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County Borough of Halifax
Health Department

Annual Report

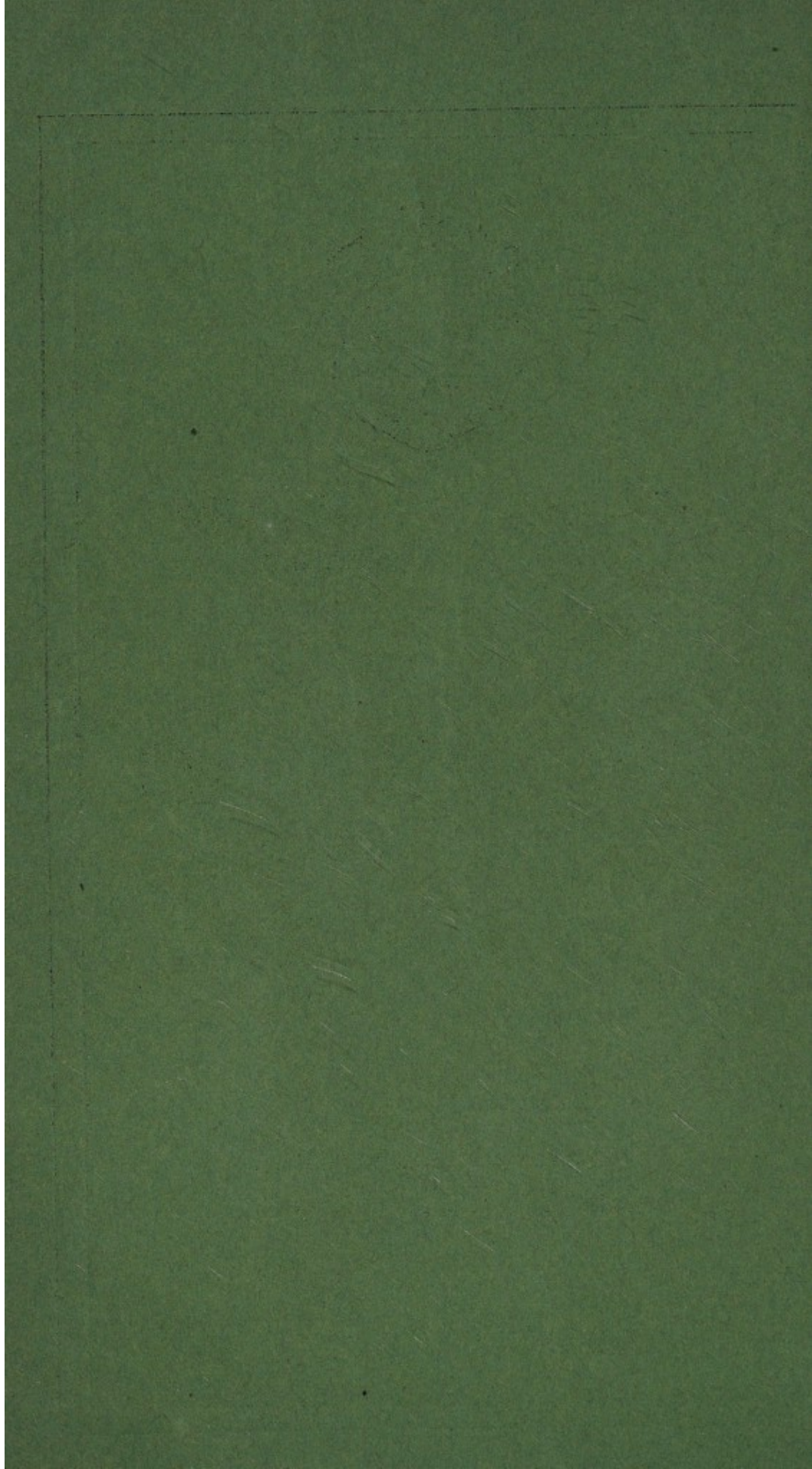
ON THE HEALTH
OF THE BOROUGH
FOR THE YEAR 1946



GEORGE C. F. ROE

M.R.C.P., L.R.C.S., L.M., D.P.H., D.P.M.

