approved by the Medical Officer of Health. Pasteurised milk is supplied, and this is regularly examined for bacterial content and efficient pasteurisation. The milk bottles are examined periodically for efficient sterilisation.

Milk Supplied to Hospitals and Open Air Schools.

The Corporation milk contracts for these supplies are for "Tuberculin Tested," "Accredited" and "Pasteurised" milk. Approximately 275 gallons of "Tuberculin Tested," 40 gallons of "Accredited" and 100 gallons of "Pasteurised" milk are delivered daily to the Corporation Hospitals and Open Air Schools.

TABLE SHOWING BACTERIOLOGICAL EXAMINATION OF SAMPLES OBTAINED FROM CONTRACT SUPPLY.

Grade of Milk.	No. of Samples Examined.	Bacterial Content.*			Presumptive Coli Test.		
		Satisfactory.	Not Satisfactory.	% Not Satisfactory.	B. Coli Absent in $\frac{1}{10}$ millilitre.	B. Coli Present in $\frac{1}{10}$ millilitre.	% Not Satisfactory.
Tuberculin Tested	47	44	3	6·4	42	5	10·6
Accredited	13	12	1	7·7	12	1	7·7
Pasteurised	46	36	10	21·7	26	20	43·5

*Examined by the Methylene Blue Reduction Test for Tuberculin Tested and Accredited Milk, and by the Plate Count Test for Pasteurised Milk.

Tuberculous Milk.

Five hundred and eighty-four samples of milk, nine of which were Pasteurised, were obtained and submitted for bacteriological examination for B. Tuberculosis. These samples are obtained on the arrival of the milk at the dairy. Of the 584 samples examined, 64, or 11 per cent., were found to be positive. It should be noted that the greater part of the farm milk after reaching the City is Pasteurised and is not delivered to the consumer in its raw state.

When a sample of milk is found to contain B. Tuberculosis, the Medical Officer of the district in which the milk is produced is immediately notified of the address of the farm ; the herd is then inspected under Section 4 of the Milk and Dairies (Consolidation) Act, 1915.

The cows which are found to be giving tuberculous milk are slaughtered under the Tuberculosis Order, by the respective Local Authorities.

Phosphatase Test.

The Phosphatase Test, which was begun in 1935 in order to ascertain whether milk was being properly Pasteurised or not was continued during 1937.

Ninety samples of " Pasteurised " milk have been examined and the following table shows the results of the test :—

	No. of Samples.	Correctly Pasteurised.	Not correctly Pasteurised.	Grossly underheated or raw.
1936	110	35	36	39
1937	90	46	23	21

As a result of the above tests, enquiries were made into the cause of the unsatisfactory samples, and certain defects in the pasteurising plants remedied. This brought about a marked improvement in 1937, and still better results may be expected in the future in consequence of this test.

Acts and Orders Relating to Diseases of Animals.

The Health Committee are the Executive Committee of the Local Authority for the purposes of the Diseases of Animals Acts, and General Orders made under the Acts.

These Acts and Orders entail a considerable amount of work which cannot be adequately expressed in tables and figures.

Anthrax Order, 1928.

During the year, a bullock affected with Anthrax was taken into the Manchester Abbatoir, having been moved in a dying condition from Cattle Sheds in the City without notification to this Authority by the owner.

When notification was received from the Manchester Authority, the provisions of the above Order were immediately carried out. Form (A) was served on the owner of the sheds, prohibiting the removal of all animals to or from the premises, except for slaughter, until after complete disinfection by the Local Authority and withdrawal of Form (A).

All animals in the sheds were examined by a Veterinary Surgeon and certified free from Anthrax before removal on licence for slaughter, disinfection of the premises was carried out and Form (A) withdrawn.

For failure to notify to this Authority the condition of the animal, legal proceedings were successfully taken against the owner of the sheds.

Fourteen cases of sudden death in cattle were investigated for Anthrax. Specimens were submitted to the Bacteriologist for examination and, in each case, proved negative. They were all carcases of cattle found dead in cattle wagons on arrival in Salford.

Swine Fever Order, 1908.

Eleven outbreaks of Swine Fever were notified to the Ministry of Agriculture and Fisheries during the year. All the outbreaks were found in slaughterhouses in the course of routine meat inspection. Some were in pigs on licence from " Infected Premises " and others were from premises where the disease had not been previously reported.

The total number of carcases condemned from all outbreaks was 114. They were moved to the Corporation's destructor and destroyed by burning, under the supervision of an Inspector.

Importation of Dogs and Cats Order, 1928.

This order is to prevent the introduction into Great Britain of rabies through the agency of canine or feline animals brought from overseas. Thirty-four visits to ships were made in order to ascertain that the dogs were being controlled in accordance with the provisions of the Order.

Animals (Landing from Ireland, Channel Islands and Isle of Man) Order, 1933, and Importation of Canadian Cattle Order, 1933.

There are eight cattle lairs in the City, into which cattle and sheep under the above Order are taken. During the year, 880 licences were received from Inspectors of the Ministry of Agriculture and Fisheries, authorising the movement of 8,565 cattle and 33,937 sheep to the lairs from the various Ports. After six days' detention, the cattle do not require a licence to accompany their movement. Prior to this detention, they can only be moved on licence for slaughter and, in this connection, 663 licences were issued, involving 7,364 cattle and 31,044 sheep.

The cattle lairs are frequently visited and inspected in order to check the movement of imported animals and to ensure that the lairs are at all times kept in such a condition as not to become a nuisance.

Transit of Animals Orders, 1927-31.

These Orders contain a number of provisions relating to the carriage of animals by road and rail. There are three cattle receiving and forwarding stations in the City, which are regularly visited and inspected. All the railway wagons, cattle pens and platforms are thoroughly cleansed and disinfected after use.

ANIMALS RECEIVED INTO THE CITY BY RAIL DURING 1937.

Cattle.	Sheep.	Calves.	Horses.
48,150	247,650	2,111	9

ANIMALS FORWARDED OUT OF THE CITY BY RAIL DURING 1937.

Cattle.	Sheep.	Calves.	Horses.
259	393	25	—

Other Acts and Orders dealt with during the year include :—

Foot and Mouth Disease Order, 1928.
Foot and Mouth Disease Order, Boiling of Animal Foodstuff Order.
Foot and Mouth Disease Order, Packing Material Order.
Poultry (Exposure for Sale) Order, 1937.
Poultry Markets and Receptacles (Disinfection) Orders.
Regulation of Movement of Swine Order, 1922.

SECTION V.

Pathological Laboratory Report

The appended tables show the work carried out at the City Laboratory and at Hope Hospital Laboratory during 1937. The total number of specimens examined was 40,147, including 243 examinations for the boroughs of Prestwich and Hazel Grove.

15,735 specimens were examined at Hope Hospital laboratory, showing an increase of 2,000 on those of last year, as the work there is still increasing owing to the growing demands made on the laboratory.

The results of the various bacteriological examinations carried out at the City Laboratory are dealt with under the various sections of the Annual Report.

There were no outbreaks of food poisoning during the year. A small outbreak of dysentery was detected early in the year, limited to a family of five; all the inmates of the house were affected. An organism belonging to the Flexner group was isolated from the stools in three of the cases. No further cases were reported.

Two isolated cases of dysentery—one Flexner and one Sonne—were detected later in the year.

An occurrence of some interest was three complaints received independently from mothers about a brand of dried milk. They each stated that, when the baby was fed on this brand of milk, it developed enteritis and vomiting, which cleared up when the milk was stopped.

Stained smears from the milk showed an occasional gram positive bacillus and a number of gram positive diplococci resembling enterococci, which were heat resistant at 60° C. though the majority of them were either dead or killed by this temperature and very few grew on culture after testing at 60° C.

Comparative examinations of other dried milks also showed enterococci in direct smear in some of them, but in smaller numbers.

Complete bacteriological counts of 8 dried milks were as follows :—

5 gave counts under	3,000	per gramme.
1 gave an average count of	6,000	,,
1 full cream brand, average count of	18,000	,,
Brand under suspicion average count of	34,000	,,

All these counts are low, though there is no bacteriological standard for dried milk. It is doubtful if the irritant effect of the milk in question was due to bacterial contamination. It was possibly due to toxins released from organisms which have mainly been killed in the process of preparing the milk. Enquiries made from the firm producing the milk produced no evidence that they had had any complaints from other sources.

During 1937, 219 bacteriological examinations were made of the swimming bath water at the four baths in the City. The results at Pendleton baths were consistently good, that is within the Ministry of Health regulations standard. Seedley baths gave two results in excess of this, and Blackfriars had 19 examinations where the total bacterial count was high. At Regent Road baths there was a high bacterial count on eight occasions. Apart from Blackfriars baths the results were on the whole good.

During the past year an investigation into the relative merits of Loeffler and Tellurite media (Glass's modification) in the diagnosis of diphtheria was carried out by Dr. Wishart, Resident Medical Officer, Ladywell Sanatorium, Dr. Stent and myself. Swabs from a series of known cases of diphtheria were cultured on both media. It was found that the tellurite medium gave approximately 14 per cent. more positives than the Loeffler. About one-third of these positive tellurite, negative Loeffler cultures were from cases of clinical diphtheria with membrane on the throat, the remainder being from convalescent carriers. Approximately 70 per cent. of the cases examined were gravis in type, though the positive tellurite, negative Loeffler cultures occurred equally in gravis and mitis types of infection.

The results of these findings show that it is advisable to use both methods of culture in the diagnosis of diphtheria. The tellurite method often takes an extra 18 hours before a definite diagnosis can be given, but it sometimes detects a diphtheria bacillus which has been overgrown on Loeffler medium.

Examinations for other Boroughs.

Nature of Investigation.	Prestwich.	Hazel Grove.	Total.
Swabs for Diphtheria Bacilli	151	—	151
Sputa for Tubercle Bacilli	18	—	18
Milk Inoculations	13	21	34
Methylene Blue Tests	—	19	19
Milk Counts	14	—	14
Examinations of Drinking Water	6	—	6
Agglutination Tests for Typhoid	1	—	1
Total	203	40	243

PARTICULARS OF INVESTIGATIONS CARRIED OUT IN THE PATHOLOGICAL LABORATORY DURING THE YEAR 1937.

Examination of specimens from Salford.

	Nature of Investigations.	Lady-well Sana-torium.	Hope Hospital.	Veterinary Depart-ment.	Tuber-culosis Depart-ment.	Venereal Diseases Depart-ment	School Medical Depart-ment.	Maternity and Child Welfare Depart-ment.	General Practi-tioners.	Salford Royal Hospital.	Various.	Total.
Bacteriological Examinations	Swabs for Diphtheria	6,959	2,640	—	1	—	2,309	31	2,263	—	—	14,203
	Swabs for Haemolytic Streptococci	—	359	—	—	—	—	6	—	—	—	365
	Urine Specimens	26	1,471	—	1	1	—	9	1	—	5	1,514
	Stools	22	187	—	—	—	—	1	14	—	32	256
	Exudates	25	332	—	—	—	—	—	—	—	—	357
	Direct Typing of Sputa	—	154	—	—	—	—	—	—	—	—	154
	Smears for Gonococci	—	307	—	—	—	2	—	24	—	—	333
	Anærobic Cultures	2	2	—	—	—	—	—	—	—	—	4
	Blood Cultures	8	262	—	—	—	—	—	—	—	—	270
	Stools for T.B.	1	1	—	—	—	—	—	—	—	—	2
	Sputa for T.B.	453	1,096	—	654	—	—	—	554	—	—	2,757
	Sputum Concentration (for T.B.)	—	3	—	6	—	—	—	—	—	—	9
	Estimation of Antibodies	—	323	—	—	—	—	—	—	—	—	323
	Examination of Milk Bottles for Sterility	—	—	76	—	—	—	—	—	—	—	76
	,, ,, Beasts' Ear for Anthrax	—	—	13	—	—	—	—	—	—	—	13
	,, ,, Hair for Ringworm	—	—	—	—	—	4	—	—	—	—	4
	,, ,, Dried Milk	—	—	—	—	—	—	16	—	—	—	16
	,, ,, Liquid Egg	—	—	—	—	—	—	—	—	—	3	3
	,, ,, Drinking Water	—	—	—	—	—	—	—	—	—	5	5
	Disinfectant Experiments	—	—	—	—	—	—	—	—	—	13	13
	Milk Counts	—	—	158	—	—	—	—	—	—	—	158
	Methylene Blue Tests	—	—	74	—	—	—	—	—	—	—	74
	Milk Inoculations	—	—	580	—	—	—	—	—	—	—	580
	Diagnosis Inoculations	5	59	1	—	—	—	—	—	10	—	75
	Virulence Tests	60	46	—	—	—	27	7	—	—	3	143
	Examination of Swimming Bath Water	—	—	—	—	—	—	—	—	—	219	219
	Gonococcal Cultures	—	—	—	—	61	—	—	—	—	—	61
Haematological Examinations	Blood Counts	5	517	—	—	—	—	—	—	—	—	522
	Reticulocyte Counts	—	476	—	—	—	—	—	—	—	—	476
	Blood Grouping	—	89	—	—	—	—	—	—	—	—	89
	Sedimentation Rate of Red Cells	—	422	—	—	—	—	—	—	—	—	422
	Paul Bunnell Reaction	—	1	—	—	—	—	—	—	—	—	1
	Coagulation Time	—	29	—	—	—	—	—	—	—	—	29
	Fragility of Red Cells	—	3	—	—	—	—	—	—	—	—	3
	Hæmoglobin Estimation	—	99	—	—	—	—	—	—	—	—	99
	Platelet Counts	1	13	—	—	—	—	—	—	—	—	14
	White Cell Counts	7	140	—	—	—	—	—	—	—	—	147

PARTICULARS OF INVESTIGATIONS CARRIED OUT IN THE PATHOLOGICAL LABORATORY DURING THE YEAR 1937—*Continued*

	Nature of Investigations.	Lady-well Sana-torium.	Hope Hospital.	Veterinary Depart-ment.	Tuber-culosis Depart-ment.	Venereal Diseases Depart-ment.	School Medical Depart-ment.	Maternity and Child Welfare Depart-ment.	General Practi-tioners.	Salford Royal Hospital.	Various.	Total.
Serological Examinations	Wassermann Tests	—	693	—	—	3,241	—	—	176	541	—	4,651
	Kahn Tests	—	693	—	—	3,241	—	—	176	541	—	4,651
	Meinicke Tests	—	6	—	—	7	—	—	4	13	—	30
	Gonorrhœal Complement Fixation Tests	—	28	—	—	1,247	—	—	1	1	—	1,277
Pathological Examinations	Cerebro-Spinal Fluids	92	239	—	—	—	—	—	—	—	—	331
	Pleural Fluids	—	84	—	—	—	—	—	—	—	—	84
	Autopsies	—	168	—	—	—	—	—	—	—	—	168
	Histological Sections	—	1,063	—	—	—	—	—	—	—	—	1,063
	Museum Specimens	—	3	—	—	—	—	—	—	—	—	3
Biochemical Examinations	Blood Sugars	1	1,153	—	—	—	—	—	—	—	—	1,154
	Blood Ureas	—	190	—	—	—	—	—	—	—	—	190
	Urea Clearances	—	301	—	—	—	—	—	—	—	—	301
	Test Meals	—	409	—	—	—	—	—	—	—	—	409
	Stools for Occult Blood	—	460	—	—	—	—	—	—	—	—	460
	Van Den Bergh Reactions	—	12	—	—	—	—	—	—	—	—	12
	Diastatic Index	—	2	—	—	—	—	—	—	—	—	2
	Milk Phosphatase Tests	—	—	90	—	—	—	—	—	—	—	90
	Urine Specimens	—	727	—	—	—	—	—	—	—	—	727
	Blood Calcium	—	3	—	—	—	—	—	—	—	—	3
	Blood Cholesterol	—	5	—	—	—	—	—	—	—	—	5
	Colloidal Gold Reaction	—	5	—	—	—	—	—	—	—	—	5
	Stools Analysis	—	2	—	—	—	—	—	—	—	—	2
	Urine for Ascorbic Acid Estimation	—	2	—	—	—	—	—	—	—	—	2
	Analysis of Urinary Calculas	—	1	—	—	—	—	—	—	—	—	1
Miscellaneous Examinations	Toxoid Treatment (No. of Cases)	—	61	—	—	—	—	—	—	—	—	61
	Mouse Inoculations	—	234	—	—	—	—	—	—	—	—	234
	Smears for Trichomanas	—	112	—	—	—	—	—	—	—	—	112
	Vaccines	11	8	—	—	—	—	—	—	—	—	19
	Friedman Tests	—	39	—	—	—	—	10	—	—	—	49
	Various	11	1	7	—	—	—	—	—	—	—	19
		7,689	15,735	999	662	7,798	2,342	80	3,213	1,106	280	39,904

SECTION VI.

Report relating to the City Analyst's Department.

The following Table (Table 1) contains particulars of 1,323 samples examined under the Food and Drugs (Adulteration) Act, 1928, during 1937.

TABLE 1.

Samples.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk	923	—	54	5.9
Skimmed Milk	5	—	—	—
Condensed Milk	9	—	—	—
Dried Milk	2	—	—	—
Butter	15	—	—	—
Cream	4	—	—	—
Synthetic Cream	1	—	—	—
Reconstituted Milk	1	—	—	—
Cheese	8	—	—	—
Cheese, cream	1	—	1	100
Margarine	10	—	2	20.0
Dripping	4	—	—	—
Lard	8	—	—	—
Shredded Beef Suet with Flour	8	—	—	—
Beef Suet	1	—	1	100
Sausage	8	3	—	7.5
Minced Meat	2	—	—	—
Preserved Shrimps	1	—	—	—
Tinned Sardines	3	—	—	—
Tinned Sild	7	—	—	—
Tinned Brisling	2	—	—	—
Tinned Tomatoes	4	—	—	—
Tinned Peas	3	—	—	—
Split Peas	2	—	—	—
Split Lentils	2	—	—	—
Flour	16	—	—	—
Sugar	4	—	—	—
Castor Sugar	2	—	—	—
Icing Sugar	2	—	—	—
Jam	20	7	—	35.0
Starch-reduced Bread	2	—	1	50.0
Treacle	4	—	—	—
Golden Syrup	1	—	—	—
Lemon Cheese	3	—	—	—
Eggs	1	—	—	—
Liquid Eggs	3	—	—	—
Tea	3	—	—	—
Coffee	4	—	—	—
Coffee and Chicory	3	—	—	—
Cocoa	5	—	—	—
Chocolate Eggs	4	—	—	—
Malt Extract and Cod Liver Oil	3	—	1	33.3
Malt Extract	1	—	1	100
Orange Juice	3	—	—	—
Vinegar	11	—	3	27.3
Pepper	8	1	—	12.5
Mixed Spice	3	—	—	—
Cinnamon	2	—	—	—
Ground Ginger	1	—	—	—

TABLE 1.—*Continued.*

Samples.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Mustard	1	—	—	—
Mustard Compound	3	—	—	—
Dried Mint	2	—	—	—
Custard Powder	1	—	—	—
Baking Powder	3	—	—	—
Cream of Tartar	4	—	—	—
Barley	3	—	1	33.3
Rice	3	—	—	—
Ground Rice	3	—	—	—
Sago	3	—	3	100
Tapioca	4	—	—	—
Arrowroot	4	—	—	—
Dried Prunes	7	—	—	—
Dried Apricots	5	—	—	—
Currants	5	—	—	—
Raisins	5	—	—	—
Sultanas	5	—	—	—
Candied Peel	3	—	—	—
Glace Cherries	4	—	—	—
Ground Almonds	8	—	—	—
Almond Oil	1	—	—	—
Olive Oil	9	—	—	—
Olive Oil and Raspberry Vinegar	2	—	—	—
Castor Oil	5	—	—	—
Camphorated Oil	3	—	—	—
Glycerine	5	—	—	—
Glycerine and Borax	2	—	1	50.0
Borax	3	—	—	—
Boracic Powder	2	—	—	—
Boracic Ointment	3	—	—	—
Basilicon Ointment	1	—	—	—
Sulphur Ointment	3	—	—	—
Zinc Ointment	7	—	2	28.6
Iodine Ointment	2	—	2	100
Stainless Iodine Ointment	8	—	4	50.0
Iodine Solution	2	—	2	100
Iodine Paint Methylated	4	—	2	50.0
Solution of Iodine Paint	1	—	—	—
Epsom Salts	5	—	—	—
Glauber Salts	3	—	—	—
Rochelle Salts	4	—	—	—
Seidlitz Powder	4	—	1	25.0
Liquorice Powder	2	—	—	—
Gregory Powder	4	—	—	—
Bicarbonate of Soda	4	—	—	—
Ammoniated Quinine Tablets	2	—	1	50.0
Aspirin Tablets	2	—	—	—
Lysol Soap	1	—	—	—
Disinfecting Fluid	1	—	—	—
Mineral Water	1	—	—	—
Whisky	8	—	—	—
	1,323	11	83	7.1

TABLE 2.

PERCENTAGE ADULTERATION—SALFORD.

Year.	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Percentage of Adulteration....	4.7	3.0	3.2	3.3	2.9	4.0	3.3	7.0	4.6	7.1
Total Samples.....	1484	1491	1556	1445	1286	1337	1374	1275	1329	1323
Formal Samples..	733	727	598	574	462	521	586	574	524	456
Informal ,,	751	764	958	871	824	816	788	701	805	867
No. of Samples per 100,000 of the population.	593	596	622	642	576	607	643	596	633	642

TABLE 3.

ADULTERATION OF MILK—SALFORD.

Year.	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Number of Samples.	994	1028	1103	1100	1106	1003	885	1006	1027	1020	1006	923
Percentage of Adulteration	2.5	2.1	3.9	2.5	3.3	2.1	1.7	4.2	1.2	4.6	3.0	5.9

TABLE 4.

MILK ADULTERATION—ENGLAND AND WALES.

Year.	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Percentage of Adulteration	7.4	6.9	8.2	7.8	6.6	6.4	7.3	7.7	7.2	7.4	6.7	Not available

TABLE 5.

AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January	82	12.46	3.63	8.83
February	91	12.47 (12.51)	3.63 (3.68)	8.84 (8.83)
March	76	12.42	3.56	8.86
April	66	12.46	3.61	8.85
May	74	12.36 (12.21)	3.54 (3.45)	8.82 (8.76)
June	95	12.42	3.57	8.85
July	69	12.49	3.66	8.83
August	51	12.57 (12.64)	3.72 (3.81)	8.85 (8.83)
September	86	12.57	3.70	8.87
October	81	12.76	3.85	8.91
November	78	12.68 (12.75)	3.79 (3.84)	8.89 (8.91)
December	74	12.50	3.66	8.84
	923	12.52	3.67	8.85

TABLE 6.