Medical Officer of Health





County Borough of Halifax
Health Department

Annual Report

ON THE HEALTH
OF THE BOROUGH
FOR THE YEAR 1946



GEORGE C. F. ROE

M.R.C.P., L.R.C.S., L.M., D.P.H., D.P.M.

Medical Officer of Health

Health Committee

(as on December 31st, 1946).

Mayor - Councillor C. H. LUCAS, J.P.

Alderman L. CHAMBERS, Chairman.

Councillor A. GELDER, Vice-Chairman.

Alderman A. MUFF.	Alderman J. H. STEPHENSON.
Alderman E. MIDGLEY.	Councillor H. NUTTON.
Councillor J. A. CROSBY.	" F. O'ROURKE.
" W. E. HORSLEY.	" W. OXLEY.
" J. LUMB.	" D. ROBINSON.
" J. NICHOLL.	" G. W. SHOTTON.
Councillor T. STOTT.	

Sub-Committees

Appointed by the Health Committee.

Health Services Sub-Committee.

THE CHAIRMAN.	Councillor CROSBY.
VICE-CHAIRMAN.	" O'ROURKE.
Alderman STEPHENSON.	" SHOTTON.

Hospitals Sub-Committee.

THE CHAIRMAN.	Councillor LUMB.
VICE-CHAIRMAN.	" NICHOLL.
Alderman MIDGLEY.	" NUTTON.
" MUFF.	" OXLEY.
Councillor HORSLEY.	" STOTT.

Accounts Sub-Committee.

THE CHAIRMAN.	Councillor LUMB.
VICE-CHAIRMAN.	" O'ROURKE.
	Councillor SHOTTON.

Joint Recovery Sub-Committee.

The Members of the Health Committee who shall serve in rotation.

Maternity and Child Welfare Committee.

The Health Committee with the following additional members:—

Mrs. J. HODGSON.	Mrs. FLORENCE RATCLIFFE.
Mrs. H. M. MARSLAND.	Mrs. GERTRUDE TINKER.
Mrs. J. MOORE.	Mrs. EPHALINA WHITAKER.
	Mrs. E. L. WHITLEY.

Committee for the Care of the Mentally Defective.

Alderman L. CHAMBERS.	Councillor W. HAIGH.
(Chairman).	" F. T. HODGSON.
Councillor J. C. ARGUILE.	" M. PICKLES.
(Vice-Chairman)	Mr. E. HARRISON.
Alderman M. LIGHTOWLER.	Mrs. E. L. EFFRON.
" J. ODDY.	Mrs. A. SMITH.
	Mrs. E. TOWNSEND.

Welfare of the Blind Sub-Committee.

THE CHAIRMAN.	Alderman MIDGLEY.
VICE-CHAIRMAN.	Councillor OXLEY.
	Councillor SHOTTON.

Staff of the Health Department

(as on December 31st, 1946)

Medical Officer of Health.

GEORGE C. F. ROE, M.R.C.P., L.R.C.S., L.M., D.P.H., D.P.M.

Assistant Medical Officers of Health.

WILFRID SMITH, M.Sc., M.B., B.Ch., B.A.O., Senior Assistant Medical Officer of Health, Clinical Tuberculosis Officer and Resident Medical Officer, Sanatorium.

E. J. SIMPSON, M.B., Ch.B., Medical Officer to Maternity and Child Welfare Centre.

F. MAUTNER, M.D., Assistant School Medical Officer.

E. J. KELLY, M.B., B.Ch., B.A.O. Assistant School Medical Officer.

R. I. S. LEWIS, M.B., Ch.B., D.P.H., Resident Medical Officer Isolation Hospital.

District Medical Officers.

A. GARVIE, M.D.

W. H. CRAVEN, B.Sc., M.B.,

J. MORRISON, M.B.

Ch.B., D.T.N.

V. C. MEYER, M.B., Ch.B.

R. DAVIDSON, M.B., Ch.B.

R. LAWSON, M.B., Ch.B.

G. S. OGILVY, L.R.C.P., L.R.C.S.

Inspectors.

J. W. BEAUMONT, Chief Sanitary Inspector.

District Sanitary Inspectors :

H. LEAPER.

A. PEARSON.

G. A. WOODHEAD.

J. L. MOXON.

F. BURKE.

H. MARGERISON, Senior Sanitary Inspector and Housing Inspector.

F. BURTON, Housing Inspector.

H. E. PERFECT, Rodent Operative.

J. FLANAGAN, Meat and Foods Inspector.

Clerical Staff.