AVERAGE COMPOSITION OF FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January	39	12.50	3.68	8.82
February	35	12.60 (12.67)	3.73 (3.79)	8.87 (8.88)
March	30	12.65	3.74	8.91
April	40	12.54	3.64	8.90
May	49	12.37 (12.10)	3.57 (3.40)	8.80 (8.70)
June	53	12.50	3.66	8.84
July	38	12.63	3.79	8.84
August	21	12.69 (12.95)	3.82 (4.08)	8.87 (8.87)
September	52	12.63	3.73	8.90
October	39	12.84	3.93	8.91
November	30	12.78 (12.92)	3.89 (3.99)	8.89 (8.93)
December	33	12.58	3.75	8.83
	459	12.59	3.74	8.85

TABLE 7.

AVERAGE COMPOSITION OF MILK OTHER THAN FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January	43	12.43	3.59	8.84
February	56	12.37 — 12.41	3.55 — 3.61	8.82 — 8.80
March	46	12.28	3.45	8.83
April	26	12.32	3.55	8.77
May	25	12.35 — 12.42	3.50 — 3.53	8.85 — 8.89
June	42	12.33	3.46	8.87
July	31	12.33	3.52	8.81
August	30	12.42 — 12.43	3.60 — 3.62	8.82 — 8.81
September	34	12.49	3.65	8.84
October	42	12.70	3.79	8.91
November	48	12.60 — 12.65	3.71 — 3.75	8.89 — 8.90
December	41	12.43	3.59	8.84
	464	12.44	3.60	8.84

TABLE 8.

AVERAGE COMPOSITION OF ALL MILK—SALFORD.

Year.	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
	%	%	%	%	%	%	%	%	%	%	%	%
Fat	3.62	3.80	3.70	3.64	3.57	3.59	3.53	3.51	3.55	3.65	3.66	3.67
Solids-not-fat	8.80	8.81	8.57	8.83	8.92	8.92	8.91	8.79	8.83	8.85	8.89	8.85
Total Solids	12.42	12.61	12.27	12.47	12.49	12.51	12.44	12.30	12.38	12.50	12.55	12.52

In Tables 9 and 16 will be found details of 94 samples reported upon as either adulterated or of suspicious quality. This corresponds to a total of 7.1 per cent. adulteration for the year in Salford. This represents the highest figure for adulteration since the year 1925, although in 1935 the figure of 7.0 was reached. As will be seen from the portion of the report dealing with milk samples, the heavy adulteration noted above can be put down, to a great extent, to the large number of adulterated milk samples obtained from one supply. Following the usual practice of the department, the majority of offences were dealt with either by interviewing the manufacturers or by a letter of caution. Legal proceedings were instituted in nine cases, which however, represented a total of forty informal and formal adulterated samples. The fines (including costs) inflicted in these cases totalled £44 17s. 0d.

MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 1683	6.5% extraneous water, F.Pt. Hortvet △ 0.490	Prosecution and conviction, fined £3 and £2 2s. 0d. costs.	Farmers' milk. "Appeal to Cow" samples genuine.
A 1693	4.8% ,, ,, ,, ,, △ 0.511		
A 1694	0.7% ,, ,, ,, ,, △ 0.522		
A 1767	2.8% ,, ,, ,, ,, △ 0.519	County Authority informed of deficiencies.	Farmers' milk.
A 1771	5.1% ,, ,, ,, ,, △ 0.503		
A 1768	2.5% ,, ,, ,, ,, △ 0.517	Supply kept under observation.	Further sample genuine.
A 1894	Deficient 26.7% fat	Prosecution. Dairyman fined £3 and £2 2s. 0d. costs.	Bottled milk.
A 1898	Deficient 28.3% fat		
A 1950	1.3% extraneous water	Supply kept under observation.	Further samples from farmers genuine.
A 1954	0.7% ,, ,,		
A 1955	0.7% ,, ,,		
A 1959	Deficient 13.3% fat	Further samples genuine	Institution milk.
A 1974	1.65% extraneous water F.Pt. Hortvet △ 0.516	Further sample genuine	Bottled milk.
A 2070	8.2% ,, ,, ,, ,, △ 0.471		
A 2071	0.6% ,, ,, ,, ,, △ 0.507		
A 2072	5.3% ,, ,, ,, ,, △ 0.495		
A 2073	7.3% ,, ,, ,, ,, △ 0.467		
A 2074	5.3% ,, ,, ,, ,, △ 0.475		
A 2075	6.4% ,, ,, ,, ,, △ 0.475		
A 2076	4.7% ,, ,, ,, ,, △ 0.482		
A 2079	3.7% ,, ,, ,, ,, △ 0.510	Further samples taken	See Samples Nos. A 2145 to A 2152.
A 2080	4.7% ,, ,, ,, ,, △ 0.505		
A 2081	2.5% ,, ,, ,, ,, △ 0.517		
A 2082	2.5% ,, ,, ,, ,, △ 0.517		
A 2083	1.5% ,, ,, ,, ,, △ 0.522		
A 2084	3.7% ,, ,, ,, ,, △ 0.510		
A 2085	3.7% ,, ,, ,, ,, △ 0.510		
	Deficient 10% fat		

TABLE 9—*continued.*

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 2145	1.9% extraneous water, F.Pt. Hortvet Δ 0.520	Prosecution. Farmer fined £7 and £3 3s. 0d. costs.	"Appeal to Cow" samples of normal solids-not-fat and freezing points.
A 2146	1.3% ,, ,, ,, ,, Δ 0.497		
	Deficient 30.3% fat		
A 2147	2.1% extraneous water, F.Pt. Hortvet Δ 0.516		
	Deficient 8.0% fat		
A 2148	2.7% extraneous water, F.Pt. Hortvet Δ 0.495		
A 2149	3.2% ,, ,, ,, ,, Δ 0.493		
	Deficient 25.3% fat		
A 2150	5.4% extraneous water, F.Pt. Hortvet Δ 0.508		
A 2151	0.4% ,, ,, ,, ,, Δ 0.518		
A 2152	3.2% ,, ,, ,, ,, Δ 0.493		
	Deficient 13.3% fat		
A 2175	7.0% extraneous water, F.Pt. Hortvet Δ 0.493	County Authority notified	Salford dairyman supplied by Lancashire farmer.
A 2176	2.1% ,, ,, ,, ,, Δ 0.519		
A 2177	1.5% ,, ,, ,, ,, Δ 0.522		
A 2216	0.5% ,, ,, ,, ,, Δ 0.527	Further samples genuine	Farmers' milk.
A 2217	0.7% ,, ,, ,, ,, Δ 0.522		
A 2218	0.5% ,, ,, ,, ,, Δ 0.527		
A 2282	Deficient 3.3% fat	Supply kept under observation.	Informal.
A 2289	Deficient 10% fat	Further samples genuine	Farmers' milk.
A 2374	0.9% extraneous water, F.Pt. Hortvet Δ 0.525	Farmer cautioned by letter	"Appeal to Cow" samples genuine.
A 2375	1.9% ,, ,, ,, ,, Δ 0.520		
A 2410	2.3% ,, ,, ,, ,, Δ 0.518		
A 2411	2.3% ,, ,, ,, ,, Δ 0.518		
A 2551	4.1% ,, ,, ,, ,, Δ 0.496	Prosecution. Farmer fined £3 and £5 14s. 0d. costs.	"Appeal to Cow" samples genuine.
A 2555	5.4% ,, ,, ,, ,, Δ 0.490		
MDA 99	4.0% ,, ,, ,, ,, Δ 0.503		
MDA 100	3.6% ,, ,, ,, ,, Δ 0.490		
A 2610	0.6% ,, ,, ,, ,, Δ 0.523	Supply kept under observation.	Remainder of supply genuine.
A 2930	0.8% ,, ,, ,, ,, Δ 0.526	Farmer cautioned by letter	"Appeal to Cow" samples

Milk.

923 samples of milk were examined during the year, 459 being samples of farmers' milk taken under Section 16 of the Food and Drugs (Adulteration) Act in course of delivery in Salford to wholesalers or retailers. As will be noticed from Tables 5, 6 and 7, the average butter fat content of all milk for the whole year was 3.67 per cent., that of farmers' milk being 3.74 per cent. and that of milk from all other sources 3.60 per cent. Farmers' milk, therefore, showed an average of 0.14 per cent. more butter fat; figures such as these have been obtained over the last nine years and their significance was discussed at some length in the report for the year 1935.

Of the total milk samples taken during the year, 54 were adulterated or below the presumptive limits of 3.0 per cent. fat and 8.5 per cent. solids-not-fat, fixed by the Sale of Milk Regulations, 1901. This figure represents a percentage adulteration of 5.9, which is the highest figure recorded in Salford since the year 1921, although it is lower than the figure for milk adulteration throughout England and Wales during the last 12 years, which varied from 6.4 per cent. to 8.3 per cent.

In the following table will be found particulars of the various types of adulteration and the number of samples under each heading :—

	%
Milks deficient in fat only	6 or 0.7
Milks containing added water only	43 or 4.7
Milks deficient in fat and containing added water	5 or 0.5
	54 or 5.9
Milks containing more than 3 per cent. added water	21 or 2.3
Milks 10 per cent. or more deficient in fat	8 or 0.9

No samples contained either colouring matter or preservative.

In the next paragraphs will be found a brief account of the adulterated samples, and Appendix I contains the results on all samples examined by the freezing point test, which are compared with the adulteration indicated by the presumptive limits of the Sale of Milk Regulations, 1901.

SAMPLES NOS. A 1683, A 1693 AND A 1694.

Sample No. A 1683 was an informal sample and Nos. A 1693 and A 1694 were formal samples of the same farmer's milk taken on delivery to a Salford

dairyman. " Appeal to Cow " samples (Nos. A 1695 and A 1696), taken at the farm, were of good quality :—

TABLE 10.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet Δ
A 1695	12.63	3.97	8.66	0.547
A 1696	12.47	3.95	8.52	0.540

Proceedings were instituted in respect of Samples Nod. A 1693 and A 1694 against the farmer, who was fined £2 0s. 0d. and £2 2s. 0d. costs in regard to Sample No. A 1693 and £1 0s. 0d. in the case of Sample No. A 1694.

SAMPLES NOD. A 1767 AND A 1771.

These were two formal samples containing respectively 8.26 and 8.52 per cent. solids-not-fat ; the first of these contained approximately 2.8 per cent. of extraneous water, both by the freezing point test and comparison of its solids-not-fat with the presumptive minimum of 8.5 per cent. laid down by the Sale of Milk Regulations, 1901. Sample No. A 1771, however, could be classed as genuine under the latter regulations, but the determination of the freezing point showed the presence of at least 5.1 per cent. of extraneous water. The minimum freezing point shown by genuine milk is –0.530° C. Hortvet. Two informal samples taken the following day from the farmer at the place of delivery to the dairyman were found on analysis to contain respectively 4.3 and 0.7 per cent. of extraneous water. The place of delivery was under the administration of the County Authority and particulars of the above samples were therefore communicated to that Authority for their information and further action.

SAMPLE NO. A 1768.

On analysis this sample gave a figure of 8.57 per cent. for solids-not-fat ; the freezing point, however, indicated the presence of 2.5 per cent. of extraneous water. A further sample was obtained the following day and found to be genuine ; the supply was kept under observation.

SAMPLES NOD. A 1950, A 1954 AND A 1955.

These formal samples obtained from one dairyman's supply showed on analysis solids-not-fat respectively of 8.54, 8.60 and 8.57 per cent. and would, therefore, under the presumptive limit of the Sale of Milk Regulations be classed as genuine. However, on carrying out the freezing point test on these samples, figures of –0.523, –0.526 and –0.526° C. Hortvet were obtained, which showed the presence of at least 1.3, 0.7 and 0.7 per cent. of extraneous water respectively. Further samples from the farmers supplying this dairyman were found to have

normal freezing points and to be genuine milks of good quality. In view of the small amounts of extraneous water present, no further action was taken, but the supply was kept under observation.

SAMPLE NO. A 1959 (A 1962, A 1969 and A 2009).

These were control samples of farmers' milk taken on delivery at a Salford Institution. While all four samples were below the contract requirement figure of 3.25 per cent. butter fat, Sample No. A 1959 was the only one which was below the presumptive legal limit of 3.0 per cent. butter fat. The samples contained the following butter fat percentages :—2.6, 3.0, 3.1 and 3.1 respectively. The averages for the whole consignments of which the above samples represent single churns, gave butter fat contents higher than required by specification, indicating that the supply had not been evenly mixed. The contractors were communicated with and further samples taken, which were all of good quality.

SAMPLES NOD. A 2070 TO A 2076 (INCLUSIVE).

These were informal samples taken on delivery from a farmer to a Salford dairyman. All the samples showed the presence of extraneous water in amounts varying from 0.6 to 7.3 per cent. calculated on the presumptive limits of 3.0 per cent. fat and 8.5 per cent. solids-not-fat of the Sale of Milk Regulations. The determination of the freezing points indicated the presence of at least 4.3 to 11.9 per cent. of extraneous water. In addition, the original milk of Sample No. A 2070 was deficient of 9.3 per cent. of fat.

SAMPLES NOD. A 2079 TO A 2085 (INCLUSIVE).

These were formal samples taken on the next delivery from the same farmer who supplied Samples Nod. A 2070 to A 2076. Calculated on the limits of the Sale of Milk Regulations, the samples appeared to be genuine, although several contained the minimum amount of solids-not-fat. Determinations of the freezing points, however, showed the samples to be watered, although to a much less extent than previously, *i.e.*, from 1.5 to 4.7 per cent., and in addition, Sample No. A 2085 was deficient of 10 per cent. of milk fat.

SAMPLES NOD. A 2145 TO A 2152 (INCLUSIVE).

These were further formal samples of the same supply. With the exception of Sample No. A 2145, they all showed the presence of extraneous water on the basis of the Sale of Milk Regulations' presumptive figures, ranging from 0.4 to 5.4 per cent., and the freezing points indicated at least from 1.9 to 7.0 per cent. of extraneous water. In addition, Samples Nod. A 2146, A 2147, A 2149 and A 2152 were deficient respectively of 30.3, 8.0, 25.3 and 13.3 per cent. of fat. The farm was visited the same afternoon and the next morning by the inspector

and " Appeal to Cow " samples obtained ; the results of the analyses of these are contained in the following table :—

TABLE 11.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet. △
NIGHT MILK.....				
A 2153.....	12.23	3.25	8.98	0.540
A 2154.....	13.57	4.50	9.07	0.541
A 2155.....	12.99	4.05	8.94	0.547
A 2156.....	12.16	3.32	8.84	0.544
A 2157.....	12.35	3.65	8.70	0.543
A 2158.....	12.38	3.20	9.18	0.551
A 2159.....	13.45	4.75	8.70	0.551
MORNING MILK.				
A 2160.....	11.62	2.50	9.12	0.551
A 2161.....	11.51	2.50	9.01	0.540
A 2162.....	11.52	2.72	8.80	0.539
A 2163.....	11.47	2.70	8.77	0.542
A 2164.....	11.69	2.62	9.07	0.547
A 2165.....	11.88	3.00	8.88	0.551

It will be observed that the night milks were all of good quality and normal freezing points, while those obtained in the morning were all poor in fat content, but the solids-not-fat and freezing points were still well above the minimum. The deficiency in fat contents in the latter samples was primarily due to a long interval (13½ hours) between the previous milking. As a result of this, due allowance must be made for the fat deficiencies shown in the previous samples, but there did not appear to be any reason for the poor solids-not-fat and low freezing points in the samples taken on delivery other than the addition of water.

Proceedings were instituted against the farmer, in respect of Samples Nod. A 2145 to A 2152, who was fined £7 and £3 3s. 0d. costs.

From the above paragraphs it will be seen that, excluding "Appeal to Cow" samples, this case involved the examination of 22 adulterated samples, only 8 of which, however, were directly concerned in the case. When it is pointed out that these samples amounted to 2.4 per cent. of the total milks taken in Salford during the year, or represented 41 per cent. of the total milk adulteration, it will be realised that the figure given for total adulteration is by no means representative of the milk supplies in general, but has been heavily weighted by the work involved in this case.

SAMPLES NOD. A 2175, A 2176 AND A 2177.

These formal samples of milk taken from a dairyman, although apparently genuine when considered on the standards of the Sale of Milk Regulations, showed, on the freezing point determinations, the presence of respectively 7.0, 2.1 and 1.5 per cent. of extraneous water. The dairyman collected his own supply at the farmer's premises, which are in the County area. Particulars of the above results were therefore communicated to the County Authority, who kept the supply under observation.

SAMPLES NOD. A 2216, A 2217 AND A 2218.

These formal samples of farmers' milk taken on delivery to Salford dairymen were found to contain very small amounts (less than 1 per cent. in each case) of extraneous water. Further samples from the same supply were genuine.

SAMPLE NO. A 2282.

This informal sample was found on analysis to be slightly deficient in fat (fat content 2.9 per cent.) ; further samples were genuine.

SAMPLE NO. A 2289.

This sample of farmers' milk was found to be deficient of 10 per cent. of milk fat. The whole of this farmer's milk supply was sampled five days later ; all the samples, however, were of genuine quality.

SAMPLES NOD. A 2374, A 2375, A 2410 AND A 2411.

The above were formal samples purchased on two separate occasions from a farmer-retailer. While they were all above the presumptive minimum of 8.5 per cent. non-fatty solids of the Sale of Milk Regulations, the freezing points indicated the presence of small amounts of extraneous water, varying from 0.9 to 2.3 per cent. A visit was paid to the farm, when the dairy was inspected, the milking supervised and " Appeal to Cow " samples taken. An inefficient joint was found in the water-cooling system, and small amounts of water were found in several of the churns. The " Appeal to Cow " samples gave freezing points for genuine milks, as indicated in the following table :—

TABLE 12.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet. △
A 2426	12.65	3.80	8.85	0.550
A 2427	12.65	3.80	8.85	0.544
A 2428	13.25	4.20	9.05	0.548
A 2429	13.90	5.10	8.80	0.555

A letter of caution was sent to the farmer drawing his attention to the results obtained and to the conditions found at the farm.

SAMPLE No. A 2610.

This sample of farmers' milk was found to contain only 8.45 per cent. of solids-not-fat, a figure which indicated the presence of a very small amount of extraneous water. The remaining six samples, obtained at the same time and consigned from this farmer, were all genuine. The supply was kept under observation.

SAMPLES NOD. A 2930 AND A 2931.

Sample No. A 2930, taken on delivery to a Salford dairyman, was found to be slightly deficient in solids-not-fat to an extent corresponding to the presence of 0.8 per cent. of extraneous water, the freezing point also indicating the presence of the same amount of extraneous water. A formal sample, No. A 2931, part of the same consignment as Sample No. A 2930, was found to contain 2.9 per cent. of fat, against the presumptive miminum of the Sale of Milk Regulations of 3.0 per cent. for genuine milk. A visit was paid to the farm from which the supply was consigned, the milking superintended and samples taken. The cows were milked mechanically and inefficient mixing of the strippings with the bulk of the supply probably accounted for the slight deficiency noted in Sample No. A 2931. " Appeal to Cow " samples were genuine in regard to fat, non-fatty solids and freezing points (see the following table). The presence of the slight amount of extraneous water in Sample No. A 2930 must therefore be put down to carelessness at the farm. A letter of caution was sent to the farmer concerned ; further samples taken on delivery were found to be of genuine composition.

TABLE 13.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet. △
A 2938	11.96	3.32	8.64	0.541
A 2939	12.71	3.80	8.91	0.547

Bottled Milk.

SAMPLE No. A 1894.

This formal sample of bottled milk was purchased from a shop and found on analysis to contain only 2.20 per cent. butter fat, which is equivalent to a deficiency of 26.7 per cent. when compared with the presumptive standard of 3 per cent. butter fat of the Sale of Milk Regulations, 1901. Following the usual custom of this department of tracing the offence back to the person actually responsible for committing it, samples were obtained the following day from the dairyman who supplied the shopkeeper (see Sample No. A 1898).

SAMPLE No. A 1898.

This formal sample was obtained from the dairyman on delivery to the shop from which Sample No. A 1894 was obtained and was found to contain only 2.15 per cent. of butter fat, which is equivalent to a deficiency of 28.3 per cent. As samples of farmers' milk on delivery to this dairyman were genuine and as this was the fourth occasion on which milk bottled by him had been

found deficient in fat, proceedings were instituted against the dairyman and he was fined £3 and £2 2s. 0d. costs.

The failure to stir milk before and during bottling may lead to serious deficiencies of butter fat content in some of the bottles, but there is absolutely no reason why the purchaser of these bottles should be prejudiced by what is after all pure negligence on the part of the dairyman. It would safeguard retailers of bottled milk and at the same time simplify the work of this department if such milk were covered by warranty.

SAMPLE NO. A 1974.

This was a formal sample purchased from a shop and found to contain at least 1.65 per cent. of extraneous water. The freezing point indicated the presence of 2.6 per cent. of extraneous water. The wholesale dairy company supplying the shop were sampled on delivery the next day and this sample was found to be genuine. The supply was kept under observation and further samples were found to be genuine.

SAMPLE NO. A 2551.

This formal sample, purchased from a shopkeeper, was found on analysis to contain only 8.15 per cent. of non-fatty solids, which is equivalent to 4.1 per cent. of extraneous water. The freezing point indicated the presence of at least 6.4 per cent. of extraneous water. Following the usual procedure of the department, the wholesaler supplying this shopkeeper was sampled the same day.

SAMPLE NO. A 2555.

This formal sample was obtained from the wholesaler who supplied the shopkeeper with Sample No. A 2551. On analysis, the non-fatty solids found were 8.04 per cent., which is equivalent to at least 5.4 per cent. of extraneous water. The following day a request was received from this dairyman that samples of his farmer's supply should be taken on delivery to him. The following two samples were therefore obtained by the Lancashire County Authority, as the place of delivery was situated in that area.

SAMPLES NOD. MDA 99 AND MDA 100.

These samples of farmers' milk taken in connection with Sample No. A 2555 were found on analysis to contain 8.16 and 8.19 per cent. of non-fatty solids, figures which indicated the presence of at least 4.0 and 3.6 per cent. of extraneous water respectively. The freezing point of Sample No. MDA 99 showed at least 5.1 per cent. of extraneous water, and that of Sample No. MDA 100 showed at least 7.6 per cent. This department requested the Cheshire County Council, in whose district the farm is situated, to have "Appeal to Cow" samples procured. These were examined and found to be milks of good quality and of normal freezing points, as indicated by the figures in the following table :—

TABLE 14.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point Hortvet. Δ
666	13.58	4.70	8.88	0.550
667	12.60	3.70	8.90	0.543

Comparison of the "Appeal to Cow" samples with Nos. MDA 99 and MDA 100 indicated that the latter contained 8.5 and 9.7 per cent. of extraneous water respectively.

Proceedings were instituted in respect of Samples Nod. A 2555, MDA 99 and MDA 100, when a warranty defence was raised in regard to Sample No. A 2555, the case against the defendant concerned being dismissed. With regard to the remaining samples, the farmer pleaded guilty and was fined £2 on the first summons, and £1 on the second summons, together with costs of £5 14s. 0d.

The following table shows the relative figures for pasteurised and non-pasteurised milk retailed in Salford during the year. These figures have now been included in the report for three years and it may be pointed out that on each occasion there has been a slightly higher figure for fat content in the non-pasteurised milk as compared with the pasteurised, just as the farmers' milk shows the same effect when compared with milks from other sources.

The division of samples into pasteurised and non-pasteurised is based upon information supplied by the Sampling Officer.

TABLE 15.

AVERAGE COMPOSITION OF PASTEURISED AND NON-PASTEURISED MILK.

Month.	PASTEURISED.			NON-PASTEURISED.		
	Fat.	Solids-not-fat.	Total Solids.	Fat.	Solids-not-fat.	Total Solids.
January	3.50	8.80	12.30	3.68	8.98	12.66
February	3.50	8.68	12.18	3.58	8.74	12.32
March	3.48	8.81	12.29	3.38	8.81	12.19
April	3.49	8.73	12.22	3.63	8.85	12.48
May	3.45	8.88	12.33	3.47	8.92	12.39
June	3.52	8.87	12.39	3.34	8.84	12.18
July	3.52	8.80	12.32	3.56	8.69	12.25
August	3.63	8.80	12.43	3.70	8.74	12.44
September	3.62	8.88	12.50	3.79	8.83	12.62
October	3.71	8.86	12.57	3.85	8.98	12.83
November	3.73	8.89	12.62	3.77	8.88	12.65
December	3.63	8.86	12.49	3.60	8.80	12.40
Yearly Average	3.58	8.75	12.33	3.66	8.83	12.49

TABLE 16.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration.	Remarks.
A 1606	Blackcurrant Jam	65 parts per million of sulphites.	Manufacturers notified.
A 1663	Pearl Barley	Infested with acari	Remainder of stock uninfested.
A 1676	Ammoniated Quinine Tablets.	Deficient 80% ammonia.	Suppliers interviewed.
A 1677	Cream Cheese	Deficient 77% butter fat.	Prosecution and conviction. Fined £2 and £2 2s. 0d. costs.
A 1839	Blackcurrant Jam	73 parts per million of sulphites.	Manufacturers cautioned.
A 1840	Blackcurrant Jam	67 parts per million of sulphites.	
A 1885	Iodine Paint	Deficient 69.5% iodine.	Manufacturers interviewed.
A 1985	Table Vinegar	Deficient 12.5% acetic acid.	Manufacturers notified.
A 2000	White Pepper	18 parts per million of sulphites.	Manufacturers notified.
A 2005	Sago	Consisted of tapioca	Retailer notified.
A 2124	Zinc Ointment B.P.	Base did not consist of simple ointment B.P.	Manufacturers notified.
A 2131	Seidlitz Powder	Contained 30% excess sodium bicarbonate.	Manufacturers notified.
A 2208	Iodine Solution	Deficient 46% iodine; contained industrial methylated spirits.	
A 2236	Iodine Solution	Deficient 38% iodine; contained industrial methylated spirits and 48% excess potassium iodide.	Label altered and iodine content increased.
A 2209	Iodine Paint Methylated.	Deficient 48% iodine.	Manufacturers interviewed.
A 2270	Beef Sausage	115 parts per million of sulphites without declaration.	Prosecution and conviction. Fines of £2 10s. 0d. and £1 1s. 0d. costs.
A 2277	Beef Sausage	150 parts per million of sulphites without declaration.	
A 2272	Beef Sausage	55 parts per million of sulphites without declaration.	Caution.
A 2273	Margarine	Label offence	Caution.
A 2313	Jam	75 parts per million of sulphites.	Proceedings instituted against manufacturers. See special note.
A 2318	Jam	80 parts per million of sulphites.	
A 2314	Jam	65 parts per million of sulphites.	Caution.
A 2317	Jam	45 parts per million of sulphites.	

TABLE 16—*continued.*

No.	Description.	Nature of Adulteration.	Remarks.
A 2401	Vinegar	Deficient 17.5% acetic acid.	Manufacturers interviewed.
A 2413	Vinegar	Deficient 17.5% acetic acid.	
A 2515	Glycerine and Borax	Deficient 20.8% of borax.	Manufacturers notified.
A 2573	Sago	Consisted of tapioca	Shopkeepers notified.
A 2575	Sago	Consisted of tapioca	
A 2578	Beef Suet	Contained 14.6% rice flour.	Caution.
A 2629	Malt Extract and Cod Liver Oil.	Deficient 13% proteins	Manufacturer interviewed.
A 2670	Malt Extract	Deficient 7.5% proteins.	
A 2644	Iodine Ointment	Deficient 14% iodine.	Present stock withdrawn from sale.
A 2690	Iodine Ointment	Deficient 34% iodine.	
A 2696	Margarine	Label offence	Caution.
A 2746	Stainless Iodine Ointment.	Deficient 74% iodine.	Prosecution. See special note.
A 2781	Stainless Iodine Ointment.	Deficient 60% iodine.	
A 2758	Starch-reduced Bread	27.79% carbohydrates declared. Found 45% carbohydrates.	Manufacturers notified.
A 2783	Stainless Iodine Ointment B.P.C.	Deficient 64% iodine.	Prosecution and conviction. Fined £5 5s. 0d. and £3 3s. 0d. costs.
A 2796	Stainless Iodine Ointment B.P.C.	Deficient 64% iodine.	
A 2905	Zinc Ointment	Base consisted of benzoated lard.	Caution.

Butter.

Fifteen samples were examined during the year, all of which were found to be genuine. The moisture ranged from 12.0 to 16.0 per cent.; the maximum permitted by law is 16.0 per cent.

Margarine.

Ten samples have been examined, 8 of which were genuine, the offence in regard to the other two samples, Nos. A 2273 and A 2696, being that of incorrect labelling. According to Section 6, Sub-section 3 (*c*) of the Food and Drugs (Adulteration) Act, 1928, when margarine is sold by retail the outer wrapper shall bear only the word "Margarine" in half-inch block letters, no other printed matter being allowed (except a statement of the weight). In the case of Samples Nod. A 2273 and A 2696, trade labels and other matter relating to the contents were also printed on the outer wrappers. In each case the shopkeeper was cautioned by the Sampling Officer, who explained the exact requirement of the Act.

Cream.

Four samples have been examined, all of which were reported as genuine. In one case the butter fat content was 47 per cent. ; in the other 3 cases, which were sold as " Tea and Coffee Cream," " Tea Cream " and " Fruit Cream," the butter fat contents were 21, 26 and 22 per cent. respectively.

These lower fat content creams would appear to be a direct result of the suggestion in the Report of the Reorganisation Commission for Milk that the sale of such cream should be encouraged for use with breakfast cereals, etc. Its cheapness compared with rich cream would be an added inducement to its purchase and at the same time it would offer competition to foreign tinned cream, which usually has a butter fat content of 20 to 25 per cent.

This suggestion is quite logical and in the hands of reputable firms there can be no serious objection to the practice. On the other hand, it must not be forgotten that at the present time, there are no legal standards for cream in this country, and there are no obligations on the vendor to label the container with the amount of butter fat which his product contains, and further, it is a fairly simple matter to give cream of this nature the appearance of a rich cream of high butter fat content. It can readily be imagined, therefore, that a big temptation may be offered to sell the lower quality article at the price of genuine rich cream, a state of affairs which would not arise if a declaration of butter fat content were required by law.

Cheese.

Eight samples of Cheshire cheese were examined during the year and all found to be genuine and conformed to the standard adopted by the Cheshire Farmers' Union of 45 per cent. of fat on the dry solids.

Cream Cheese.

One sample was submitted, No. A 1677, during the year and gave the following figures on analysis :—

Fat	12.2
Water	66.0
Protein	19.2
Mineral Matter	1.5
Milk sugar, etc.	1.1
	100.0

Two authentic samples of cream cheese purchased about the same time for comparison gave fats of 70.0 and 80.0 per cent. and moistures of 28.6 and 19.0 per cent. respectively. The figures obtained above are more significant still when compared with the average values for ordinary Cheshire cheese purchased in this City, *i.e.*, fat 33 per cent. and moisture 39 per cent., corresponding to a heat equivalent of 1,830 calories per pound, against only 890 calories per pound in the sample under discussion. Consideration of the analytical figures also shows that the sample was made from milk which contained only 2 per cent. of fat.

Although at present there is no legal standard for cheese of any type in this country, "cream cheese," to both the trade and the general public, has always meant cheese prepared from cream, and not whole milk, much less partially skimmed milk. As far as the sample was concerned, therefore, it was very definitely not a cream cheese, the only pretext on which such a classification could be based being that it was a "soft cheese," although its texture was decidedly granular and quite unlike the close, smooth appearance of a genuine cream cheese. With regard to soft cheeses, there are several distinct varieties besides cream cheese, such as Gervais, Bondon, Camenbert and miniature Wensleydale. Gervais is made from fresh whole milk enriched with a proportion of cream; Bondon was originally a whole milk cheese but is now frequently made from skimmed milk, while the two last are whole milk cheeses; these four varieties are, however, quite distinct in origin and composition from cream cheese and are sold under their respective titles.

In arriving at a standard on which to base the genuineness of a cream cheese, reference was made in particular to the Agricultural Produce (Grading and Marking) (Cream Cheese) Regulations, 1935, made by the Minister of Agriculture and Fisheries, in which two grades are recognised; Extra Selected (Double Cream) containing not less than 70 per cent. butter fat by weight, and Selected, containing not less than 55 per cent. butter fat by weight. On the basis of the lower standard, the sample was deficient of 77 per cent. of the minimum amount of butter fat.

In view of the extremely unsatisfactory composition of this sample, a prosecution was instituted against the shopkeeper, after it had been ascertained that the manufacturers had given a correct invoice for the article, and were therefore not responsible for the description applied to it by the retailer. At the hearing a fine of £2 0s. 0d. and £2 2s. 0d. costs was imposed.

Lard, Suet and Dripping.

During the year, 8 samples of lard, 4 of dripping and 8 of shredded beef suet with flour were examined and all were found to be genuine. One sample, bought as beef suet, was found on examination to consist of shredded beef suet with rice flour, containing 85.4 per cent. suet. It is an offence to sell suet minced with flour unless the presence of the latter is declared to the purchaser, and further, a standard of not less than 83 per cent. fat has been suggested by the Society of Public Analysts in 1931 as indicating the absolute maximum of flour which should be present under any conditions. The sample in question complied with this standard except from the point of view of labelling, and the shopkeeper was cautioned accordingly.

Jam.

Twenty samples have been examined during the year, and of these 7 were reported as adulterated. In every case the offence consisted in the presence of preservative in the form of sulphur dioxide, in an amount over and above the figure of 40 parts per million permitted by the Public Health (Preservatives, etc. in Food) Regulations, 1925.

BLACKCURRANT JAM, SAMPLE NO. A 1606.

This informal sample was found on analysis to contain 65 parts per million of sulphur dioxide preservative, an excess of 25 parts per million on the maximum allowed under the above Regulations. Blackcurrant jam made from preserved fruit pulp is extremely difficult to render entirely free from sulphur dioxide. At the same time, by different methods of preservation or by care in boiling, a satisfactory product can be obtained. The wholesale suppliers and the manufacturers of this jam were communicated with and the latter stated that every care would be taken in the manufacture of their product to ensure that it complied with the Regulations.

BLACKCURRANT JAM, SAMPLES NOD. A 1839 AND A 1840.

These were informal and formal samples of the same make of jam which, on analysis, were found to contain respectively 73 and 67 parts per million of sulphite preservative calculated as sulphur dioxide. The same remarks apply in the case of these samples as were made in the case of Sample No. A 1606 and a letter of caution was sent to the manufacturers concerned.

NEW SEASON'S STRAWBERRY JAM, SAMPLES NOD. A 2313 AND A 2318.

These were informal and formal samples respectively purchased from the same shop. On examination for sulphite preservative, the informal sample was found to contain 75 parts per million expressed as sulphur dioxide. The formal sample, purchased the following day, was found to contain 80 parts per million of sulphites expressed as sulphur dioxide. The amounts found in both these samples were considerably in excess of the permitted limit. When sulphur dioxide is found in jam, it is almost invariably due to the use of fruit pulp instead of fresh fruit in the preparation of the jam. Strawberry pulp is allowed to contain 2,000 parts per million of sulphur dioxide. In the opinion of this department, this offence was aggravated by the fact that a " New Season's " label was on the sample and further, the purchase was made actually in this year's strawberry season from the first consignment delivered to the shop. The use of pulp annulled any claim to freshness which may be inherent in the " New Season " label.

Proceedings were instituted against the vendors of this sample, but it transpired that the copy of your Analyst's certificate enclosed with the summons was not served on the vendors by the police concerned. This procedure is contrary to the requirements of Section 28 of the Food and Drugs (Adulteration) Act, 1928; the Stipendiary Magistrate therefore granted leave to withdraw the summons, and in view of the fact that the vendors had withdrawn all stocks of the jam from sale in this City, it was not possible to take further samples.

NEW SEASON'S STRAWBERRY JAM, SAMPLES NOD. A 2314 AND A 2317.

These were informal and formal samples purchased from the same shop; the informal sample, No. A 2314, was found to contain 65 parts per million of sulphites as sulphur dioxide, and the formal sample, No. A 2317, purchased the following day, contained 45 parts per million of sulphur dioxide. In view of the relatively slight excess of sulphur dioxide found in the formal sample, a letter of caution to the vendors was considered adequate action.

Sausage.

Eight samples have been examined during the year, 3 being reported as adulterated.

Beef Sausage, Samples Nod. A 2270 and A 2277.

These were informal and formal samples purchased from the same shop; the former contained 115 parts per million and the latter 150 parts per million of sulphites expressed as sulphur dioxide.

Sulphite is used as a preservative and under the Public Health (Preservatives, etc. in Food) Regulations, 1925, sausage is allowed to contain 450 parts per million of sulphite if its presence is declared to the purchaser. No notification was given at the time of purchase that either of these samples contained preservative. The average amount of sulphite found in preserved sausage in this laboratory is approximately 100 parts per million. In view of the presence and the amount of sulphite found in the above samples, legal proceedings were instituted, the retailer being fined 10s. and the wholesaler, for aiding and abetting the offence, was fined £2 0s. 0d. and £1 1s. 0d. costs.

Beef Sausage, Sample No. A 2272.

This informal sample was found to contain 55 parts per million of sulphur dioxide, no declaration of the presence of preservative being given at the time of purchase. The shopkeeper was interviewed and it was ascertained that the premises had only recently been occupied and the inspector verified that the preservative notices had been left at the former premises and were still displayed there. In view of these circumstances and the relatively small amount of sulphite present, a verbal caution was deemed adequate action.

Tapioca and Sago.

Four samples of tapioca have been examined, all of which were found to be genuine.

The 3 samples of sago which were submitted, however, all consisted of tapioca. This offence was a technical one, in that both substances are approximately the same price and are used for similar purposes and tapioca is often manufactured in a form which resembles sago in appearance. On the other hand, in origin and microscopically, the two substances are absolutely distinct, tapioca being obtained from the tubers of the cassava plant and sago from the pith of the sago palm; it is, therefore, a misdescription to call tapioca sago or *vice versa*. The vendors of Samples Nod. A 2005, A 2573 and A 2575 were informed of their real composition and were requested to label them correctly.

Vinegar.

During the year, 11 samples were analysed, of which 3 were reported as adulterated.

Sample No. A 1985 was found to contain only 3.5 per cent. w/v of acetic acid. The Local Government Board's recommendation and the generally accepted standard in the trade is that vinegar should contain at least

4.0 per cent. w/v of acetic acid ; the above sample was therefore deficient in acetic acid to the extent of 12.5 per cent. The manufacturers were notified of the deficiency and were informed that this department considered the 4.0 per cent. recommendation a reasonable minimum and requested that in future this standard should be complied with.

Table Vinegars (Unfermented), Samples Nod. A 2401 and A 2413. These were informal and formal samples respectively purchased from the same shopkeeper. Each contained only 3.3 per cent. of acetic acid, which was equivalent to a deficiency of 17.5 per cent. on the standard of 4.0 per cent. mentioned above. On enquiry by the Sampling Officer, it was found that the retailer had obtained no warranty with the consignment, and in view of the fact that this vinegar was sold in crown cork bottles, to which the retailer could not gain access, it was felt that hardship would be inflicted by a prosecution in which the actual manufacturers could not be coupled. A letter was sent to the retailer advising him, in his own interests, to obtain warranties for all future consignments, and the manufacturers were also interviewed ; the latter gave an undertaking that their product would in future comply with the 4.0 per cent. standard.

During the last 50 years or so, increases in chemical and biochemical knowledge have resulted in the manufacture of vinegar and/or acetic acid by a number of different processes, the products of which have frequently been sold to the public without any indication of their origin. As a direct result of this, definitions or standards, among which may be mentioned the following have, from time to time, been put forward for various types of vinegars :—

Annual Report of the Local Government Board for 1911 :

" Vinegar is a liquid derived wholly from alcoholic and acetous fer-
" mentation."

" Malt vinegar is derived wholly from malted barley or wholly from
" cereals, the starch of which has been saccharified by the diastase of malt."

" Artificial vinegar is any vinegar or substitute for vinegar containing
" or derived from any preparation containing any added acetic acid which
" is not wholly the product of alcoholic and subsequent acetous fermenta-
" tion."

" . . . . .and all vinegars to contain *at least* 4.0 per cent. w/v of acetic
" acid."

Again, Liverseege*, besides the limit of 4.0 per cent. for acetic acid, suggested that " Vinegar should have at least 1.5 w/v of total solids and 0.18 w/v of mineral matter. Malt vinegar should, in addition, have at least 0.05 w/v of P_2O_5 and 0.04 w/v of nitrogen." It is to be noted that the two latter figures, while quite liberal for malt vinegars made from malted barley, would preclude this title from being given to vinegars made from certain other malted grains such as maize.

* Adulteration and Analysis of Foods and Drugs.—J. F. Liverseege, page 390.

More recently, we have in 1935 the following definitions and suggested standards for vinegar and malt vinegar agreed to as the result of deliberation between the Society of Public Analysts and other Analytical Chemists and the Malt Vinegar Brewers' Federation :—

" (1) Vinegar is the product of the alcoholic and acetous fermentation of a saccharine solution without any intermediate distillation, except in the case of spirit vinegar as defined in (4).

" (2) Malt vinegar should be derived, without intermediate distillation, wholly from malted barley, with or without the addition of entire cereal grain malted or otherwise, the starch of which has been saccharified by the diastase of malt.

" (3) When vinegar is demanded, a purchaser should be supplied with malt vinegar, unless due notification is given to the purchaser of the article supplied.

" (4) The name " vinegar " may be applied to other products which comply with the definition of vinegar (1) above, provided a prefix is used to denote the origin of the product, thus, " distilled vinegar " ; " spirit vinegar."

" Distilled vinegar is the product of the distillation of vinegar as defined in (1) above, and its source should be denoted, such as " distilled malt vinegar."

" Spirit vinegar is the product of the acetous fermentation of a distilled alcoholic fluid.

" (5) " Imitation " or " Artificial " vinegar should in every case be sold specifically marked " Imitation " or " Artificial " vinegar. It is any substitute for vinegar containing acetic acid, which is not wholly the product of alcoholic and subsequent acetous fermentation and shall not contain any acid other than acetic acid.

" (6) All vinegars and imitation or artificial vinegars shall contain not less than 4.0 per cent. w/v of acetic acid. They shall not contain any acid other than acetic acid or those acids produced by normal fermentation processes.

" (7) Caramel may be used as a colouring matter in all vinegar and imitation or artificial vinegars."

The following points arise out of the above. While the definitions suggested by the Society of Public Analysts and the Malt Vinegar Brewers' Federation are a definite step forward and do certainly define vinegars in a much more precise manner than hithertofore, there are still certain anomalies present, for example, there is a certain amount of ambiguity between sections (1), (3) and (4), and in particular, if vinegar is to be defined as in (1), section (3) would appear to be redundant.

Lastly, in the London Sessions appeal case of Sutton v. Tame, 1937, where artificial vinegar was sold as "Table Vinegar," the Committee gave their considered opinion that when a "substance is sold as vinegar or table vinegar without any qualification or explanation as to its origin being given by the seller to the purchaser, it implies that the substance sold is produced by a process of fermentation." It is to be noted that, while this judgment does state that vinegar should be produced by a process of fermentation, it does not necessarily imply that when vinegar is asked for, malt vinegar must be supplied.

A point which is of extreme importance is that the labelling should be precise and sufficiently obvious to any person who merely glances at it. There is at present no restriction on the size of the lettering used in the words qualifying the word "vinegar" and furthermore, in some cases, these words are not only in very much smaller type but are placed upon a section of the label completely ruled off from the word "vinegar." This particular type of labelling is found with other articles of a modified nature, and in the writer's opinion, legislation requiring the qualifying word or phrase to be printed in letters of a definite size on the label of any foodstuff to which they apply, is long overdue.

The above definitions, etc. are not legal standards affecting the whole of the country, but they do represent definite steps in that direction, and in view of the importance of the question both to the manufacturers and the consumers, it is hoped that if legislation is introduced governing the composition and labelling of food, vinegar will be one of the first commodities to be affected.

DRUGS.

Stainless Iodine Ointment.

No.	Description.	Total Iodine.	Remarks.
		%	
A 2644	Iodine Ointment	4.3	Declared formula 5% iodine. Stainless ointment.
A 2690	Iodine Ointment	3.3	Declared formula 5% iodine. Stainless ointment.
A 2691	Stainless Iodine Ointment B.P.C.	5.0	
A 2746	Stainless Iodine Ointment	1.3	Informal sample.
A 2781	Stainless Iodine Ointment	2.0	Same make as No. A 2746.
A 2793	Stainless Iodine Ointment N.F.	4.4	National Formulary requires 5% iodine.
A 2794	Stainless Iodine Ointment B.P.C.	4.7	
A 2783	Stainless Iodine Ointment B.P.C.	1.8	Informal sample.
A 2796	Stainless Iodine Ointment B.P.C.	1.8	Same make as No. A 2783.
A 2836	Stainless Iodine Ointment Proprietary brand.	4.1	Declared formula 4% iodine, etc.