J. H. BARGH, Chief Clerk.

Clerks:

H. WRIGHT.

E. A. BARKER.

D. ARCHBELL.

T. K. BOOTHMAN.

N. BRADLEY.

P. BLAKE.

P. GARSIDE (Temporary)

Miss E. CLARKSON, Vaccination Officer, Visitor for Mental Deficiency Acts, Children and Young Persons Act (Part V), Home Helps Organiser

Maternity and Child Welfare.

Miss E. R. ORAM, Senior Health Visitor.

Health Visitors :

Miss M. MOORE.

Miss M. O. FORRESTER.

Miss S. E. BRIGGS.

Miss N. DINGSDALE.

Mrs. E. MALTON, Clerk.

The Halifax General Hospital.

Miss N. SPILMAN, Matron.

A. WHEELDON, Steward.

L. LYNN, Assistant Steward.

H. WILKINSON, Admission Officer.

Miss H. EYRE, Clerk.

Clerks (Temporary).

Mrs. L. FARRAR.

Mr. F. W. COATES.

Miss E. M. KEETLEY.

Miss M. STEPHENSON.

Miss W. GOODRICH.

Miss A. SYKES.

Day Nurseries.

Ling Bob Day Nursery, Pellon—Matron: Mrs. M. R. WILSON.

Craigie Lea Day Nursery, Ovenden—Matron: Miss A. N. GUMMERSON.

Miss P. A. VAUGHAN, Tuberculosis Visitor.

Miss R. E. STUBBS, Matron, Isolation Hospital.

Miss M. F. McCAFFERTY, Matron, Halifax Sanatorium.

R. MALLINDER, B.Sc., F.I.C. Public Analyst.

COUNTY BOROUGH OF HALIFAX.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,
FOR THE YEAR 1946.INTRODUCTION.*To the Chairman and Members of the Health Committee.*

Mr. Chairman, Ladies and Gentlemen,

I have the honour to present the Annual Report upon the health of the Borough for the year 1946. The Report is the seventy-fourth of the series.

The incidence of all the infectious diseases, with the exception of Paratyphoid B. Fever (see appendix), was very low. The following table shows some of the chief Vital and Mortal Statistics for the year 1946, compared with the year 1945. A detailed statistical summary is given in Section 1 of the Report.

Year	Birth-rate	Death-rate	Infant Mortality Rate	Maternal Mortality Rate	Number of Stillbirths	Number of Illegitimate Births
1945	16.4	16.1	42.0	2.0	34	138
1946	18.6	14.4	31.01	1.1	52	148

An outbreak of Paratyphoid B. Fever occurred in August and a special report thereon appears in the appendix of this report. The outbreak emphasises the importance of a clean food supply and the danger of typhoid and paratyphoid "carriers" handling food for human consumption. The increasing use of bulk supplies of food-stuffs without subsequent cooking is an important factor in outbreaks of paratyphoid fever. Food at all its stages should be protected from contamination. The control of "carriers" is a difficult matter. There are more carriers than we can detect and we can only

deal with those who are known. Paratyphoid is seldom spread by water—usually by foodstuffs. In Halifax the water is filtered and chlorinated and all water supplies are bacteriologically examined and only negative reactors handle water for human consumption. No human device is infallible but, these precautions, properly carried out, give a large measure of security against an outbreak of water-borne typhoid.

An examination of our mortal statistics suggests that most deaths occur in infancy and after middle age. We are fighting a winning battle against death in infancy, but after middle age (with the exception of pneumonia) we are still often fighting a losing battle. Against Cancer, Heart and Arterial Diseases we have not been very successful. The fundamental cause or causes of cancer remain a riddle.

Viruses are to-day frequently indicted as the cause of disease. Viruses are so small that they cannot be seen with an ordinary microscope. Their exact nature is doubtful. They cause such diseases as measles, mumps, chicken-pox, infantile paralysis, and in all probability influenza and the common cold.