Before considering the above results, the directions in the British Pharmaceutical Codex for making non-staining iodine ointment may be quoted :—

"	Iodine.....	5 g.
"	Arachis Oil	15 ml.
"	Yellow Soft Paraffin to.....	100 g.

" Mix the iodine with the arachis oil, add the yellow soft paraffin, and " heat gently, with occasional stirring, at a temperature not exceeding 60° " until complete combination is effected, as indicated by the disappearance " of the brown colour."

The only other standard book of reference dealing with the preparation of this ointment is the National Formulary for National Health Insurance purposes, which also requires the addition of 5 per cent. of iodine.

It will be at once apparent that notwithstanding the fact that iodine is a volatile substance, no directions to prevent loss, other than that the temperature should not exceed 60°, are given. The length of time for which heat is applied and also whether the mixing takes place in an open vessel or not will very appreciably affect the results. The most important point, however, is that no standard or indication is given for the amount of iodine which should be present in the finished ointment.

On examining the above results, it will be observed that there is a very wide divergence in the amounts of iodine present, and that while in some cases there is reasonable approximation to the original figure of 5 per cent., in others the amount is so low as to infer that either gross carelessness has occurred in compounding, or that less than 5 per cent. of iodine was originally added. In considering what would be a reasonable figure for iodine content, ointments prepared by several well-known manufacturers have been examined and the conclusion arrived at was that with care 4.5 per cent. of iodine could be retained, and that 4.0 per cent. was the lowest amount which should be retained, allowing for usual manufacturing losses. This last figure of 4 per cent. is also suggested in a paper by Richardson*, who discusses in some detail the results obtained under varying manufacturing conditions.

Samples Nod. A 2644, A 2691, A 2793, A 2794, and A 2836, may therefore be considered satisfactory. With regard to Sample No. A 2690, when purchased the ointment was packed in glass jars with screw-on tinned iron covers, and it was noticed that the latter were extremely corroded, especially on the inside. In some cases the corrosion had completely perforated the lid and flakes of the rusty metal had fallen on to the ointment. On chemical examination, it was found that considerable amounts of iodine had combined with the iron of the lid and this must have been obtained from the iodine originally present in the ointment. It was, therefore, apparent that, while there was no intent to defraud, the form of container was very unsuitable, in that the ointment would rapidly lose strength and would also become contaminated by the corroded metal. Iodine acts very readily on iron, the reaction proceeding with evolution of considerable heat; it is, therefore, obvious that this metal should not be exposed directly to any iodine vapours. Protection can be very readily afforded to the inside of this

* Pharmaceutical Journal ,1935 Vol. I, page 589.

type of metal lid if it is lined with a close fitting piece of waxed card, which is resistant to the vapours of iodine. The manufacturers' attention was drawn to the very unsatisfactory condition of this preparation and a request was made that all present stocks in the City should be withdrawn from sale and this was acceded to. In the case of Sample No. A 2796, there were no mitigating circumstances, as in the above case, to account for the low iodine content, and proceedings were therefore instituted against both the retailer and the manufacturer. At the hearing the retailer was fined 5s. and the manufacturers, for aiding and abetting the offence, were fined £5 and £3 3s. 0d. costs.

Proceedings were also instituted against the vendors of Sample No. A 2781, but owing to the serious illness of one of the defendants, the case was adjourned *sine die*.

The prices paid for the above samples by the Sampling Officer varied from 1d. to 2s. per 1 oz. jar. This fact is mentioned as giving some indication of the variation in price charged for a popular remedy of this nature.

Liquid Iodine Preparations.

Seven samples which come under the above grouping were examined during the year, and the following four were considered unsatisfactory :—

Iodine Solution, Samples Nod. A 2208 and A 2236.

These were informal and formal samples respectively of the same brand of iodine solution. On analysis, the informal sample was found to be deficient of 46 per cent. of iodine and also contained industrial methylated spirits. The formal sample was deficient of 38 per cent. of iodine, but contained an excess of 48 per cent. of potassium iodide and was made with industrial methylated spirits. It is the opinion of this department that preparations labelled " Solution of Iodine " or " Iodine Solution " should conform to the weak solution of iodine of the British Pharmacopœia. Iodine preparations containing ingredients other than those of the Pharmacopœia, for example, industrial methylated spirits, should be sold under a name which admits of no confusion with the synonyms of the British Pharmacopœia.

The manufacturers were communicated with and they agreed to re-label this product " Iodine Paint " and further, to increase the percentage of iodine, the important ingredient, to 2.5 per cent.

Iodine Paint Methylated, Sample No. A 1885.

This informal sample was found to contain only 0.61 per cent. of iodine. In view of the standard for " Solution of Iodine B.P." and the Factory and Workshops First Aid Order requiring the use of 2.0 per cent. iodine solution, this department considers that methylated iodine paints, which are a definite substitute for the British Pharmacopœia " Solution of Iodine," should contain at least 2.0 per cent. of iodine.

The makers were accordingly interviewed and they gave a written undertaking that in future their preparation would conform to these requirements.

IODINE PAINT METHYLATED, SAMPLE NO. A 2209.

On the above standard, this informal sample was deficient of 48 per cent. of iodine. The manufacturers were interviewed and further samples submitted to this department were found to be genuine.

Ammoniated Quinine Tablets.

Of the two samples examined, one was genuine, but the other, No. A 1676, differed very considerably from the declaration in both quinine and ammonia contents. The sample was labelled "1 drachm tablets," which, calculating in terms of ammoniated tincture of quinine, would mean that each tablet contained 0.071 gm. of quinine sulphate and 0.036 gm. of ammonia (NH_3). Actually, the tablets contained 0.090 gm. of quinine sulphate and 0.0065 gm. of ammonia, corresponding to an excess of 27 per cent. and a deficiency of 80 per cent. respectively. While these tablets are difficult to prepare in such a way that the ammonia content will remain reasonably constant, it was felt in this case that the deficiency was excessive and the offence was further aggravated by the disparity in the amount of quinine found. The suppliers were interviewed and they gave an undertaking that this form of tablet would not be stocked by them in future.

Zinc Ointment.

Of the 7 samples examined, 2, Nos. A 2124 and A 2905, were reported as adulterated. They were both the product of the same firm bought at different shops and at different periods during the year, as Zinc Ointment B.P. They contained the amount of zinc oxide (15 per cent.) required by the British Pharmacopœia, but in each case the ointment base consisted of benzoated lard, a substance used to compound the zinc ointment of the 1914 Pharmacopœia. According to the present Pharmacopœia (1932), the base should consist of simple ointment, which is a mixture of paraffins with a little lanolin. As this product was labelled to be in accordance with the British Pharmacopœia and as five years have now elapsed since the new formula was first published, which is ample time in which old stocks could be used up, the manufacturers' attention was drawn to the composition of this article, with a request that it should be replaced by material complying with the current formula. This request has been acceded to.

Glycerine and Borax.

Of the two samples examined, one, No. A 2515, was found to contain 9.5 per cent. of borax. The British Pharmacopœcia article named "Glycerin of Borax," which this sample was undoubtedly intended to represent, should contain 12 per cent. of borax. Calculated on the B.P. standard, the sample was therefore deficient of 20.8 per cent. of borax. The manufacturers were communicated with and agreed to exercise greater care in compounding this article, which in future would comply with the recognised standard.

Malt Extract and Cod Liver Oil.

Three samples were examined and one of these was reported upon adversely.

SAMPLE No. A 2629. This informal sample was found on analysis to contain 11.7 per cent. w/w of cod liver oil, but only 3.45 per cent. of proteins. According to the British Pharmacopœcia this preparation should contain 10 per cent. w/w of cod liver oil (corresponding to 15 per cent. v/v) in malt extract of an original protein content of 4.5 per cent. The sample therefore, while containing the required amount of cod liver oil, was deficient of 13 per cent. of proteins.

The manufacturers were communicated with and interviewed, their manufacturing methods were revised and an undertaking given to this department that their product would in future comply with the standard of the British Pharmacopœia.

Malt Extract.

SAMPLE No. A 2670. This informal sample, manufactured by the same firm who made Sample No. A 2629, was also found to be slightly deficient in proteins (4.16 per cent. being found against a required 4.5 per cent.) The undertaking given in the case of Sample No. A 2629 applied also to this sample.

MISCELLANEOUS SAMPLES.

Contract Samples	213
Miscellaneous Health Department	45
Waters	5
Police and City Coroner	11
City Engineer	12
Own Information, etc.	19
Soot Gauges	47
Sulphur Dioxide (Lead Peroxide)	24
Swimming Bath Waters	248
	624
Sulphur Dioxide (Volumetric method, daily tests)	243
Sunlight Tests	2,128
	2,995

Contract Samples.

Soap—Pale	4
White Windsor	4
Carbolic	4
Soft	3
Liquid	7
Flakes	5
Powder	8
Scouring Tablets	2
Scouring Powder	5
Liquid Metal Polish	6
Metal Paste	5
Turpentine Substitute	3
Floor Sweeping Compound	3
Jams and Marmalade	54
Cocoa	3
Margarine	9
Cheese	14
Lard	11
Sausage	32
Meat Extract	6
Floor Polish	3
Furniture Cream	3
Brushes	4
Lysol	8
Formaldehyde	4
Laundry Starch	3
	213

The reduction in the total number of contract samples in the present year compared with the year 1936 results from a resolution of the Purchasing Committee that it would be advisable to accept tenders for dry goods for 12 monthly periods and for many foodstuffs for 6 monthly periods, instead of for 6 months and 3 months periods, as on previous occasions.

One sample of soap flakes and one of sausage taken at institutions in the City were reported upon adversely and the contractors communicated with.

Miscellaneous Health Department Samples.

These included dried, condensed and human milk, various drugs and disinfectants, ice cream, sweets, samples of earth, cloth from bed ticks, and specimens of insects.

In connection with an investigation into the source of an unpleasant acetous odour, noticed in a certain district in Salford, six samples of incrustations found in the interstices of the paving flags and three samples of earth from below the flags were examined. In every case, the presence of calcium acetate was

demonstrated. The white incrustation found between the flags had the following approximate composition—41 per cent. of earthy matter, 48 per cent. of water soluble extract and 11 per cent. of moisture. The water soluble extract contained the equivalent of 36.3 per cent. of acetic acid and 14.9 per cent. of calcium oxide, showing that it consisted almost entirely of calcium acetate. This salt is very readily soluble in water and would be deposited wherever its solution was allowed to evaporate. In order to trace the origin of the deposits, paving flags were removed at the points at which they had been noticed and samples taken of the soil immediately below the centre of the flag (care being taken to exclude the soil at the edges, which might be contaminated from an outside source). Water soluble extracts were obtained from these varying between 0.6 and 1.1 per cent. and which contained from 0.2 to 0.4 per cent. of acetic acid.

It would appear, therefore, that the nuisance could be attributed to the gradual seeping up from beneath the flags of moisture containing calcium acetate in solution, which would evaporate and leave a deposit of the salt on the flags. The fact that the smell was particularly complained of after rain would agree with the liberation of acetic acid from the deposit by dilute mineral acids such as are found in the rainfall of thickly populated areas.

Calcium acetate is utilised in calico printing and other industries, and is also a by-product in any industry where acetic acid has to be neutralised, and it is quite possible that at some time deposits of it may have been incorporated with the soil in this neighbourhood.

The samples of ice cream and that of sweets were submitted in connection with cases of illness, but on both occasions the specimens appeared perfectly wholesome and no traces could be found of anything injurious to health.

The pieces of cloth submitted were cut from bed ticks which had been treated in the Corporation disinfector and, although in one case the material was practically new, after the disinfecting treatment it developed holes merely on handling. It was found that these pieces of cloth were " filled " with a mixture of alum and magnesium sulphate, both of these substances and especially the latter frequently being used by cloth manufacturers for this purpose. Under ordinary conditions of use, these salts have no deleterious effect and when the fabric is washed, they are dissolved and thereby removed. When, however, such fabrics are submitted to dry heat, as happens in a disinfector of this type, where super-heated steam followed by dry air is used, it is well known that magnesium sulphate has a definite tendering action on the fibres of the cloth, while the action of alum is very much greater and will quickly rot the fibres.

During the year some half-dozen specimens of insects have been submitted by residents in the City, with a view to ascertaining whether they were in any way harmful to human beings. They were kindly identified for this department by either Dr. Miles or Mr. Britten of Manchester University, and in each case were found to be quite harmless. On three occasions, one of the spider beetles (Niptus Hololeuceus) was submitted. This beetle is fawn in colour, about 3-16 of an inch in length and does very much resemble a spider in appearance ;

it is extremely common and is found in practically every house and warehouse in this and in many other countries. It does practically no damage and certainly none to wood or cloth. Its usual food is farinaceous matter, but it is also possible that it will exist on the insect remains often found between the ceilings and in the wall cavities of old property.

INVESTIGATIONS FOR THE CITY CORONER AND POLICE.

In the case of a man who had died under circumstances which might have been due to arsenical poisoning, four human organs were examined for the City Coroner. No evidence was obtained of the presence of arsenic or other poisonous substance.

In connection with the sudden death of a man, three human organs were examined for the City Coroner, but no evidence was obtained of the presence of poisonous substances.

A sample of ointment was examined for the City Police and was reported to consist of 3 per cent. of powdered mustard in a lard base.

Two kinds of pills and a white powder were examined for the Police in an alleged case of obtaining drugs for the purpose of procuring abortion. The white powder consisted of quinine sulphate. Aloes, canella, colocynth and oil of pennyroyal were detected in one type of pill; iron carbonate and oil of pennyroyal in the other.

Swimming Bath Waters.

The use of swimming baths has increased greatly in recent years. In order that available facilities should be used to the best advantage, the Ministry of Health in 1929 published a report on the "Purification of the Water of Swimming Baths." This report contains certain practical suggestions for the guidance of Local Authorities, which may be summarised as follows:—

For indoor baths, it is recommended that filtration should be continuous by means of pressure filters, with a "turnover period" for the whole of the water in the baths of not more than four hours. In order that rapid filtration should be effective, it is necessary to add a "coagulant," that is, an aluminium compound with the necessary alkaline salt to form a flocculent and retentive precipitate of aluminium hydrate, which prevents solid particles and some of the bacteria from passing through the filters. After filtration, the clear liquid is heated, aerated and chlorinated by means of chlorine gas or by chloramine. The water entering the bath should then comply with the following chemical guarantees:—

1. The water issuing from the plant shall contain not more than 0.5 parts and not less than 0.2 parts per million of free chlorine.
2. Be definitely alkaline to methyl orange, but free from caustic alkalinity.
3. Be of a clarity so that a 19 S.W.G. platinum wire can be seen through a depth of six feet.
4. Fully aerated, sparkling and attractive in appearance.

Provided that the bath is not hopelessly overcrowded, the bacterial purity will then be approximately that of drinking water. It is pointed out that the maintenance of an alkaline condition is important to neutralise the acid continually formed from the alumina and chlorine, which often causes complaints of smarting eyes, often wrongly attributed to the presence of excess chlorine. A pH value between 7.0 and 8.0 will be adequate protection in this respect.

248 samples of swimming bath water were examined during the year, all the baths in use being tested at least once a week during the period extending from the beginning of May to the end of October and at less frequent intervals during the winter. Out of the total number of samples examined, only four showed substantial divergences from the standards for free chlorine and alkalinity indicated above, and even in these cases, which were at once reported to the Baths Superintendent, the divergences were insufficient to cause noticeable inconvenience to the bathers. It may be pointed out that the results obtained were extremely satisfactory, especially when it is remembered that in the summer months the number of bathers varies almost hourly between big extremes, resulting in rapid changes in the condition of the water, which can only be compensated for by constant attention to the working of the plant.

Pharmacy and Poisons Act, 1933.

Legislation came into force during 1935 which prevents the promiscuous selling of practically all substances of a poisonous or corrosive nature. Poisons can now only be obtained either through a registered pharmacist or, in the case of certain poisons, through shopkeepers whose premises have been especially registered for this purpose. The administration of the Act with regard to shopkeepers other than pharmacists is the duty of each Local Authority and covers the sale of all poisons in Part II of the Poisons List. (The Poisons List is made by the Secretary of State under Section 17 of the Pharmacy and Poisons Act, 1933, and includes the names of all substances which are to be treated as poisons). Before a shopkeeper can sell Part II poisons, he must apply to have his name placed upon the list kept by the Local Authority, at an initial cost of 7s. 6d. and a yearly renewal fee of 5s. per shop. The chief effect of this legislation is to restrict the sale of carbolic disinfectants, strong acids and alkalies and arsenical compounds, etc.

Eight applications and 160 renewal applications have been made and approved during the year, making a total on the register of 168 shops, against 173 last year. 194 visits to the premises of Listed Sellers have been paid by your Sampling Officer, who is the Local Authority's Inspector under the Act.

During the year, three shopkeepers have been cautioned for exposing for sale Part II poisons without being registered as Listed Sellers, and in addition, ten manufacturers or packers have been communicated with drawing their attention to infringements of the Act and Rules with regard to the labelling of their products.

Eight samples were submitted for analysis consisting of three samples of phenol disinfectants and five samples of ammonia solution. Of these, the following four samples were regarded as unsatisfactory :—

AMMONIA SOLUTION, SAMPLE NO. A 2642.

This sample contained 14.8 per cent. w/v of ammonia (NH_3). Ammonia solutions containing more than 5 per cent. of ammonia are Part II Poisons and require the declaration of the proportion of the poison present. In this case the declaration was worded—" contains commercial strong ammonia 1—1" The packers were notified that this department considered that the declaration did not disclose the actual amount of poison present ; they have since submitted amended labels.

AMMONIA, SAMPLE NO. A 2719 ; PHENOL DISINFECTANT, SAMPLE NO. A 2720.

These contained respectively 15.1 per cent. w/w of ammonia and 20 per cent. v/v of phenols and were therefore Part II Poisons. They were sold to the inspector by a shopkeeper who was not on the register as a Listed Seller of Part II Poisons. On enquiry being made, it was found that this business was opened since the commencement of the Act and the vendor pleaded ignorance of its requirements. He has since had his name placed on the Corporation's register of Listed Sellers of Part II Poisons.

DISINFECTING FLUID, SAMPLE NO. A 2848.

This sample was found to contain 6.8 per cent. of phenols and was purchased from a shopkeeper who was not a Listed Seller of Part II Poisons. On investigation, it was found that the commodity had been supplied to him on the understanding that it could be sold by persons other than Listed Sellers.

A strong letter of caution was sent to the shopkeeper and to the manufacturers concerned.

MERCHANDISE MARKS ACT, 1926.

Imported Goods Marking Orders.

Fifty-two shopkeepers have been cautioned during the year for various infringements of the above Orders. One shopkeeper was fined 10s. for selling imported butter without disclosing its country of origin, and two shopkeepers were fined 20s. and 40s. with costs of £1 1s. 0d. in each case with respect to similar offences relating to imported raw tomatoes.

It has recently been observed that imported eggs are frequently exposed for sale with the mark of indication of origin illegibly stamped on the shell. This is a contravention of Sections 5 and 6 of the Imported Goods No. 5 Order, 1928, which reads as follows :—

" PART II—(EGGS IN SHELL).

" 5. It shall not be lawful to import any hen or duck eggs in shell " into the United Kingdom, nor to sell or expose for sale in the United " Kingdom, any imported hen or duck eggs in shell, unless they bear an " indication of origin.

" 6. The indication of origin shall be conspicuously and durably " marked in ink on the shell of each imported egg in letters not less than " two millimetres in height."

As the requirements of this Order are carried out in the country of origin, the attention of the Local Grocers' Association has been drawn to the unsatisfactory procedure adopted and the matter is being taken up by this body with the Consuls of the countries concerned. This department feels that at the present juncture, this is a much better method of getting satisfactory labelling than the prosecution of individual shopkeepers who may be exposing for sale improperly labelled eggs.

Fertilisers and Feeding Stuffs Act, 1926.

Eleven samples have been examined, of which three were fertilisers and eight feeding stuffs. One sample of fertiliser and four samples of feeding stuffs showed variations from the declared statutory statements in excess of the permitted limits; in addition, the statutory statements relating to the sample of fertiliser and one of the feeding stuffs were not in the prescribed form. In no case was the presence of any injurious substance detected.

Appended is a list of the unsatisfactory samples, together with the variations found :—

A 1881 Bone Meal (Brown)	Phosphoric acid found 16.2 per cent.—declared 20.6 per cent. phosphoric acid insoluble in water (declaration should give total phosphoric acid).
A 2452 Meat Meal.....	Salt found 5.0 per cent.—Maximum permitted is 4.0 per cent. Phosphoric acid found 6.38 per cent.—No declaration given.
A 2454 Laying Meal.....	Oil found 3.70 per cent.—declared 2.42 per cent. Albuminoids found 17.25 per cent.—declared 15.50 per cent.
A 2455 Fish Meal	Oil found 1.58 per cent.—declared 3.0 per cent.
A 2456 Chicken Mash.....	Albuminoids found 16.6 per cent.—declared 20.0 per cent. Fibre found 5.3 per cent.—declared 9.0 per cent.

Measurement of Solar Radiation.

The number of observations made under this section was 1,228 by the potassium iodide method, 300 by the nitrite method, 300 by Dr. Ashworth's photographical method and 300 by the Campbell-Stokes bright sunshine recorder. A complete year's record has been obtained, for the first time, from the integrating solarimeter.

The Potassium Iodide Method.

This process* has been in continuous use for eleven years at four stations, three in Salford and one at the Corporation's Sanatorium at Nab Top, Marple. The following table shows the results obtained during the year and the yearly totals for the last five years expressed as milligrammes of iodine liberated by an exposure from 9 a.m. to 9 a.m.

* For details of method see Annual Report, Salford, 1935, page 37.
Bagnall, Analyst, 1929, 54, 101.

TABLE 17.

MEASUREMENT OF DAYLIGHT.

Month.	Regent Road.	Nab Top Sanatorium, Marple.	Ladywell Sanatorium.	Drinkwater Park.
January	65.2	132.0	74.7	81.2
February	81.1	126.2	137.4	120.1
March	96.7	157.8	141.2	140.0
April	117.4	172.5	145.5	141.6
May	119.3	304.1	204.9	202.7
June	203.6	226.8	192.6	190.5
July	213.5	261.0	242.7	235.3
August	246.2	299.5	232.5	234.4
September	211.5	260.1	219.9	199.8
October	135.6	182.3	180.4	171.1
November	69.6	117.0	105.0	75.0
December	28.3	99.2	84.9	51.8
Yearly Totals.				
1937	1588.0	2338.5	1961.7	1843.9
1936	1651.8	2273.4	1544.4	1676.1
1935	1650.2	2493.6	2051.1	1965.6
1934	1743.2	2323.4	2162.2	2070.6
1933	1627.6	2311.7	2073.8	1953.1
Yearly average for five years	1652.2	2348.1	1958.6	1901.9
Comparative percentage figures	70.4	100.0	83.4	81.0
Loss against Nab Top Sanatorium	29.6	—	16.6	19.0

The losses against Nab Top Sanatorium over the last five years have been tabulated in the following table :—

TABLE 18.

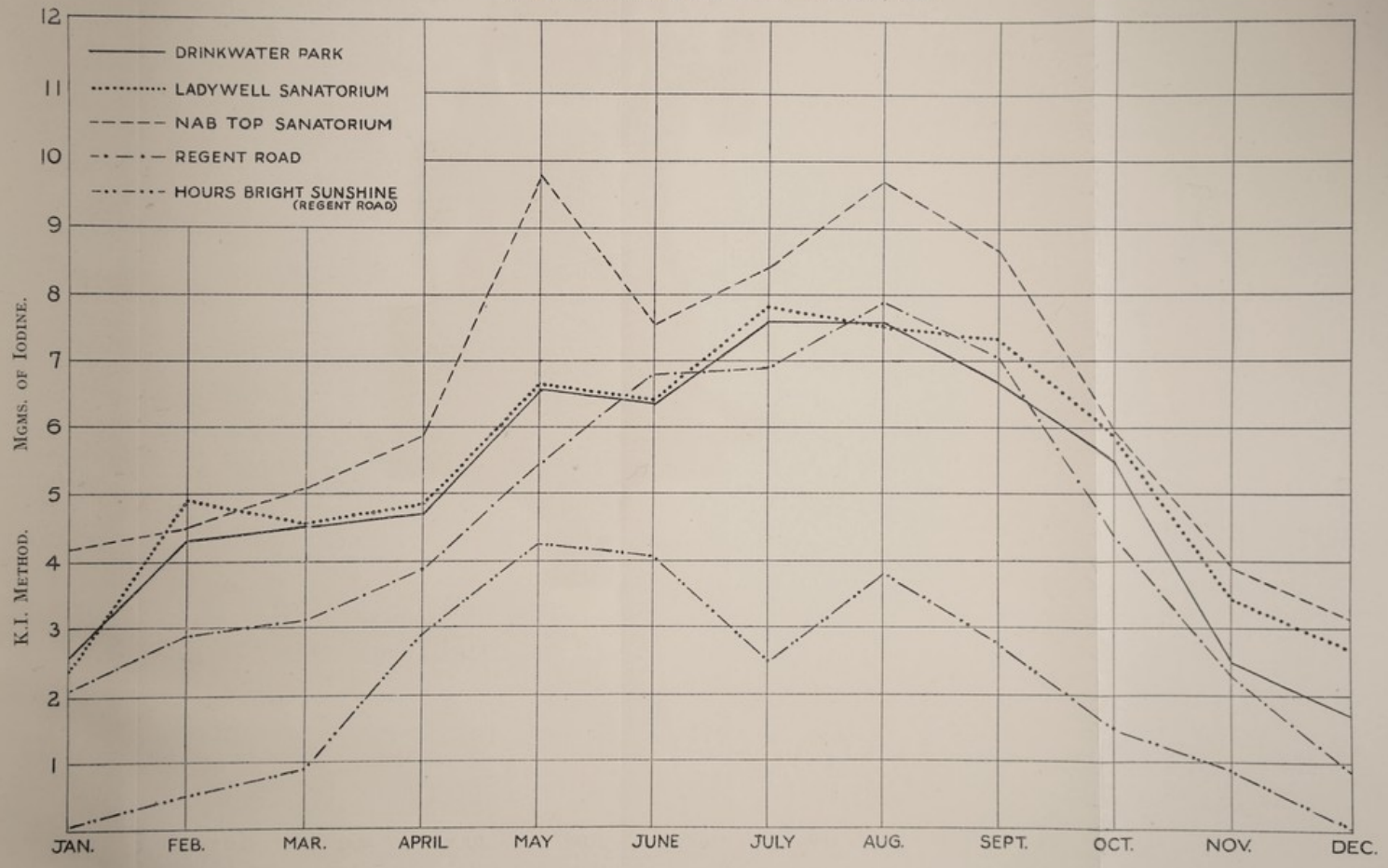
LOSS AGAINST NAB TOP SANATORIUM.

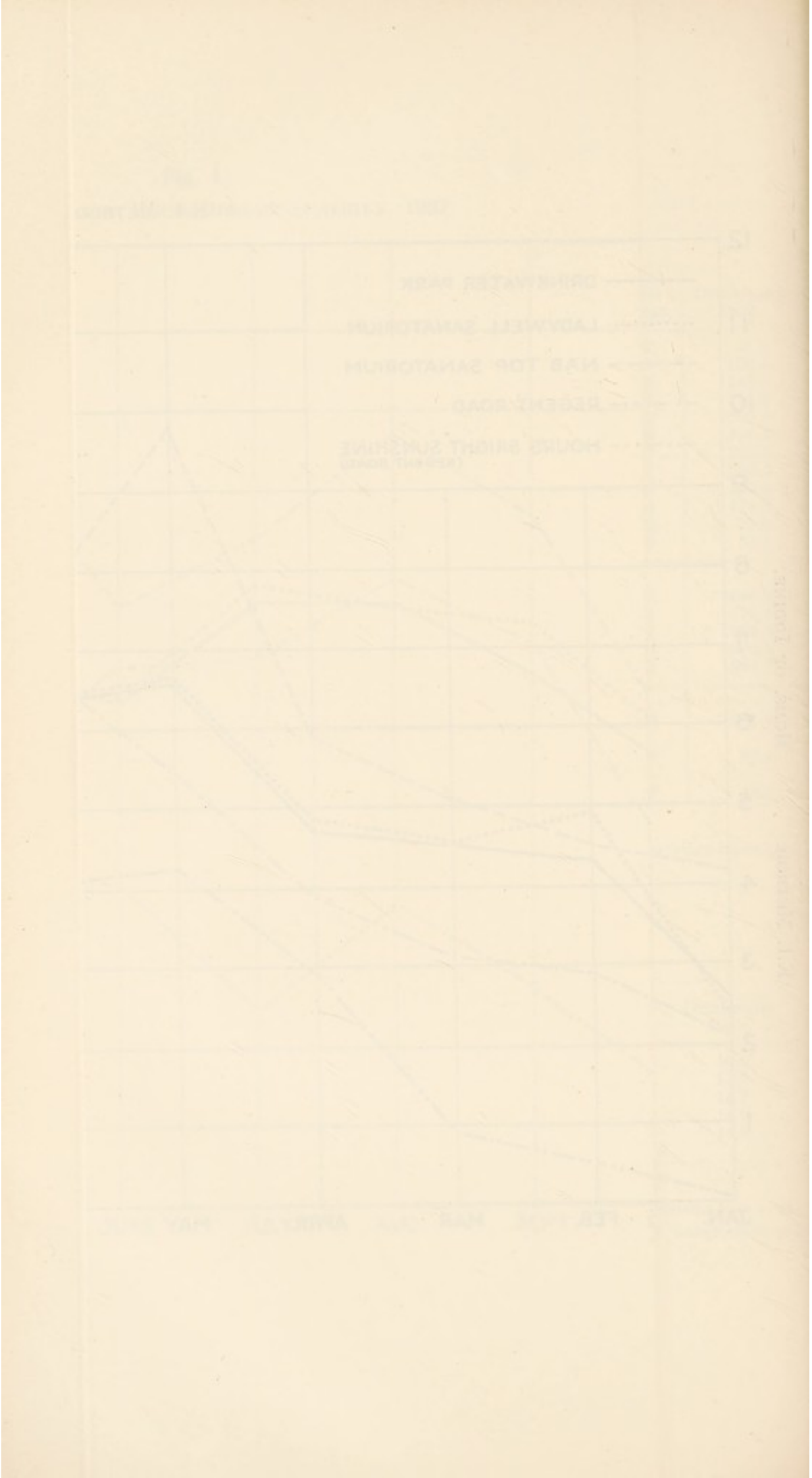
Year.	Regent Road.	Ladywell Sanatorium.	Drinkwater Park.
1937	29.6	16.6	19.0
1936	26.5	15.1	17.7
1935	27.1	12.2	15.7
1934	23.6	10.3	14.0
1933	22.5	10.6	14.5

The average loss against Nab Top Sanatorium for the previous four years, 1929 to 1932, was 20.4 for Regent Road, 10.7 for Ladywell Sanatorium and 13.0 for Drinkwater Park.

Fig. 1.

K.I. Method and Hours Bright Sunshine, 1937.





This last table shows very clearly that over the last five years there has been a steadily growing loss at the three other stations when compared against Nab Top. At a first glance it might be assumed that this was due to increasing pollution at the three stations concerned, but this is not borne out by further inspection of the results. The yearly averages for totals of milligrammes of iodine liberated at the four stations for the period covered by the last five years and the period of four years immediately preceding that are as follows :—

	Regent Road.	Nab Top Sanatorium.	Ladywell Sanatorium.	Drinkwater Park.
Average Totals 1933-1937	1652.2	2348.1	1958.6	1901.9
Average Totals 1929-1932	1599.0	2009.0	1794.1	1748.6
Differences	53.2	339.1	164.5	153 3

This table brings out very clearly the fact that while there is improvement in the atmosphere at all the stations as observed by the potassium iodide method, that at Nab Top has improved to a very much greater extent than at the other three stations, Regent Road showing only very slight improvement and Ladywell Sanatorium and Drinkwater Park holding intermediate positions

The results obtained by this method during the year under review are shown graphically in Figure 1, and it will be seen that Nab Top Sanatorium, especially in the summer months, gives much higher results than any of the other stations, which may be grouped together during this period ; during the remainder of the year, Regent Road gives the lowest results.

Another point which arises out of comparison of Figure 1 with Figures 2 and 3 is that in readings by the potassium iodide method and the integrating solarimeter, which are both affected by radiation other than ultra violet, the peak occurs in August, whereas in the nitrite and photographical methods, where the results are almost entirely due to ultra violet, the peak occurs in May. If one examines the graph for the potassium iodide method, it will be seen that there is a distinct shearing of the curve towards the latter half of the year, especially at the three stations situated in Salford. No very definite explanation of this phenomenon has yet suggested itself, unless in a process which is known to be affected chiefly by visible light and ultra violet and not so much by heat rays, it is assumed that the use of domestic fires in the early part of summer and the resultant partial obscuring of light by smoke causes the peak readings to be obtained later than they would be in a perfectly clear atmosphere.

The Nitrite Method.

Observations have been continued throughout the year by this method, which was developed in these laboratories from the original work of Gillam and Morton.* These workers found that nitrite is produced by the action of ultra

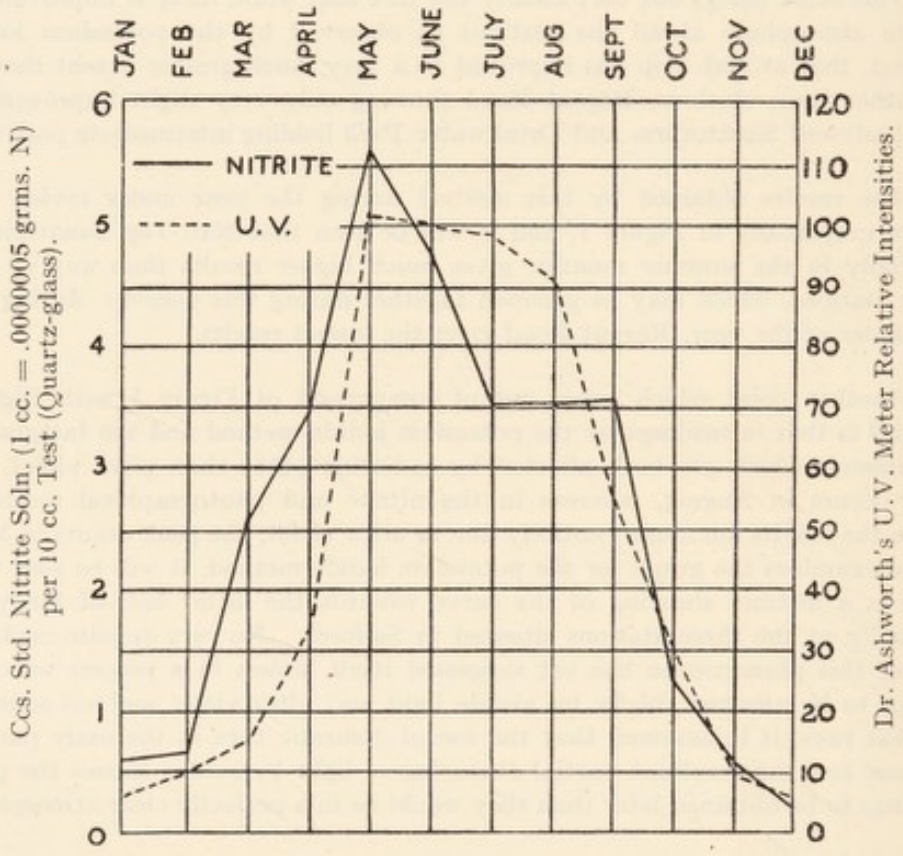
* J. Soc. Chem. Ind. 1927, 46, 415.

violet light in an alkaline solution of potassium nitrate and they suggested that this photochemical reaction could be used to measure ultra violet light in daylight. The method adopted is essentially the exposure of two identical solutions of alkaline nitrate side by side, one in a quartz tube, the other in a glass tube, and to measure the difference in the amount of nitrite formed, either by Griess-Ilosvay's or Riegler's method. The nitrite formed in the quartz tube in excess of that formed in the glass tube can only be due to ultra violet light of wavelength below approximately 320 mu.*

The results obtained are presented graphically in Figure 2.

FIG. 2.

NITRITE BY GILLAM AND MORTON'S MODIFIED METHOD AND ULTRA-VIOLET RAY METER RESULTS.



* Ordinary glass bottles will transmit all rays longer than about 320 mu. Quartz transmits down to about 200 mu. The visible light from the sun covers the range 400–750 mu. Ultra violet light from the sun is normally 300–400 mu. Antirachitic ultra violet light is below 313 mu. Antirachitic ultra violet light will prevent rickets; the erythemal region is 265 to 310 mu. (1 mu is one-millionth of a millimetre).

DR. ASHWORTH'S ULTRA VIOLET RAY METER.

This instrument consists essentially of a glass filter transmitting between 300 and 400 mu., with a maximum transmission of 80 per cent. at 360 mu., falling steadily to each of the limits mentioned, a step wedge consisting of varying thicknesses of wire gauze and a piece of photographic paper upon which the light acts after passing through the glass and a proportion of the wire gauze, depending on the intensity of the light. The instrument gives definite information regarding the relative intensity of the total ultra violet rays in solar radiation, but in view of our knowledge of the extremely small amount of ultra violet rays of wavelength 300 mu. present, especially in winter sunshine, it cannot be assumed that a positive reading for ultra violet rays with this instrument also indicates the presence of rays of therapeutic value. Some difficulty has been experienced in obtaining photographic papers of constant sensitivity by different workers with this instrument, and therefore, there has been some doubt as to the possibility of comparing results from different parts of the country. It is obvious that a difference in sensitivity of paper which can hardly be detected in ordinary photographical printing will cause considerable variations in an instrument of this type. Experiments are being carried out at the present time, both in this laboratory and elsewhere, on other types of light-sensitive papers and it is hoped that shortly this difficulty will be overcome. The results obtained at Regent Road during the year are reproduced in Figure 2 and in Table 19. There also appears in this table the ratios obtained between the photographic and potassium iodide methods during the years 1937 and 1936.

TABLE 19.

RELATIVE INTENSITIES OF U.V. LIGHT AND RATIO TO KI METHOD.

Month.	Regent Road, Salford.	Ratio U.V./KI. 1937.	Ratio U.V./KI. 1936.
January	6.3	3.0	1.7
February	9.6	3.3	1.1
March	16.4	5.3	5.1
April	33.3	8.5	4.3
May	102.0	18.8	8.7
June	100.6	14.8	11.2
July	98.3	14.2	10.0
August	92.1	11.7	8.7
September	56.4	8.0	7.8
October	29.2	6.7	6.3
November	10.5	4.6	3.9
December	7.7	8.4	5.0

It will be noticed that the ratio very definitely increases during the summer months and this is probably due to the fact, which has been commented on previously in these reports, that when considerable proportions of iodine have been liberated, such as occurs during the summer, the reaction slows down, *i.e.*, one bottle exposed over a period gives a lower result than two bottles each exposed for half the period. This slowing-up effect over a long period, and it

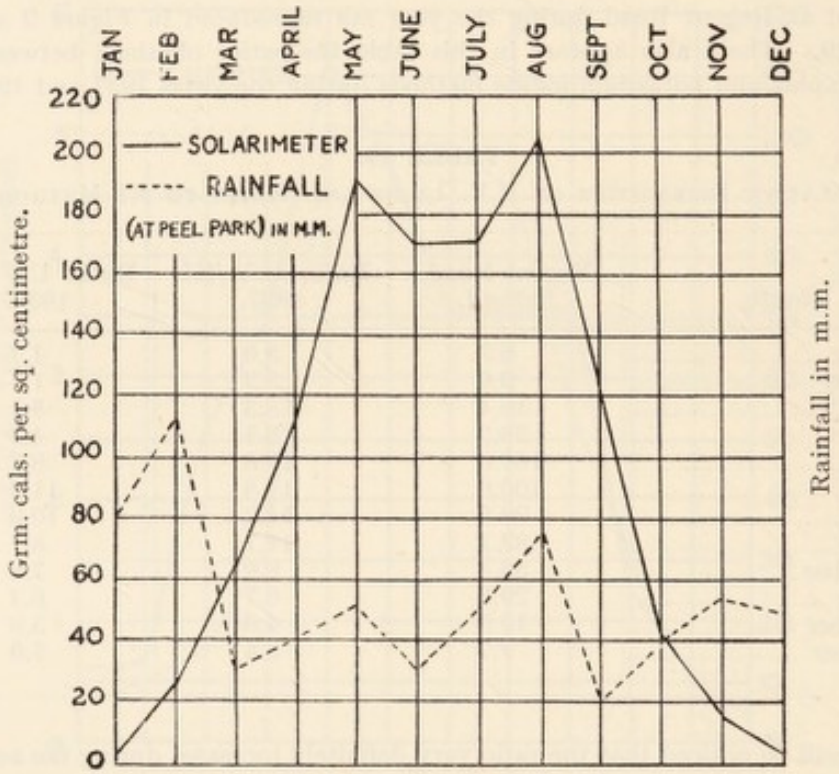
has been tried over an extent of three days, does not occur with the photographic method ; therefore, as length of exposure or intensity of light increases, so will the ratio between the results increase. The slowing up of the potassium iodide method is probably due to absorption of light when the solution becomes coloured with iodine, and a series of experiments has been commenced, using different light filters in order to investigate this point.

Integrating Solarimeter.

This instrument is essentially a Moll pattern thermopile coupled with a sensitive milliampere-hour-indicator. The solar radiation is, therefore, transferred into and recorded as electrical energy, the apparatus, of course, having been previously calibrated by being exposed to a standard source of radiation. The results obtained by this instrument are in terms of absolute units of energy and have a distinct advantage over those obtained by any of the methods previously mentioned. The thermopile is non-selective and records total solar radiation, both visible and invisible. The results obtained, in Salford, expressed

FIG. 3.

Solarimeter Readings and Rainfall at Peel Park in m.m.



as mean daily totals in gramme calories per square centimetre, are shown graphically in Figure 3 and are also given in Table 20 compared with the results obtained from a recording solarimeter installed at the Meteorological Office, South Kensington.

TABLE 20.

SOLARIMETER—DAILY MEAN RADIATION.

Month.	Salford.	South Kensington.
January	5.26	35.5
February	25.43	83.3
March	66.96	160.2
April	111.75	186.6
May	190.50	289.0
June	168.50	366.1
July	165.80	293.6
August	205.50	318.5
September	126.75	208.3
October	45.0	102.4
November	13.5	43.3
December	3.3	23.8

The results show big differences between the two series of observations, especially in the months January and December and they indicate in a striking manner the very considerable screening of daylight by smoke clouds in the air above this City, especially in the winter months.

The figures also show the very great decrease which occurs in solar radiant energy between the summer and winter months. In Salford there was a change from over 200 gm. cals, per sq. cm. to 3 gm. cals, per sq. cm. This last figure is in terms of total energy the total U.V. being only 1 or 2 per cent. of this figure and the therapeutic U.V. being very much smaller than that again. For example, Luckiesh (1930)*, with the sun at the zenith on a clear day attributes only 3.9 per cent. of the total solar energy to the wavelengths 290-400 mu. and only 0.022 per cent. to the wavelengths 290-310 mu. In the winter, when the sun is much lower in the sky, the total amount of U.V. would be very much less, and some of the lower wavelength U.V. rays present in summer sunshine will be entirely absent in the winter rays. To illustrate this point, the following table is included, showing the rapid decrease in the relative intensity of U.V. wavelengths at Davos.†

TABLE 21.

DECREASE IN INTENSITY OF ULTRA VIOLET WAVELENGTHS.

Wavelength.	June 15 Mid-day Solar altitude 66.5°.	December 15 Mid-day Solar altitude 20°.
400	489	47
320	200	27
300	2.5	2.0×10^{-4}
290	1.4×10^{-5}	3.7×10^{-17}

* Laurens, "Physiological Effects of Radiant Energy," page 35.
† " " " " " page 38.

Sulphur Pollution.

243 tests have been carried out throughout the year at Regent Road by the volumetric sulphur method and 24 monthly tests at both Regent Road and Ladywell Sanatorium by the lead peroxide method. In the former process, the sulphur dioxide present in the air is returned as parts per million, while by the latter method, atmospheric sulphur pollution is returned as milligrammes of sulphur trioxide per 100 square centimetres of exposed surface. Both processes show a very striking rise during the winter months, and the volumetric process, by which daily determinations are made, show exceptionally high figures on foggy days, thus demonstrating the tenacity with which smoke pollution hangs over the City during these periods. The results obtained by the lead peroxide method during November are exceptionally low for this period of the year, and contrast very strongly with those obtained by the volumetric method. While the weather conditions prevailing at this time were somewhat unusual, no obvious explanation for these results can be put forward.

TABLE 22.

SULPHUR POLLUTION.