Abnormal blood pressure is the cause of about twenty-five per cent. of deaths in persons over fifty years. Two main groups of this condition are now recognised. In one group the hypertension is probably secondary to some pathological state such as chronic kidney disease. In the other it emerges as a primary entity without obvious kidney or other disease. In my opinion heredity is a big factor in abnormal blood pressure occurring in early middle life. Some people are born with arteries of poor quality. In respect of Cancer, a detailed account appears in Section 3 of this Report.

I have to draw your attention to the fact that in males between the ages of 45 and 60, the fatality rate for diseases of the heart muscle and coronary arteries (the arteries that supply the heart muscle) is very high. No thoughtful person can help being struck by the marvellous capabilities of the heart muscle, working as it often does for 70 years against an average pressure of 120 millimetres of mercury in the artery of the arm, and 150 millimetres in the aorta—the great artery of the heart. If it be asked then, what are the causes of so many deaths from disease of the heart muscle, the answer will be arterio-sclerosis (hardening of the arteries, particularly the coronary arteries), fatty degeneration, old age and chronic toxæmia. Of all these causes, the most important is arterio-sclerosis, for gradual occlusion of the coronary vessels is a long way the most general cause of degeneration, and is itself a frequent factor in many widely different pathological states. Prevention of heart disease is a difficult matter. Before the occurrence of a serious pathological lesion there are often subjective symptoms, the recognition of which, as being of cardiac origin, may be of vital importance. Of these, the most significant are unexpected fatigue in doing routine work; dyspnoea (difficulty in respect of breathing) coming on after effort, which may be nothing particular in itself, but

happens to be of an unusual type; a sense of constriction and/or pain in the chest following slight exertion, and an inexplicable lethargy in a person who is usually vigorous. These symptoms appearing more or less suddenly in a person of middle age (and apparently in good health) may be of serious import and should suggest a check up by a doctor.

As the population grows older, the care of the aged will become an activity of the health services. The aged make up about one-eighth of the population, and their number is increasing absolutely and relatively. They do not want to end their days in Institutions. In my view, Halifax is working on the right lines in providing hostels for old people. Suitable occupation for the old is a most important item in any such scheme.

As in former years (omitting the war years), I have endeavoured to write the introduction to this report in non-technical language so that it can be understood by the layman. It would have been a simpler matter to write the report in technical language, but such a presentation would have little appeal to the ordinary citizen, and it is my desire to interest the citizen in the problems of the public health services. It is hoped that this part of the report will be found of some value for the main purpose for which it was written—"The man in the street."

The general report is planned so that the details of any specific section can be readily found.

I wish to express my thanks to the staff of the Health Department for the conscientious manner in which they have carried out their duties during the year.

Mr. C. Carlton, Chief Clerk, retired in June. He completed 50 years of faithful and efficient service in the Public Health Department. For his help at all times and especially during the war years, I tender my sincere thanks. Mr. J. H. Bargh was appointed Chief Clerk in July 1946. In January the Department suffered great loss through the untimely death (on active service overseas) of Mr. H. Carlton.

In conclusion, I have to acknowledge with many thanks, the support, interest and encouragement of the Health Committee which I received throughout the year.

I am,

Mr. Chairman, Ladies and Gentlemen,

Your obedient Servant,

GEORGE C. F. ROE,

Medical Officer of Health.

Public Health Department,
Powell Street,
Halifax.

SECTION 1



Statistics

REPORT

Statistics

Latitude	53° 44' North.				
Longitude	1° 50' West.				
Mean height above sea level, feet	...	...	...	780	
Area in acres	...	...	...	14,081	
Population (Census 1931)	...	...	...	98,115	
(Males 44,600. Females 53,515).					
Population (Mid year, 1946)	...	...	...	93,280	
Density of population per acre	...	...	...	6'6	
Number of inhabited houses (1931 Census)	...	...	...	28,488	
Number of houses according to Rate Books	...	...	...	30,853	
(1st April, 1947).					
Average number of persons to each occupied house...				3'02	
Rateable Value, 7th January, 1947	...	...	...	£633,042	
Sum represented by a penny rate, 7th January, 1947				£2,489	
(Estimated Product).					

Summary of Vital Statistics.