Month.	Milligrammes Sulphur Trioxide per 100 sq. cm. Daily Average		Parts Sulphur Dioxide per million of Air. Daily Average.
	Regent Road.	Ladywell Sanatorium.	Regent Road.
January	5.63	5.59	0.083
February	5.85	5.93	0.061
March	4.47	5.17	0.035
April	4.39	4.46	0.029
May	2.66	2.53	0.026
June	3.55	3.29	0.023
July	3.82	3.96	0.044
August	3.79	3.92	0.052
September	4.96	5.45	0.033
October	4.45	3.95	0.075
November	2.70	2.92	0.129
December	5.12	5.49	0.094

Examination of Soot Gauge Deposits.

The work of examining the deposits in the special gauges placed at various points in the City has been continued. Standard gauges are situated at Peel Park, Salford; Ladywell Sanatorium; Drinkwater Park Hospital; and at the Corporation Sanatorium at Marple, Cheshire.

In uniformity with the results expressed by other stations, of which there is 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 English ton, whilst there are 2.59 square kilometres to the square mile, so that to convert metric tons per square kilometre to English tons per square mile, it is necessary to multiply by 2.55 or roughly 2½.

The following are the average monthly results that have been obtained during the year. It will be observed that the deposits collected at Peel Park, Ladywell Sanatorium and Drinkwater Park are very similar in amount and indicate a considerable amount of atmospheric pollution, whilst, as is to be expected, the deposit collected at Marple shows that the air there is, comparatively speaking, "pure." In connection with the Peel Park gauge, which this year shows lower figures than on previous occasions, it should be pointed out that this is probably due to the removal of the gauge during April, necessitated by structural alterations, to a site more in the centre of the park, with the result that less contamination will gain access from the Crescent.

In order that comparison may be made with other districts, the average figures are given for the gauges giving the greatest and least deposits.

The gauge showing the greatest deposit is Birmingham (Great Charles Street) and that showing the least is Loggerheads (Staffs.).

Perhaps the most noticeable feature of the results is the acid nature of the deposits. This is shown by the pH values of the water collected. The pH due to the carbonic acid in the air would be about 5.5. Figures below this, therefore, indicate an acid deposit, and higher figures an alkaline deposit. Considering that Marple is fairly well in the country and shows a general record better than those obtained in the City, its acid rainwater is noteworthy. This shows how widespread may be the drift of acid smoke from cities.

TABLE 23.

SOOT GAUGE OBSERVATIONS.

Monthly Averages : Metric Tons per Square Kilometre.

		Salford : Peel Park.	Salford : Ladywell Sanatorium.	Salford : Drinkwater Park.	Marple : Nab Top Sanatorium.	Loggerheads : (Staffs).	Birmingham, (Great Charles St.).
Rainfall in millimetres		53.80	59.40	62.70	56.00	69.0	60
Tar	Insoluble Matter	0.17	0.16	0.13	0.09	0.02	—
Carbonaceous Matter other than tar	Insoluble Matter	1.75	2.30	1.50	0.68	0.30	—
Insoluble Matter		4.31	4.76	3.60	1.47	0.61	13.43
Ash	Insoluble Matter	2.39	2.30	1.97	0.70	0.29	—
Loss on ignition	Soluble Matter	1.43	1.61	1.98	0.71	0.70	—
Ash	Soluble Matter	1.52	2.19	2.34	0.93	0.82	—
Soluble Matter		2.95	3.80	4.32	1.64	1.52	4.52
Total Solids		7.26	8.56	7.92	3.11	2.12	17.95
Sulphates	Included in Soluble Matter	0.90	0.97	1.15	0.61	0.29	Not available.
Chlorides	Included in Soluble Matter	0.74	0.88	1.02	0.50	0.25	,,
Ammonia	Included in Soluble Matter	0.03	0.04	0.05	0.03	0.03	,,
Acidity		0.24	0.51	0.40	0.21	0.03	,,
pH		4.2	3.6	3.9	4.2	5.4	,,

TABLE 24.

pH VALUES FOR THE FOUR STATIONS

Month.	Peel Park.	Drinkwater Park.	Ladywell Sanatorium.	Nab Top Sanatorium, Marple.
January	3.8	3.7	3.5	4.2
February	4.1	3.7	3.6	4.1
March	4.4	3.7	3.3	3.8
April	4.2	3.9	3.5	3.9
May	4.3	3 7	3.7	4.1
June	4.4	4.3	3.8	4.5
July	4.3	4.1	3.9	4.3
August	3.9	3.9	3.2	4.1
September	4.3	4.1	4.3	4.6
October	4.0	4.0	3.7	4.6
November	4.3	3.9	3.7	4.3
December	3.9	3.7	3.5	3.9
Average for 1937	4.2	3.9	3.6	4.2

APPENDIX I.

FREEZING POINTS OF MILK SAMPLES 1937.

Sample No.	Fat.	Solids-not-fat.	Total Solids.	Freezing Point Hortvet. Δ	Added Water.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
					%	%
A 1679	3.9	9.1	13.0	0.549	—	—
A 1682	4.0	8.5	12.5	0.528	—	0.4
A 1683	3.25	7.95	11.2	0.490	6.5	7.5
A 1690	3.4	8.65	12.05	0.537	—	—
A 1691	3.5	8.55	12.05	0.538	—	—
A 1692	3.55	8.69	12.24	0.535	—	—
A 1693	3.55	8.09	11.64	0.511	4.8	3.6
A 1694	3.85	8.44	12.29	0.522	0.7	1.5
A 1695	3.97	8.66	12.63	0.547	—	—
A 1696	3.95	8.52	12.47	0.540	—	—
A 1767	3.7	8.26	11.96	0.519	2.8	2.1
A 1768	3.2	8.57	11.77	0.517	—	2.5
A 1771	3.5	8.52	12.02	0.503	—	5.1
A 1772	3.3	8.6	11.9	0.534	—	—
M 65	3.65	8.13	11.78	0.506	4.3	4.5
M 66	3.2	8.44	11.64	0.521	0.7	1.7
A 1911	3.8	9.58	13.38	0.540	—	—
A 1949	3.55	8.85	12.4	0.541	—	—
A 1950	3.05	8.54	11.59	0.523	—	1.3
A 1954	3.6	8.6	12.2	0.526	—	0.7
A 1955	3.55	8.57	12.12	0.526	—	0.7
A 1956	3.9	8.9	12.8	0.554	—	—
A 1957	3.5	8.7	12.2	0.549	—	—
A 1958	3.15	8.65	11.8	0.549	—	—
A 1974	3.42	8.36	11.78	0.516	1.7	2.6

APPENDIX I.—*Continued.*

Sample No.	Fat.	Solids-not-fat.	Total Solids.	Freezing Point Hortvet. △	Added Water.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
					%	%
A 2068....	3.7	8.59	12.29	0.554	—	—
A 2069....	3.8	8.6	12.4	0.542	—	—
A 2070....	2.5	7.84	10.34	0.471	8.2	11.1
A 2071....	3.25	8.34	11.59	0.507	0.6	4.3
A 2072....	3.25	8.13	11.38	0.495	5.3	6.6
A 2073....	2.9	7.85	10.75	0.467	7.3	11.9
A 2074....	2.85	8.14	10.99	0.475	5.3	10.4
A 2075....	3.0	7.78	10.78	0.475	6.4	10.4
A 2076....	3.3	8.09	11.39	0.482	4.7	9.1
A 2079....	3.45	8.52	11.97	0.510	—	3.7
A 2080....	3.05	8.64	11.69	0.505	—	4.7
A 2081....	3.61	8.50	12.11	0.517	—	2.5
A 2082....	3.2	8.6	11.8	0.517	—	2.5
A 2083....	3.55	8.74	12.29	0.522	—	1.5
A 2084....	3.2	8.6	11.8	0.510	—	3.7
A 2085....	2.7	8.5	11.20	0.510	—	3.7
A 2091....	3.3	8.9	12.2	0.539	—	—
A 2092....	3.35	8.95	12.3	0.538	—	—
A 2093....	3.4	8.95	12.35	0.534	—	—
A 2145....	3.6	8.56	12.16	0.520	—	1.9
A 2146....	2.07	8.39	10.46	0.497	1.3	6.2
A 2147....	2.7	8.32	11.02	0.516	2.1	2.6
A 2148....	3.1	8.27	11.37	0.495	2.7	6.6
A 2149....	2.17	8.23	10.4	0.493	3.2	7.0
A 2150....	3.4	8.04	11.44	0.508	5.4	4.1
A 2151....	3.45	8.46	11.91	0.518	0.4	2.3
A 2152....	2.52	8.23	10.75	0.493	3.2	7.0
A 2153....	3.25	8.98	12.23	0.540	—	—
A 2154....	4.5	9.07	13.57	0.541	—	—
A 2155....	4.05	8.94	12.99	0.547	—	—
A 2156....	3.32	8.84	12.16	0.544	—	—
A 2157....	3.65	8.70	12.35	0.543	—	—
A 2158....	3.2	9.18	12.38	0.551	—	—
A 2159....	4.75	8.70	13.45	0.551	—	—
A 2160....	2.5	9.12	11.62	0.551	—	—
A 2161....	2.5	9.01	11.51	0.540	—	—
A 2162....	2.72	8.8	11.52	0.539	—	—
A 2163....	2.70	8.77	11.47	0.542	—	—
A 2164....	2.62	9.07	11.69	0.547	—	—
A 2165....	3.0	8.88	11.88	0.551	—	—
A 2175....	3.7	8.5	12.2	0.493	—	7.0
A 2176....	3.4	8.9	12.3	0.519	—	2.1
A 2177....	3.2	9.0	12.2	0.522	—	1.5
A 2204....	3.1	8.9	12.0	0.542	—	—
A 2216....	3.2	8.52	11.72	0.527	—	0.5
A 2217....	3.2	8.44	11.64	0.522	0.7	1.5
A 2218....	3.8	8.46	12.26	0.527	0.5	0.6

APPENDIX I.—*Continued.*

Sample No.	Fat.	Solids-not-fat.	Total Solids.	Freezing Point Hortvet. Δ	Added Water.	
					Calc. from Sale of Milk Regulations	Calc. from Freezing Point.
					%	%
A 2225....	3.6	8.55	12.15	0.548	—	—
A 2226....	3.65	8.63	12.28	0.543	—	—
A 2227....	3.25	8.53	11.78	0.538	—	—
A 2285....	3.8	8.5	12.3	0.547	—	—
A 2287....	3.45	8.55	12.0	0.550	—	—
A 2366....	3.45	8.22	11.67	0.533	3.3	—
A 2367....	3.55	8.60	12.15	0.540	—	—
A 2368....	3.45	8.45	11.9	0.530	0.6	—
A 2374....	3.6	8.5	12.1	0.525	—	0.9
A 2375....	3.5	8.55	12.05	0.520	—	1.9
A 2376....	3.3	8.7	12.0	0.552	—	—
A 2410....	3.7	8.55	12.25	0.518	—	2.3
A 2411....	3.75	8.55	12.3	0.518	—	2.3
A 2426....	3.8	8.85	12.65	0.550	—	—
A 2427....	3.8	8.85	12.65	0.544	—	—
A 2428....	4.2	9.05	13.25	0.548	—	—
A 2429....	5.1	8.8	13.9	0.555	—	—
A 2551....	3.2	8.15	11.35	0.496	4.1	6.4
A 2555....	3.8	8.04	11.84	0.490	5.4	7.5
A 2556....	4.5	9.2	13.7	0.566	—	—
MDA 99	3.92	8.16	12.08	0.503	4.0	5.1
MDA 100	3.22	8.19	11.41	0.490	3.6	7.6
666	4.7	8.88	13.58	0.550	—	—
667	3.7	8.9	12.6	0.543	—	—
A 2605....	3.75	8.6	12.35	0.543	—	—
A 2608....	3.7	8.6	12.3	0.545	—	—
A 2609....	3.4	8.8	12.2	0.543	—	—
A 2610....	3.0	8.45	11.45	0.523	0.6	1.3
A 2890	3.27	8.33	11.6	0.533	2.0	—
A 2924....	3.25	8.3	11.55	0.533	2.4	—
A 2925....	3.5	8.55	12.05	0.534	—	—
A 2930....	4.1	8.43	12.53	0.526	0.8	0.8
A 2931....	2.9	8.18	11.08	0.533	3.8	—
A 2932....	3.6	8.53	12.13	0.530	—	—
A 2933....	3.25	8.27	11.52	0.536	2.7	—
A 2938....	3.32	8.64	11.96	0.541	—	—
A 2939....	3.8	8.91	12.71	0.547	—	—

SECTION VII.

Maternity and Child Welfare Department and the Supervision of Midwives.

Staff.

1 Senior Medical Officer, who is also Supervisor of Midwives.
1 Assistant Medical Officer—full time.
1 Assistant Medical Officer—part time.
1 Non-medical Supervisor of Midwives.
16 Health Visitors.
3 Masseuses and Artificial Light Operators.
8 Clerks.

Medical Officers.

Dr. Sproul, Senior Medical Officer for Maternity and Child Welfare, is responsible for the general administration of the Department and for the Supervision of Midwives; she is a member of four voluntary societies undertaking Maternity and Child Welfare Services in the City and is also Honorary Medical Officer to the Salford Nursery School Committee and the Salford District Nursing Association.

Dr. Boyes was appointed Assistant Medical Officer in March, 1937, and Dr. Maxwell-Reekie as part-time Assistant Medical Officer in May, 1937.

Health Visitors.

Each Health Visitor is allotted a district to the visiting of which most of her time is devoted. It is her duty to visit each child residing on her district, and to keep a record of its progress until it reaches the age of five years; to visit and advise expectant mothers, and to carry on the work of the various Maternity and Child Welfare Clinics and Centres.

Propaganda work must of necessity form a very large part of the duties of Health Visitors and the time spent in this type of work cannot be shown by figures. The Health Visitors have continued an active campaign in connection with Diphtheria Immunisation.

Four members of the Health Visiting Staff have been responsible for the Department's Demonstration Windows at the Health Offices and during the year displays were arranged showing the importance of "Correct Posture"; "Safety First"; "Suitable Diets for Toddlers" and "Proper Care of Perambulators."

During December, a Toy-making Competition was arranged for fathers. The materials used did not cost more than one shilling per toy and in many cases the cost was nil. The toys produced showed great ingenuity and were for the most part very well made and finished. The object of the competition was to encourage parents to make an effort to provide their children with suitable Christmas toys at the least possible cost.

During 1937, the Medical Staff of the Children's Wards at Hope Hospital have notified the Maternity and Child Welfare Department of all discharges from the Hospital of children under 5 years of age, and have supplied details of the feeding and treatment which the parents have been advised to carry out. These cases are "followed-up" immediately by a Health Visitor in order that advantage may be taken of the facilities offered by the Department, *i.e.*, free milk, sunlight treatment, massage, etc.

A similar arrangement has been made with the Staff of Ladywell Sanatorium, and all cases under 5 years of age are visited immediately upon discharge.

The following table shows the number of visits by the Health Visitors during 1937 :—

TABLE C.W. 1.

Wards.	First Visits to Children under 1 year.	Total Visits to Children under 1 year.	Total Visits to Children 1 to 5 years.	First Visits to Expectant Mothers.	Total Visits to Expectant Mothers.	Total Visits.
Albert Park	235	917	1433	90	126	2476
Charlestown	212	915	1636	81	90	2641
Claremont	107	265	587	22	25	877
Crescent	278	1072	1798	83	111	2981
Docks	162	527	835	59	77	1439
Kersal	128	399	760	35	40	1199
Langworthy	142	576	1580	53	68	2224
Mandley Park	192	641	1152	34	54	1847
Ordsall Park	230	964	1469	70	100	2533
Regent	219	1037	1263	58	69	2369
St. Matthias'	228	1327	1961	67	99	3387
St. Paul's	187	859	1412	48	99	2370
St. Thomas'	158	692	1438	84	90	2220
Seedley	129	316	563	26	33	912
Trinity	210	989	2109	86	200	3298
Weaste	94	248	598	18	21	867
Special Visits	72	168	67	....	2	237
	2983	11912	20661	914	1304	33877

Maternity and Child Welfare Clinics and Centres.

The City is served by the following Maternity and Child Welfare Clinics and Centres :—

	Child Welfare Sessions.	Ante-Natal Sessions.
Municipal Buildings Regent Road	5 per week.	2 per week.
Murray Street, Broughton	4 ,, ,,	1 ,, ,,
Police Street, Pendleton	6 ,, ,,	1 ,, ,,
Ordsall Centre, Landseer Street	2 ,, ,,	—
Encombe Place, Salford	3 ,, ,,	—
St. John's Schools, Langworthy Road	2 ,, ,,	—
Congregational Church, Claremont Road	1 ,, ,,	—
Hope Hospital	—	2 per week.
Royal District Nurses' Home, Crescent, Salford	1 per month.	4 per month.

The object of the Department is to make the whole of the work educational and preventive. Every effort is made to encourage mothers to attend an ante-natal clinic as early as possible in their pregnancy and to continue to keep themselves under medical supervision until their confinement. The medical staff of the Department endeavour to maintain close co-operation with midwives and general practitioners. Where necessary, patients are referred to a Consultant Obstetrician; to the Tuberculosis Department for chest complications and X-ray examinations in cases where diagnosis by other means is difficult; Pathological Department for various tests to assist in diagnosis and treatment; Dental Department for cases in urgent need of dental treatment; Venereal Diseases Clinic where patients who are found to be in need of treatment are kept under observation, and Hope Hospital for treatment during pregnancy, and, if necessary, admission to the ante-natal wards.

Table C.W. 2 shows the number of attendances at Ante-natal Clinics and the number of consultations held, Table C.W. 3 shows the number of attendances at the Child Welfare Centres and the number of consultations which took place during 1937.

TABLE C.W. 2.

ATTENDANCES AT ANTE-NATAL CLINICS DURING 1937.

Clinics and Centres.	Individual Cases.	Total Attendances.	Consultations.
Regent Road Clinic	657	2081	2081
Broughton Clinic	262	883	866
Police Street Clinic	290	906	906
Ordsall Centre	11	11	11
Encombe Place Centre	58	58	58
Seedley Centre	4	4	4
Regent Road Centre	2	2	2
The Height Centre	3	3	3
Hope Hospital Clinic	1321	6561	1321
District Nurses' Home Clinic	248	857	380
	2856	11366	5632

TABLE C.W. 3.

ATTENDANCES AT CHILD WELFARE CLINICS AND CENTRES DURING 1937.

CLINICS AND CENTRES.	NEW CASES.		TOTAL ATTENDANCES.		CONSULTATIONS.	
	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.	Under 1 year.	Over 1 year.
Regent Road Clinic	221	148	2,712	3,797	1,148	1,369
Broughton Clinic	471	236	5,941	4,005	2,292	1,897
Police Street Clinic	414	104	6,984	5,177	2,429	1,916
Ordsall Centre	124	19	1,932	1,422	526	385
Encombe Place Centre	289	62	4,126	3,280	1,410	1,132
Seedley Centre	263	22	4,500	2,425	1,071	546
Regent Road Centre	170	44	2,202	1,375	571	518
The Height Centre	100	17	1,926	853	593	315
Royal District Nurses' Home	126	—	505	73	98	—
	2,178	652	30,828	22,407	10,138	8,078

Maternal Mortality

During 1937, 18 Maternal Deaths occurred in the City, of these 3 died at home and 15 in hospitals. A detailed report upon each case was forwarded to the Maternal Mortality Committee of the Ministry of Health.

The causes of death were found to be as follows :—

Sepsis following Abortion (2 proved to be self-induced).	3
Obstetric Shock	1
Cardiac Failure, Chronic Secondary Anæmia and Premature Labour	1
Myocardial Degeneration	1
Pulmonary Oedema, Bronchitis and Cæsarean Section	1
Acute Nephritis	1
Post-partum Hæmorrhage	1
Exhaustion and Uterine Inertia	1
Cardiac Failure, Chronic Bronchitis and Cæsarean Section	1
Ectopic Gestation	1
Eclampsia	1
Acute Yellow Atrophy of Liver	1
Mitral Stenosis	1
Puerperal Sepsis	3

Birth Control.

In April, 1934, the Council decided to accept financial responsibility for cases referred by the Maternity and Child Welfare Medical Staff to the " Salford Mothers' Clinic," for advice and information relating to contraception.

The cases referred are married women in whose cases pregnancy is, in the opinion of the Medical Officer, liable to be detrimental to the health of the mother.

During 1937, 21 cases were referred to the Clinic, 10 of whom attended.

Post-Natal Clinic.

Following the receipt of the Ministry of Health's Circular 1622, issued in May, 1937, on the subject of Maternal Mortality, an attempt was made to establish a Post-natal Service. As Saturday morning was the only session when the medical staff were free to do this work, patients who had attended ante-natal clinics were invited on alternate Saturday mornings to the Broughton and Regent Road Clinics. It was found, however, that the response was very poor and the Saturday morning clinic, has, for the time being been discontinued. The practice of the Clinic Medical Officers advising nursing mothers at ordinary child welfare sessions has been carried on during the year and 183 consultations of this type took place.

Further efforts are being made, and it is hoped that a clinic will be arranged to take place on a week-day more convenient to the mothers during 1938.

Massage Treatment.

Massage treatment is given for Rickets and other Orthopædic conditions, at the Clinics and Centres. The results in all cases where the children are brought regularly, and for a sufficient length of time, are very satisfactory. The children attending for massage treatment are seen regularly by the Medical Officers. In cases where the mothers cease attending before the children are officially discharged, the Health Visitor investigates and invites them to re-attend. After they have been discharged, the mothers are asked to bring them regularly to the Child Welfare Centres in order that they may be kept under observation.

During the year 1937, the following cases have been dealt with :—

Clinics and Centres.	No. of Sessions held Weekly.	No. of Regular Cases.	No. of Casual Cases.	Cases Discharged Cured.	Total No. of Attend-ances.
CLINICS—					
Regent Road	10	133	132	25	3500
Broughton	4	66	93	34	1193
Police Street	3	89	128	30	1392
CENTRES—					
Encombe Place	1	17	75	6	512
Ordsall	1	22	26	15	352
Seedley	2	27	63	15	843
	21	354	517	125	7792

Artificial Light Clinic.

The conditions for which artificial sunlight is administered are Rickets, Anæmia, Marasmus and Debility following acute infectious diseases. The results obtained are very gratifying, and only a few cases fail to respond to treatment. After discharge from sunlight treatment, each child is kept under observation by the Medical Officer at the Child Welfare Centre. In a few special cases, a second course of treatment has been found necessary. The treatment is administered by a competent operator under the supervision of the Medical Officer. All cases are examined regularly during the course of treatment.

At the Regent Road Clinic five sessions per week are devoted to the treatment of children under five years of age, and at the Broughton Clinic, where the Sunlight Lamp which had been removed from the Municipal Maternity Home was installed early in 1937, two sessions have been held weekly throughout the year.