Birthrate per 1,000 population	...	...	...	18'6	
Deathrate per 1,000 population	...	...	...	14'4	
Infantile deathrate per 1,000 births	...	...	...	31'01	
Respiratory deathrate	...	...	...	1'2	
Phthisis deathrate	...	...	...	'37	
Deathrate from other forms of Tuberculosis	...	...	...	'07	
Tuberculosis deathrate (all forms)	...	...	...	'44	
Deathrate from Cancer	...	...	...	2'2	

Summary of Deaths.

(Based on the Registrar General's "Short List" of causes of death).

Cause of Death	Number
Typhoid and Paratyphoid Fevers	—
Cerebro-spinal Fever	—
Scarlet Fever	—
Whooping Cough	2
Diphtheria	—
Tuberculosis of respiratory system	35
Other forms of Tuberculosis	6
Syphilitic Disease	8
Influenza	4
Measles	—
Acute Poliomyelitis and polioencephalitis	—
Acute Inf. Encephalitis	2
Cancer of Buc. Cav. and Oesoph (M)	10
Cancer of Uterus (F)	14
Cancer of Stomach and Duodenum	34
Cancer of Breast	24
Cancer of all other sites	124
Diabetes	16
Intracranial vascular lesions	182
Heart Disease	464
Other Diseases of Circulatory System	44
Bronchitis	59
Pneumonia	35
Other Respiratory Diseases	17
Ulcer of Stomach or Duodenum	11
Diarrhoea, etc. (under 2 years)	4
Appendicitis	7
Other Digestive Diseases	32
Nephritis	46
Puerperal and post-Abort: Sepsis	2
Other Maternal Causes	—
Premature Birth	14
Congenital Malformation; Birth inj.; Infant Dis.	22
Suicide	12
Road Traffic Accidents	4
Other Violent Causes	22
All other Causes	84
Total	1,340

	Year	Birthrate per 1,000 Total Population	Annual Deathrate per 1,000 Population								Rate per 1,000 Births	
			All Causes	Typhoid and Para-Typhoid	Small-Pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Diarrhoea and Enteritis (under two years)	DEATHS under one year
England and Wales ...	1946	19.1	11.5	0.00	0.00	0.00	0.00	0.00	0.01	0.15	4.4	43
126 County Boroughs and Great Towns including London ...	1946	22.2	12.7	0.00	0.00	0.01	0.00	0.02	0.01	0.13	6.1	46
HALIFAX ...	1938	13.4	14.1	0.00	0.00	0.02	0.00	0.00	0.06	0.05	2.1	57
	1939	13.8	15.3	0.00	0.00	0.01	0.02	0.03	0.05	0.17	1.4	60
	1940	13.0	15.6	0.01	0.00	0.00	0.00	0.02	0.15	0.23	4.0	45
	1941	13.3	15.7	0.00	0.00	0.04	0.00	0.03	0.12	0.10	2.3	65
	1942	15.8	14.6	0.00	0.00	0.03	0.00	0.00	0.05	0.05	6.9	56
	1943	17.1	15.4	0.00	0.00	0.00	0.00	0.04	0.04	0.31	5.2	50
	1944	18.6	14.5	0.00	0.00	0.01	0.00	0.03	0.04	0.03	3.5	38
	1945	16.39	16.1	0.00	0.00	0.01	0.00	0.02	0.05	0.09	3.4	42
	1946	18.6	14.4	0.00	0.00	0.00	0.00	0.02	0.00	0.04	2.3	31

Provisional figures. The rates have been calculated on a population estimated to the middle of 1931. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the group of towns.

Vital and Mortal Statistics for Halifax during the last 21 years.