The following are the Sunlight Clinic figures for the year 1937 :—

	Regent Road.	Broughton.
Individual cases	328	90
Total attendances	4262	625
CASES DISCHARGED :		
Very much improved	3	2
Improved	77	13
No improvement owing to irregular attendance	248	75

Transfer of Information to the School Medical Department.

During the past five years, histories of children attaining the age of five years, have been transferred to the School Medical Department. It has not been possible with the staff available to transfer the whole of the cases, but in every case where the child's health has not been satisfactory, a résumé of all the information which has been collected by the Department is sent to the School Medical Officer, together with a note of the school which the child is to attend.

Measles.

The compulsory notification of Measles came into force on May 15th, 1936. Since that date every case of measles notified has been visited by a Health Visitor and advice given as to adequate isolation and proper nursing of the patient.

During the winter months of 1937, an epidemic of Measles commenced in the City, and continued until the late spring of 1938. The disease was fortunately of a rather mild type and the mortality from this cause was not unduly high.

Cases appearing to be in need of hospital treatment were reported to the Senior Medical Officer for Maternity and Child Welfare, and in most cases arrangements were made with the patient's own medical adviser, and the patient removed to hospital. During 1937, 966 first visits and 1,120 revisits were paid by Health Visitors to notified cases of measles.

Free Milk Scheme.

The Council's scheme for supplying free milk to necessitous cases provides for the supply of one pint of liquid milk (or its equivalent in dried food) per day to children under the age of two years and to expectant mothers after the sixth month of pregnancy.

Application for assistance under the above scheme has been made in respect of 937 families during 1937. In 840 cases milk was granted free, in 23 cases at part-payment, and 97 applications were refused on account of the family income being in excess of the amount allowed by the scale which is used to determine necessity.

During the year, a total of 1,404 children and 193 pregnant women were assisted.

Sewing Classes.

Sewing classes are held on one half day per week at four Centres, at which mothers are taught to make hygienic clothing and "thrift" garments, i.e., garments made from cast-off adult clothing, for their children. A Health Visitor attends each of these classes, and at three of the Centres help is given by voluntary workers who are members of the Salford Mothers' Guild and Ladies' Public Health Society.

Dinners for Expectant and Nursing Mothers.

Arrangements are made with the Salford Mothers' Guild and Ladies' Public Health Society for the serving, on every full working day, of dinners for expectant and nursing mothers at the Ordsall, Encombe Place and Police Street Centres.

One Health Visitor is in attendance at least one day per week at each Centre, the remainder of the work being carried on by voluntary assistance. Every expectant mother attending the Centres for dinners is asked to attend the Ante-natal Clinic regularly, and is kept under medical supervision.

Diphtheria Immunisation.

Immunisation Clinics have been held, in conjunction with ordinary child welfare sessions once per week throughout the year at the Pendleton, Broughton and Ordsall Centres. The Health Visitors are still experiencing some difficulty in persuading parents to allow their children to be immunised. During 1937 a total of 1,301 attendances of children under the age of five years was recorded and 364 children were brought for the complete course.

Home Helps.

The applicants for Home Helps are usually known to the Maternity and Child Welfare Department through the Free Milk Scheme, and are consequently deserving cases. Home Helps are only supplied where there is absolutely no one to look after the home and other children whilst the mother is in bed. The Home Help attends at the home for ten days from the day of confinement, her hours being from 8 a.m. to 2 p.m., for which she receives from the Corporation 4s. 0d. per day, but provides her own food. Her duties are to look after the house and children generally, see older children off to school, and prepare meals for the mother and the rest of the family. She does not do the family wash, but may, if necessary, wash baby clothes in readiness for the Midwife's visit. As far as possible Home Helps are supplied from the district in which the patient lives, for the sake of convenience, and in order to save travelling expenses. If it is necessary to supply a Home Help who lives some distance away from the patient, reasonable travelling expenses are allowed.

There are four Home Helps on the books at present, they being women who are particularly suited for the work, and who are well known to the Health Visitors as to character, reliability, etc.

The Scheme has been in operation since 1920, and has worked very satisfactorily. During the year 1937, 4 women have been employed as Home Helps and 16 necessitous cases have been assisted.

Public Health Act, 1936—Child Life Protection.

The following is a report of work done in the administration of the Act during 1937 :—

Cases on Register at end of 1936		38
New Registrations during 1937		21
Children removed from Register		25
Including—		
Children removed from Salford	7	
,, adopted without reward	2	
,, attained age of nine years	4	
,, returned to parents	10	
,, admitted to institutions	2	
,, died	—	
Children remaining on Register		34
Total Visits paid during 1937		448

Nursery Classes and Nursery Schools.

The Salford Nursery School has been visited once per month during 1937, by the Senior Medical Officer.

The inspection of children attending nursery classes has been carried out once weekly by the Assistant Medical Officer. The children comprise the age group 3—5 years.

The number of sessions devoted to this work during 1937 ..... = 19
,, ,, ,, schools visited ..... = 18
,, ,, ,, children inspected during 1937 ..... = 361
,, ,, ,, children showing one or more defects ..... = 184

The number of children showing defects appears high but many of these were of a minor character, and were referred to the Child Welfare Centres for treatment or observation. Of those children suffering from more serious conditions, a number were already receiving adequate treatment. The remainder were referred to the family medical practitioner, the general hospital or to the Specialist Clinics according to the requirements of the case.

In most cases the mothers were present at the inspection and were eager to receive the advice proffered on the care and management of their children, and to avail themselves of the facilities offered for treatment. The high proportion of children needing treatment emphasises the importance of the school inspection of children in this age group.

The following table indicates the chief defects found :—

Condition.	Total.	Receiving Treatment or Observation.	Requiring Treatment.	Requiring Observation.
Ptosis	1	...	1	...
Blepharitis	5	...	5	...
Conjunctivitis	5	...	5	...
Strabismus	15	8	7	...
Otorrhœa	5	1	4	...
Nasal Catarrh	2	...	2	...
Enlarged Tonsils and/or Adenoids	39	...	23	16
Cervical Adenitis	3	...	3	...
Dental Caries	41	...	...	...
Nits and/or Pediculi	19	...	19	...
Impetigo	5	...	5	...
Seborrhœa	7	...	7	...
Lipoma Back	1	...	...	1
Bronchitis	26	4	22	...
Heart Conditions	9	2	...	7
Epilepsy	2	2	...	...
Enuresis	5	...	5	...
Cyclical Vomiting	3	3	...	...
Speech Defects	2	...	...	2
Tuberculosis Rib	1	1	...	...
Genu-Valgum	7	1	6	...
Postural Defect	1	...	1	...
Deformity, Hand and Arm	1	1	...	...
Inguinal Hernia	1	...	1	...
Measles	1	...	1	...
Whooping Cough	1	...	1	...
Miscellaneous	25	...	...	...

TABLE C.W. 4.—NOTIFICATION OF BIRTHS.

Wards.	Live Births Notified By				Births transferred to other Local Authorities	Total live births notified.	Live births not notified.	Still-births notified.	St. Mary's Still-births
	Mid-wives.	Medical Practi-tioners.	Manchester Hospitals and Other Local Authorities.	Hope Hospital.					
Albert Park	138	10	9	85	1	241	3	16	2
Charlestown	133	4	6	77	2	218	1	6	1
Claremont	100	8	7	62	7	170	3	4	—
Crescent	123	21	7	92	—	243	2	7	1
Docks	100	—	4	72	3	173	—	10	—
Kersal	58	11	20	37	—	126	6	2	—
Langworthy	93	—	—	50	1	142	—	6	—
Mandley Park	150	3	52	69	47	227	4	2	—
Ordsall Park	124	2	2	83	1	210	1	9	1
Regent	105	8	7	78	—	198	—	10	1
St. Matthias'	126	23	9	81	1	238	—	7	—
St. Paul's	132	1	3	56	3	189	—	14	—
St. Thomas'	109	1	2	61	—	173	—	10	—
Seedley	69	—	4	52	—	125	—	2	1
Trinity	126	34	13	56	3	226	—	3	2
Weaste	73	1	4	75	23	130	1	7	—
	1,759	127	149	1,086	92	3,029	21	115	9

Supervision of Midwives.

The year 1937 has been of extraordinary importance in the history of midwifery. With the passing of the Midwives Act, 1936, local authorities were required to prepare schemes for submission to the Ministry of Health to secure for each area a midwifery service adequate for its needs. In Circular 1569, issued in September, 1936, the Minister states :—

> " The principal object of the Act is to secure the organisation throughout the country of a domiciliary service of salaried midwives under the control of local supervising authorities as an important step in the improvement of the Maternity services and in the campaign for reducing maternal mortality. At the same time, the whole status of the midwifery profession will be raised by providing adequate salaries and secure prospects for those midwives who enter the new service, and by compensating those who retire within a specified period and so reducing the present overcrowding in the ranks of the profession."

In accordance with the Ministry's instructions, before submitting the Salford Scheme to the Ministry, consultations took place between representatives of the Health Committee and the following organisations :—(1) the Local Medical and Panel Committee, (2) Manchester and Salford District Nursing Institution, (3) St. Mary's Hospital Board and (4) the Local Branch of the Midwives Institute.

The Scheme submitted to the Ministry contained the following proposals :—

1. That 19 midwives should be employed directly by the Corporation.
2. That arrangements be made with the Manchester and Salford District Nursing Institution for three midwives to attend cases under the Scheme.
3. That arrangements be made for St. Mary's Hospital midwifery staff to attend such cases as make application to them within a certain area.

In order to facilitate the working of the scheme, and to give patients as far as practicable a reasonable choice of midwife, it was proposed that the City be divided into five areas, four to be worked by groups of midwives directly employed by the Council, and the fifth to be allocated to the staff of the District Nursing Institution.

The district practice worked by the staff of St. Mary's Hospital covers approximately three of the five areas mentioned.

In making arrangements with St. Mary's Hospital Board and the Royal Nursing Institution, the Council complied with the Ministry's request that the arrangements made should, if possible, secure to the district served by any voluntary institution undertaking the teaching of midwifery, a sufficient number of cases for their purpose.

The Council's scheme included a proviso that, as far as possible, midwives should be recruited from those already practising in Salford, having regard to efficiency, size of practice, and length of time the midwife had been in practice in the City.

The Act required that the local authority should fix a charge for the services of municipal midwives, and it was proposed in the scheme, that the fees prevailing in the district prior to the passing of the Act, should be continued, *i.e.*, £2 2s. 0d. in the case of a first confinement and £1 15s. 0d. in other cases.

The Minister signified his approval of the scheme and it was put into operation on 1st August, 1937.

It was decided at the outset to make every effort to retain the personal relationship already existing between patient and midwife, partly in order to keep the confidence of the patient, and partly to facilitate the smooth working of the scheme. Thus, the custom whereby a patient personally booked the midwife of her choice and paid the midwife directly for her services has been maintained. In the majority of cases, the rendering of an account and the issue by the midwife of an official receipt are the only signs of "officialdom" that the operation of the new Act has made apparent to the mother.

Arrangements have been made for the midwives appointed under the Act to attend ante-natal clinics periodically and every effort has been made to welcome the midwives as members of the staff, and to encourage them to realise that their work forms an important section of the City's Public Health Service.

From 1st August to the end of 1937, the following domiciliary cases have been attended :—

	Acting as Midwife.	Acting as Maternity Nurse.
Municipal Midwives	431	61
St. Mary's Hospital Staff	32	—
Royal District Nursing Institution Staff	89	4

The Act required local authorities to pay compensation to every midwife who, between 1st January, 1935, and 18th March, 1936, notified an authority of her intention to practise, and who, not later than 31st July, 1939, voluntarily surrenders her certificate to the authority in whose area she is practising at the time of such surrender. During the year 1937 seven midwives surrendered their certificates voluntarily and received the compensation due to them under the provisions of the Act.

The routine supervision of all midwives practising in the area has been carried on as in previous years. The total number of midwives in district practice at the end of 1937 was 28, including 18 municipal midwives. (One of the midwives appointed under the new Act resigned in November, 1937).

The work of the Non-medical Supervisor of Midwives included the following :—

550 Miscellaneous visits.

238 Visits to Midwives' Homes.

243 Interviews.

During the year, 1,519 cases were attended by midwives, and 265 cases were attended by doctors with midwives acting as maternity nurses.

Notifications.

Under the Midwives Act, 1902, midwives are required to make the following notifications to the Local Supervising Authority :—

1. Each time they require to call in a doctor.
2. Any contact with infectious disease other than puerperal fever or puerperal pyrexia.
3. Stillbirths.
4. Deaths of infant or mother.
5. Substitution of artificial feeding for breast feeding.

Medical Assistance.

During the year, 934 notifications of a midwife having sent for medical assistance were received, the causes being as follows :—

Deformed Pelvis	1
Abnormal Presentations	49
Placenta Prævia	1
Ante-partum Hæmorrhage	24
Post-partum Hæmorrhage	12
Uterine Inertia	128
Obstructed Labour, or requiring instrumental assistance.	119
Retained Placenta or Membranes	15
Ruptured Perineum	215
Rise of Temperature	31
Eclampsia	3
Premature Birth	14
Miscarriage and Abortion	11
Inflammation of Eyes	118
Other causes relating to Mother	141
Other causes relating to Child	52
Total	934

Contact with Infectious Disease.

Eleven notifications of contact with infectious disease were received from midwives during 1937. Four on account of having been in contact with Pemphigus Neonatorum, and seven in connection with other infection. In each case the midwife was disinfected at the Mode Wheel Disinfecting Station.

Investigation of Stillbirths.

Forty-one stillbirths were notified by midwives in domiciliary practice during 1937. Each case was thoroughly investigated and the cause found to be as follows :—

2 Abnormal Presentation.
6 Premature Birth (4 of which were macerated).
3 Ante-partum Hæmorrhage.
7 Difficult Labour (1 deformed pelvis).
4 Deformities of Fœtus.
3 Toxæmia of Pregnancy.
3 General ill-health of mother.
1 Severe shock during pregnancy.
10 Macerated Fœtus (2 born before arrival of help—Inquiry held).
2 Cause unknown (born before arrival of help—Inquiry held).

In three of these cases there had been no ante-natal supervision.

Investigation of Infant Death.

Twenty-two Notifications of Infant Death were received during 1937, the causes being as follows :—

6 Prematurity and Debility.
4 Prematurity and Cardiac Failure.
2 Congenital Malformation.
4 Congenital Heart Disease.
3 Asphyxia Pallida.
2 Convulsions.
1 Pulmonary Atelectasis.

Artificial Feeding of Infants.

During the year 1937, 46 Notifications of the substitution of Artificial Feeding for Breast Feeding were received, the reasons given being as follows :—

In 17 cases artificial feeding was ordered by the doctor in attendance.
14 mothers had insufficient secretion of breast milk.
4 mothers were returning to work.
2 mothers refused to feed their babies.
1 infant was removed to hospital.
2 Mothers were suffering from Mastitis.
6 Mothers were too ill to feed their babies.

Public Health (Notification of Puerperal Fever and Puerperal Pyrexia Regulations) 1926 and 1928.

Puerperal Fever. Six cases were notified during 1937.
4 cases occurred in the domiciliary practices of midwives.
1 case occurred in Hospital.
1 case occurred in the practice of a General Medical Practitioner.

Puerperal Pyrexia. Fifty-three cases were notified during the year.
22 cases occurred in Hope Hospital.
20 cases occurred in the domiciliary practices of midwives.
5 cases occurred in the practices of doctors (3 were removed to hospital).
6 cases occurred in the district practice of St. Mary's Hospital (4 were removed to hospital).

All cases were thoroughly investigated by the Non-Medical Supervisor of Midwives and every precaution taken to prevent the spread of the disease. This includes the temporary suspension of the midwife and disinfection of her person, bag and clothing, and the careful supervision of other cases then being attended by her.

As the Regulations require prompt notification of any rise of temperature, special attention, and, if necessary, the services of a consultant are quickly available.

Bacteriological examinations of lochia and blood are made on request at the Municipal Laboratory.

Public Health (Ophthalmia Neonatorum) Regulations, 1926 and 1928.

There has been a considerable decrease in the number of cases of Ophthalmia Neonatorum notified during the year 1937, the number notified being 9.

1 case occurred in Hope Hospital.
7 cases occurred in the practices of midwives.
1 case occurred in a Nursing Home outside Salford, and was later notified by a Salford doctor.

In six cases both eyes were affected and in three cases one eye was affected. Two cases were classed as severe and 7 as slight. All cases recovered without injury to sight.

All notified cases of Ophthalmia Neonatorum are visited, and where necessary the case is referred to the District Nursing Association, who supply a nurse to carry out treatment under doctors' orders.

During 1937, 118 cases of discharging eyes of infants were notified by midwives in accordance with the Central Midwives Board Rules. All cases were visited regularly until the condition had cleared, and where necessary, instruction as to the method of treatment was given.

Pemphigus Neonatorum.

Five cases of Pemphigus Neonatorum were notified during 1937. Three cases occurred in the practices of midwives, one was notified from a clinic and one occurred in the district practice of St. Mary's Hospital.

The age of onset varied from eight days to three weeks. Every precaution was taken to prevent the spread of the disease and all the cases recovered.

Assisted Midwifery Scheme.

From 1st January to 31st July, 1937, when the Municipal Midwifery Service commenced, 48 applications for assistance under the above scheme were received. Assistance was granted in 36 cases, and in 12 cases the application was refused. In 8 cases the income was in excess of the scale allowance, in two cases the accommodation was unsatisfactory, and two patients were advised to enter hospital for confinement on medical grounds.

Each case is investigated by the Assistant Inspector of Midwives and no assistance is granted under the scheme in cases where the home accommodation is unsuitable for confinement to take place there, or in cases where the mother has had a previous difficult confinement necessitating hospital treatment, such cases being urged to seek admission to hospital.

In 50 cases compensation of 10s. per patient was paid to midwives in respect of booked cases where the patient had subsequently been sent to hospital on medical advice.

Midwives Act, 1918.

Under the Midwives Act, 1918, section 14 (1), the Local Authority is authorised to pay the fees of registered medical practitioners called in by midwives in cases of emergency, and, where possible, recover the fee from the patient or her husband. This ensures that no lying-in woman need be without the services of a qualified medical attendant, however poor her circumstances may be. The doctors' accounts are checked and paid in accordance with the Scale of Fees prescribed by the Ministry of Health.

Nursing Homes Registration Act, 1927.

There were, at the end of 1937, seven Nursing Homes on the Register, three of these being Maternity Homes, two Medical and Maternity and two Medical and Surgical. One establishment was closed during the year and one newly registered after certain sanitary and structural defects had been made good.

The Senior Medical Officer for Maternity and Child Welfare assisted by the Non-Medical Supervisor of Midwives inspects the Homes at least once each year, and more often when necessary.

SECTION VIII.

Hope Hospital.

General.

As 1937 has been the first complete year in which the new buildings have been in regular use, the year has been characterised by consolidation of the advantages to the patients and staff which have resulted from the greatly improved accommodation in the new wards and departments.

The Hospital has had greater demands made on its accommodation than ever before and it has been called upon to treat a larger number of in-patients as well as of out-patients. This is illustrated by the following figures, extracted from the statistics appearing at the end of this report :—

	1936.	1937.
Admissions	9,504	10,156
Births	961	1,086
Operations	2,691	3,035
Out-patient attendances	21,408	23,730
Mothers attending Ante-natal Clinic	1,259	1,321

The main work of the year having been occupied in settling down to the new conditions and in taking advantage of the new facilities provided, we have not much to record in the way of new ventures, but two very important additional improvements have been inaugurated. The plaster room was transferred to new quarters in the old operating theatre which has been modified and re-fitted for the purpose. These rooms have been found to provide very satisfactory accommodation for this important branch of the orthopædic work. Secondly, two large rooms in the new buildings (originally intended to be used as dining rooms for the nursing staff) have been taken over to accommodate the massage and electro-therapeutic department. Here a spacious gymnasium has been provided and also ample space, in curtained cubicles, for treatment by massage, radiant heat, diathermy, etc.

During 1937 there continued to be a steady demand for admission as private paying patients. Such patients, if they require treatment for medical or surgical illnesses, are accommodated in the small, two-bed wards in the new pavilions. Maternity cases are admitted to A2 ward. Medical and surgical cases, if resident within the City of Salford, are charged at the rate of three-and-a-half guineas, maternity cases four-and-a-half guineas per week. Paying patients are also admitted from outside the Salford area but are required to pay one guinea per week more.

The number of private paying patients admitted during the year was as follows :—

Medical and surgical cases	122
Maternity cases	122
Total	244

Medical Staff.

Mr. Mercer and Mr. Smalley having resigned from their appointments as Visiting Surgeons for Diseases of the Ear, Throat and Nose, Mr. W. B. McKelvie was appointed and took up his duties in May.

Mr. Brown and Dr. MacKay continued during the year to act as Examiners for the General Nursing Council. Dr. Henderson, R.O.O., obtained the Diploma of Master of Midwifery of the Society of Apothecaries. He applied for, and was granted by the Committee, three months' leave of absence in order to study for the Fellowship examination of the Royal College of Surgeons of Edinburgh. During the latter part of 1937, Dr. Henderson undertook additional duties at two of the City Ante-natal Clinics.

Nursing Staff.

As in past years, the Committee granted to the General Nursing Council permission to use the Lecture Room and adjoining rooms as a centre for their examinations.

The regular examinations for our own Hospital Certificate were also held as usual, the examiners being Dr. G. J. Langley (Medicine), Mr. E. E. Hughes (Surgery) and Miss Halstead (Practical Nursing).

The results of the various examinations were as follows :—

	Entered.	Passed.	Failed.
1. Hospital Certificates	42	42	0
2. State Examinations :			
(*a*) Preliminary	37	36	1
(*b*) Final	54	52	2
3. S.C.M. Diploma of the Central Midwives Board	37	35	2

A series of lectures on practical nursing was given to the male attendants by the Senior Tutor Sister (Miss Edwards).

Miss Edwards, Senior Tutor Sister, resigned and was succeeded by Miss Knowles.

Sister Howie was transferred from the position of Maternity Supervisor to that of Assistant Home Sister and her place in the Maternity Department was taken by Sister Beech. As the work in the teaching department had increased, a third Tutor Sister was appointed by the Committee.

The Nurses' Swimming Team won the Inter-Hospitals Cup for the fourth successive year.

The Tennis Cup, in the competition for which our teams were beaten last year, was won again in 1937. The Hockey Team continues to be active and had a successful season.

A very successful Athletic Sports Meeting was held in the Hospital grounds in July when a large number of members of the Staff turned out to compete in the various events.

During 1937 there were 171 cases of illness among the Nursing Staff. The average duration of illness was thirteen days. The total number of nursing days so lost was 2,287. The corresponding figures for 1936 were 172, 15 and 2,700.

Medical Wards.

Staff.—Dr. Langley, Visiting Physician.
Dr. MacKay, Whole-time Physician.
Dr. Elsie Porter (Visiting) assisting in special investigation into Pneumonia.
The Assistant Medical Officers allocated to Medical Wards.
Miss Rogers (Visiting) Electrocardiologist.

General Work.—The number of patients requiring special investigation and treatment continued to be high and the acute wards were always full, indeed, accommodation had occasionally to be found for medical cases in other wards. The specialisation resulting from the allocation of particular wards to the investigation and treatment of specific diseases proved to be worth while. There was greater working efficiency and economy of time, and the instruction given to nurses was more thorough.

The treatment of acute lobar pneumonia with homologous anti-pneumococcus serum continued to be the method of choice. A paper on the results of this treatment was published in *The Lancet*, vol. I, page 795, 1937.

Pulmonary Tuberculosis.—The total number of new cases diagnosed during the year was 40. All were brought to the notice of Dr. E. N. Ramsbottom, Senior Tuberculosis Officer, at his weekly visits and arrangements made to enable them to be taken under his care. Certain pulmonary cases attending the Municipal Chest Clinic were admitted to Hospital as occasion arose for specialised forms of investigation and treatment.

The Electrocardiograph as an aid to diagnosis in the investigation of cardiac muscle function continued to be of great help. Reports on 539 electrocardiograms were made during the year.

Medical Out-patient Department.—This department continued to be very busy. New patients, numbering 630 (an increase of 212 over 1936), were sent by their private medical attendants for help in diagnosis, for investigation, or for specialised treatment. Another 114 patients came to the department for observation and treatment on discharge from the wards. There were 2,371 return attendances by old patients—274 more than in 1936.

The diabetic clinic was attended by an average of about 30 patients per month.

Diphtheria and Scarlet Fever Immunisation.

Nursing Staff.

Number tested	85
Number found to be immune	58
Number susceptible to :—	
Diphtheria	13
Scarlet Fever	6
Diphtheria and Scarlet Fever	8

The susceptible nurses were immunised if they remained on the staff of the Hospital.

Children between the ages of 2 and 14 continued to be Schick tested on admission to Hospital if they had not already been tested. Susceptible children were immunised in Hospital.

Surgical Wards.

Staff.—Mr. Simmons, Visiting General Surgeon.
Mr. Milner, Visiting Orthopædic Surgeon.
Mr. Todd, Visiting Gynæcologist.
Mr. McKelvie, Visiting Aural Surgeon.
Mr. Brown, Whole-time Surgeon.
Dr. Henderson, R.O.O., Operative Gynæcology.
Drs. Ghosh, Faulkner-Hill, Sykes and Nicholson, Visiting Anæsthetists.
Mr. Pollitt, Visiting Dental Surgeon.
The Assistant Medical Officers allocated to the Surgical Wards.

The year has been a busy one and there has been no abatement in the volume of the work done in the surgical department. The total operations for the year number 3,035, and show an increase of 344 over the number for the year 1936. In general, there has been an increase in every branch of surgical work, but the main bulk of the increase in the operative work is accounted for by the increased number of gynæcological operations, dental operations, and

minor surgical operations. The latter have been undertaken by the Assistant Medical Officers, and there is now established a regular weekly session for minor surgical procedures, which no longer need to be added to the tail-end of a heavy list of major operations. This has taken a considerable burden off the regular general operating sessions.

There are still ten regular operating sessions each week, with special sessions for urgent emergency cases. The work in the new operating theatres has continued to be most satisfactory. The increase in emergency work has led to the appointment of a full-time night theatre sister, and this has resulted in increased expedition and efficiency in dealing with these cases at night, in addition to giving an opportunity for some of the routine work to be done at night, and thus relieving the day theatre staff in some measure.

The operations were distributed as follows :—

Full-time Staff :	
Mr. Brown	420
Dr. Henderson	431
Assistant Medical Officers	363
Visiting Staff :	
Mr. Simmons (General Surgeon)	208
Mr. Milner (Orthopædic Surgeon)	126
Mr. Todd (Gynæcologist)	246
Mr. McKelvie (Ear, Nose and Throat Surgeon)	654
Other Ear, Nose and Throat Surgeons	435
Surgeons from the Radium Institute	7
Mr. Pollitt (Dental Surgeon)	131
Other Visiting Surgeons	14
Total	3,035

The anæsthetics were as follows :—

General (Chloroform, Ether, Gas and Oxygen)	2,125
Spinal	650
Local Infiltration	106
Evipan	126
Twilight	27
Total	3,035

Anæsthetics were administered by :—

Assistant Medical Officers	1,246
Dr. Ghosh	352
Visiting Anæsthetists	1,268
Surgeons	142
Twilight	27
Total	3,035

Mr. Pollitt, School Dentist, has attended regularly each week and has had a regular operating session. A marked increase in the dental operations is shown as a result. There is no limit to the amount of work for a dentist in the Hospital, and it has been found necessary to limit attention to urgent cases and to cases where outside dental treatment cannot be made available. The fact that a skilled dental service is now available in the Hospital has been greatly appreciated in every department.

Ear, Nose and Throat Department.—There was a change in the organisation of this department during the year, and Mr. McKelvie was appointed to take sole charge of the ear, nose and throat work. This reorganisation entailed a limitation of the work to one consultation session and two operating sessions each week. The new arrangements have proved entirely satisfactory and have resulted in a progressive diminution in the waiting list for tonsil cases, which existed earlier in the year. The result is that these cases, instead of having to wait months or even longer for admission, can now be admitted and operated on in a relatively short time.

Orthopaedic Department.—The orthopædic department has continued under the direction of Mr. Milner. Early in the year the plaster room was transferred from G1 day-room to the old operating theatre. This has provided most satisfactory accommodation for this purpose, the only disadvantage being that it is a rather long distance from the X-ray department and the wards. This disadvantage is more than compensated by the provision of roomy and pleasant accommodation for the plaster work.

The figures for the year were :—

In-patients :

In Hospital on 1st January, 1937	56
New Admissions	362
Discharges	347
In Hospital on 31st December, 1937	54
Deaths	13

OUT-PATIENTS :

Out-patient attendances	1,441
Patients treated in the plaster room	914
Anæsthetics administered in the plaster room	82

SURGICAL OUT-PATIENT DEPARTMENT.—The work in this department continues to be active. Casualty cases have increased from 300 to 353, whilst during the year 3,431 general surgical out-patient cases were seen, a slight decrease on the previous year. It need hardly be emphasised that the work in the Out-patient Department is most important from the point of view of the Hospital generally. A considerable amount of routine investigation work, along with other work, is carried out in the Out-patient Department, and in many cases admission to the Hospital can be avoided as a result. A limitation of this service would result immediately in severe and pronounced pressure on the accommodation for in-patients, for it provides an efficient and economical method of relieving the burden on the available bed accommodation, without detracting from the service which the Hospital provides for the community.

OPERATIONS DURING 1937.

1.	Mouth (including teeth)	133
2.	Abscess (various)	115
3.	Gynæcological	496
4.	Tonsils and Adenoids	989
5.	Bones and Joints	159
6.	Stomach and Intestine	150
7.	Liver and Gall Bladder	20
8.	Appendix	192
9.	Hernia	172
10.	Genito-Urinary	199
11.	Hæmorrhoids	60
12.	Breast	17
13.	Ear	36
14.	Empyema	20
15.	Nose	50
16.	Eye	3
17.	Brain	2
18.	Thyroid	18
19.	Various	131
20.	Cystocopic Examinations	73
	Total	3,035

Maternity Department.

Staff.—Mr. Todd, Visiting Obstetrician.
Dr. Henderson, Resident Obstetric Officer.
The Senior Assistant Medical Officer.

Again the maternity unit is able to show a steady increase in the work of all departments. Few changes have occurred in the administrative side of the work since the last report, A2 and A3 serving as clean lying-in wards and A1 as a ward for emergency admissions and potentially septic material. Late in the year the part of A1, originally housing abortions, was used for ante-natal cases, originally accommodated in B2. The main ward of B2 was then relegated to the care of abortion cases, and the day-room of B2 was structurally altered to accommodate morbid lying-in patients, especially those developing morbidity on A2 or A3.

The increase in numbers of patients attending the ante-natal clinics of the Hospital has now reached a figure which has necessitated opening the ante-natal department on Thursday morning, thus making four ante-natal clinics per week. Probably the necessity will arise for a further session unless better accommodation can be obtained, the main difficulty being the absence of a waiting room.

The association of the Hospital with the clinics outside and under the Public Health Department has been strengthened by the attendance (since June) of the R.O.O. at Police Street Clinic (one session per week) and Regent Road (one session per week). The district clinics have very materially assisted in reducing the number of attendances at the Hospital's already congested ante-natal centre.

One post-natal clinic per week is held each Saturday morning. The increased number of attendances there may necessitate the opening of a further session in the near future.

Number of attendances at Ante-natal Clinics	6,561
Number of individual mothers attending Clinics	1,321
Number of individual mothers attending Post-natal Clinics	425
Number of cases admitted to the Ante-natal Ward	339
Number of cases delivered	1,156
Booked	1,086
Non-Clinic	70
Number of Abortions admitted	260
Number of Ectopic Gestations	7

MATERNAL DEATHS.

Analysis.

1. *Gangrenous Cystitis. Foreign Body in Bladder. Abortion.
2. *Pelvic Peritonitis, Parametritis. Abortion.
3. Acute Pulmonary Oedema. Cæsarean Section.
4. †Post Partum Hæmorrhage. Retained Placenta.
5. Puerperal Septic Infection (Staphylococcus Aureus). Placenta Prævia.
6. Obstetric Shock. Multiparity.
7. ‡Mitral Stenosis with decompensation.
8. Peritonitis. Septic Abortion.
9. Acute Liver Atrophy.
10. Peritonitis. Putrid Endometritis. Forceps delivery.
11. Broncho-pneumonia. Cæsarean Section.
12. Paralytic Ilens. Tubal Ectopic.
13. Cerebral Hæmorrhage. Eclampsia.
14. Obstetric Shock. Post Partum Hæmorrhage. Retained Placenta.

*Reported to Coroner.
†Sent in as P.P.H. Died one hour after admission.
‡Ante-natal Death. Six months pregnant.

Number of Still Births	57	4·9%
Number of Neo-natal Deaths	31	2·69%

Caesarean Sections	31

Analysis.

Contracted Pelvis	18
Breech	5
Transverse	1
Rigid Cervix	2
Placenta Prævia	2
Prolapsed Cord	1
*Failed Forceps	2
	31

*(1) Latzko C.S. (2) Cæsarean Hysterectomy.
All other operations were Lower Segment Sections.

Caesarean Deaths.

(1) Acute Pulmonary Oedema. C.S. for Contracted Pelvis.
(2) Acute Bronchitis. Rickety Dwarf.

Number of Forceps Deliveries	101
	Rate 8·8%
Breech Deliveries	46

Hæmorrhages :

Accidental Hæmorrhage	10
Placenta Prævia	6
Eclampsia	5

Septic States :

Puerperal Septicæmia	1
Puerperal Pyrexia	23
Ophthalmia Neonatorum	1
Pemphigus Neonatorum	0

Other Obstetric Operations :

Perineal Repairs requiring Anæsthetic	21
Manual Removal of Placenta	6
Embryotomy	7
Stomach Tube Inductions	14
Tent Inductions	2
Miscellaneous	6

The non-clinic cases though forming only 6·44 per cent.of the cases admitted to the lying-in wards show a higher proportion of abnormality and dystocia. Under a few main headings the following will show the proportions falling into the different groups. The figures in all groups have of course been already included in the tota' figures for the department set out previously.

Non-Clinic Cases		*70
1. Delivered normally in Hospital		25
2. B.B.A.		6
3. Delivered as Breech in Hospital		7
4. Admitted as Emergencies		32
(*a*) Obstructed Labour		13
(i) Failed Delivery outside	10	
(ii) No attempt at Delivery outside	3	
(*b*) Ante Partum Hæmorrhage		8
(*c*) Delivered outside		3
(i) Retained Placenta	2	
(ii) Eclampsia	1	
(*d*) Miscellaneous		8

*Excluding Abortions, Ectopies and Ante-natal Admission.

Number of Non-Clinic cases requiring Cæsarean Section as an Emergency	9
Maternal Death (Admitted with Retained Placenta, died one hour after admission).	1
Still Births	12
Neo-natal Deaths	6

It will not be out of place to mention here a new clinic which has been opened in connection with the Gynæcological Department, for the rational investigation and treatment of leucorrhœa. Although the bulk of material is purely gynæcological, many patients are referred both from our own post-natal clinic and otherwise. Besides saving beds by unnecessary admission, and patients' time by the application of immediate rational therapy, the clinic provides at the same time a close post-natal follow-up in its immediate sphere, and a link between the obstetric and gynæcologic units.

Reports upon the Pathological examination of material are issued during the clinic sessions. In this part of the routine the willing co-operation of the Pathologists has been greatly appreciated by the clinicians.

Treatment of Cancer.

The arrangements with the Christie Cancer Hospital and Holt Radium Institute continue to function satisfactorily. An increasing number of cases requiring deep X-ray therapy have to be transported daily for considerable periods to and from the Institute. This puts a heavy strain on the Hospital ambulance service. The majority of these cases are however not suitable to be transported excepting as lying-down, ambulance cases, so this cannot be avoided.

The number of cases dealt with was as follows :—

	1936.	1937.
Patients examined at the Institute	46	42
,, treated here with Radium	20	15
,, treated as in-patients at the Christie Hospital	8	1
,, treated as out-patients at the Christie Hospital (Deep X-ray)	14	8

V.D. Cases.

Staff.—Dr. Marinkovitch, V.D. Medical Officer for Salford.
The Assistant Medical Officers attached to Wards E2 and C2.

The number of male cases admitted for treatment was 67, as compared with 37 for the last eight months of 1936. Fifty-seven female patients were treated as in-patients, as compared with 48 in 1936.

Dr. Marinkovitch has continued to act as Consulting Dermatologist to the Hospital.

Laboratory for Investigations in Pathology.

Staff.—Dr. Crawford, City Pathologist.
Dr. Lois Stent, Assistant City Pathologist.
Three Technicians.

During the year 1937, 14,260 specimens were examined, as shown in the appended table—an increase of 2,000 on those examined in 1936 and an increase of 5,000 on the number of examinations carried out in 1935.

In order to cope with the increase of work, an extra junior technician was appointed in December, 1935. Since then the work done in the Laboratory has increased by over 50 per cent., so that it becomes more and more difficult for the staff to deal with the steadily growing demands upon them.

One may add that in spite of the increase of work, the expenditure on chemical reagents, bacteriological media, etc., remains at a comparatively low figure, as practically all these are made by the laboratory staff.

The investigations into the serum treatment of pneumonia are still being carried out as a routine procedure. In addition, the Laboratory is now used as an inoculation centre for the treatment of carbuncles, boils and other staphylococcal infections with staphylococcus toxoid.

BACTERIOLOGICAL EXAMINATIONS.	
Swabs for K.L.B.	2,640
Swabs for Hæmolytic Streptococcus	359
Urine specimens	1,471
Exudates	332
Direct Typing of Sputa	154
Stools	187
Smears for Gonococci	307
Anærobic Cultures	2
Blood Cultures	262
Stools for T.B.	1
Sputa for T.B.	1,096
Sputum Concentration (for T.B.)	3
Estimation of Antibodies	323
HAEMATOLOGICAL EXAMINATIONS.	
Blood Counts	517
Reticulocyte Counts	476
White Cell Counts	140
Blood Grouping	89
Sedimentation Rate of Red Cells	422
Paul-Bunnell Reaction	1
Coagulation Time	29
Fragility of Red Cells	3
Hæmoglobin Estimations	99
Platelet Counts	13
Carried forward	8,926

BACTERIOLOGICAL EXAMINATIONS (*continued*).

Brought forward	8,926
PATHOLOGICAL EXAMINATIONS.	
Cerebro-Spinal Fluids	239
Pleural Fluids	84
Autopsies	168
Histological Sections	1,063
Museum Specimens	3
BIOCHEMICAL EXAMINATIONS.	
Blood Sugars	1,153
Blood Ureas	190
Urea Clearances	301
Test Meals	409
Stools for Occult Blood	460
Van den Bergh Reaction	12
Diastatic Index	2
Milk Phosphatase Tests	90
Urine Specimens	727
Blood Calcium	3
Blood Cholesterol	5
Colloidal Gold Reaction	5
Stools Analysis	2
Urine for Ascorbic Acid Estimation	2
Analysis of Urinary Calculus	1
MISCELLANEOUS EXAMINATIONS.	
Toxoid Treatment (number of cases)	61
Mouse Inoculations	234
Smears for Trichomonas	112
Vaccines	8
Total	14,260

Maintenance of the Hospital.

During the year the old X-ray Department at E block was converted into a Sick Bay for the Nursing Staff.

Runways have been fixed on the Fire Bridges between Pavilions G and H so that beds and cots may be easily taken out.

The bridge between A2 and B2 has been enclosed with metal and glass frames. B2 Day-room has been converted into a small unit for maternity cases.

A system of call bells has been installed on the private wards in N.E. 1, 2, 3 and 4.

The general call system from the Lodge has been completed with regard to the pavilions N.E. and N.W.

MASSAGE.—The new Massage Department was completed and occupied during the year. The department has a large room divided into cubicles for general massage and electrical treatment and a room for remedial exercises.

X-RAY.—A new teak tank for developing films, etc., has been erected in the Dark Room.

EXTENSIONS.—The Offices and Clinic Rooms at the new extensions have been heated.

LODGE.—A new shelter has been erected at the Lodge by the Transport Department.

ORTHOPAEDIC DEPARTMENT.—The old Operating Theatre has been redecorated and converted into a Plaster Room for the Orthopædic Department of the Hospital.

PAINTING WORK.—The staff of painters has been fully occupied during the year. In addition to the converted departments already mentioned, the Day-rooms of G1 Ward, Special Wards of N.W.2, staircase and corridor of N.W.1 and 2, Sun-ray Department, main gates and railings, C2X, C2 Ward, Lecture Room and bedrooms at the Nurses' Home have been redecorated. The Theatres and Labour-rooms have been regularly washed down by the painting staff.

THEATRES.—The ceilings of both theatres have been covered with plaster boards. The archway of the theatre was built up and doors installed. Both theatres and the Surgeons' Wash-up have been redecorated.

GENERAL.—The work of the Maintenance Staff has been excellent, all the members taking pride in their work. The undermentioned is a list of the jobs carried out by the various departments :—

	Jobs.
Engineering Staff	1,852
Electricians	3,329
Plumbers	1,826
Joiners	2,312
Bricklayers	438

GARDENS AND GROUNDS.—The work of this particular branch has been carried out very well. The sunken garden at the Nurses' Home has been completed. New lawns have been laid and the whole scheme made to be as bright and cheerful as possible.

STATISTICS.

1. General.

	1936.	1937.
In Hospital on 1st January	885	937
New Admissions	9,504	10,156
Live Births	961	1,086
Totals	11,350	12,179
Discharges during the year	9,291	10,012
Deaths	1,122	1,241
Remaining under treatment at the end of the year	937	926
Totals	11,350	12,179
Mortality	10·2%	10·0%

	1936.	1937.
Average cost per patient per week	58s. 10d.	61s. 7d.

2. X-ray Department.

	1936.	1937.
Number of Patients	4,128	5,088

3. Department of Massage and Electro-Therapeutics.

(*a*) *Massage.*	1936.	1937.
Number of In-Patients	406	361
Number of Out-Patients	351	362
Totals	757	723
Number of Treatments :—		
In-Patients	9,168	7,178
Out-Patients	6,103	6,190
Totals	15,271	13,368

	1936.	1937.
(*b*) *Electro-Therapeutics.*		
In-Patients	130	244
Out-Patients	191	233
Totals	321	477
Number of Treatments :—		
In-Patients	3,716	8,007
Out-Patients	3,904	5,113
Totals	7,620	13,120
(*c*) *Ultra-Violet Radiation.*		
Number of Treatments	1,354	1,481

3. Out-Patients' Department.

Dressings and Treatments	18,380	19,576
Consultations, etc	3,028	4,154
Totals	21,408	23,730

4. Department of Pathology.

Autopsies Conducted	143	169
Specimens Examined	12,262	14,260

5. Mental Wards.

	1936.			1937.		
	Male.	Female.	Total.	Male.	Female.	Total.
Patients under treatment on 1st January	64	85	149	65	82	147
Patients transferred from County Mental Hospital	—	—	—	—	—	—
Patients admitted during the year	150	124	274	153	136	289
Totals	214	209	423	218	218	436

Discharges.

	Male.		Female.		Total.	
	1936.	1937.	1936.	1937.	1936.	1937.
Released c/o Friends	51	46	36	42	89	88
Transfers to Mental Hospital	38	42	24	22	62	64
Released to other Wards	11	11	24	18	35	29
Released to other Institutions	4	16	12	15	16	31
Discharged during the year	104	115	96	97	202	212
Deaths during the year	21	51	30	25	51	76

TABLE SHOWING INCREASE IN WORK OF THE HOSPITAL SINCE 1914.

Year.	Admissions.	Births.	Discharges.	Deaths.	Average Daily No. of Patients.	Operations.
1914	2,728	12	2,135	591	749	149
1915	1,632	4	1,393	491	514	160
1916	1,330	—	941	353	439	175
1917	1,263	3	1,058	335	407	145
1918	1,402	16	1,104	391	303	144
1919	1,559	7	1,056	348	339	107
1920	2,516	64	1,736	451	689	163
1921	3,335	227	2,899	617	858	332
1922	3,720	263	3,272	745	888	395
1923	4,463	250	3,749	815	870	430
1924	4,416	182	3,742	922	811	523
1925	5,315	293	4,292	1,015	868	802
1926	5,471	366	4,839	903	943	882
1927	5,801	409	5,125	1,003	943	960
1928	6,430	559	5,545	926	960	1,076
1929	7,477	674	6,936	1,141	918	1,403
1930	7,583	685	7,150	1,038	969	1,807
1931	7,963	812	7,762	1,093	919	2,004
1932	8,521	843	8,156	1,052	961	2,186
1933	8,031	615	7,572	1,084	940	2,201
1934	7,893	745	7,548	1,081	940	2,080
1935	8,371	782	8,079	1,020	912	2,152
1936	9,504	961	9,291	1,122	977	2,691
1937	10,156	1,086	10,012	1,241	1,021	3,035