Year	Death-rate	Infant Mortality Rate	Maternal Mortality Rate	Tuberculosis (all forms)		Diphtheria		Scarlet Fever		Typhoid and Para-typhoid		Cerebro Spinal Fever		Smallpox	
				New Cases	Deaths	New Cases	Deaths	New Cases	Deaths	New Cases	Deaths	New Cases	Deaths	New Cases	Deaths
1926	13.5	79	5.7	135	69	80	9	102	1	3	1	1	nil	nil	nil
1927	15.4	90	7.4	194	96	83	8	192	2	5	nil	nil	nil	12	nil
1928	12.3	67	10.2	150	67	224	16	386	2	8	2	1	nil	221	nil
1929	14.7	76	6.8	183	82	146	9	431	3	73	1	nil	nil	156	1
1930	14.3	66	9.2	169	79	100	7	274	1	9	1	1	nil	56	nil
1931	14.9	77	3.2	198	70	165	17	163	3	4	2	nil	nil	nil	nil
1932	14.8	80	8.7	158	71	162	10	182	1	1	nil	2	2	nil	nil
1933	15.4	92	9.4	161	71	173	13	256	2	nil	nil	3	3	nil	nil
1934	13.9	77	10.5	132	60	344	20	337	2	nil	nil	1	1	nil	nil
1935	14.6	70	6.4	158	55	322	16	227	2	nil	nil	1	1	nil	nil
1936	15.2	68	7.02	206	75	206	12	136	nil	3	nil	2	2	nil	nil
1937	14.6	63	2.39	135	38	164	5	162	nil	1	nil	5	5	nil	nil
1938	14.1	57	2.92	165	55	155	6	145	nil	nil	nil	3	1	nil	nil
1939	15.3	60	4.4	135	65	129	5	184	2	nil	nil	nil	nil	nil	nil
1940	15.6	45	8.8	118	51	311	15	166	nil	3	1	31	9	nil	nil
1941	15.7	65	1.5	111	60	230	12	97	nil	nil	nil	16	3	nil	nil
1942	14.6	56	3.4	113	65	196	5	669	nil	1	nil	9	4	nil	nil
1943	15.4	50	1.9	123	68	127	4	411	nil	2	nil	2	2	nil	nil
1944	14.5	38	2.3	156	54	118	4	481	nil	nil	nil	nil	nil	nil	nil
1945	16.1	42	2.0	110	53	92	5	173	nil	nil	nil	nil	nil	nil	nil
1946	14.4	31	1.1	69	41	17	nil	74	nil	73	nil	nil	nil	nil	nil

Vital and Mortal Statistics for Halifax during the last 21 years (continued).

Year	Pneumonia		Whooping Cough		Poliomyelitis		Cancer Deaths	Heart Diseases Deaths	Cerebral Hemorrhage Deaths
	New Cases	Deaths	New Cases	Deaths	New Cases	Deaths			
1926	64	53	nil	10	nil	nil	161	202	109
1927	105	70	nil	6	1	1	158	254	125
1928	66	32	nil	nil	nil	nil	172	216	92
1929	87	38	nil	14	6	nil	170	308	100
1930	121	61	nil	2	nil	nil	170	308	114
1931	124	109	nil	4	1	nil	191	327	95
1932	105	82	nil	8	2	nil	176	342	85
1933	105	87	nil	3	4	nil	158	418	87
1934	80	66	nil	2	1	nil	180	381	74
1935	117	69	nil	1	1	nil	194	406	67
1936	91	74	nil	4	1	nil	193	448	74
1937	115	77	nil	2	nil	nil	178	424	73
1938	164	58	nil	nil	1	nil	186	419	77
1939	182	59	2	2	2	nil	193	449	89
1940	156	57	185	2	2	nil	187	408	232
1941	188	66	240	3	nil	nil	235	381	179
1942	226	61	174	nil	5	nil	216	374	164
1943	236	55	211	4	2	nil	205	374	179
1944	124	38	201	3	nil	nil	177	366	199
1945	103	43	133	2	nil	nil	219	398	237
1946	69	35	153	2	1	nil	206	464	182

Table showing comparative yearly Vital and Mortal Statistics from 1939 to 1946 inclusive.

Year	Birth-rate	Death-rate	Infant Mortality Rate	Maternal Mortality Rate	Pulmonary Tuberculosis		Venereal Diseases		Pneumonia	
					New Cases	Death-rate	Syphilis	Gonorrhoea	New Cases	Deaths
1939	13.8	15.3	60	4.4	83	.58	35	89	182	59
1940	13.0	15.6	45	8.8	106	.44	45	96	156	57
1941	13.3	15.7	65	1.5	102	.58	33	66	188	66
1942	15.8	14.6	56	3.4	98	.53	34	40	226	61
1943	17.1	15.4	50	1.9	101	.62	49	56	236	55
1944	18.6	14.5	38	2.3	90	.48	45	49	124	38
1945	16.39	16.1	42	3.0	90	.48	50	67	103	43
1946	18.6	14.4	31	1.1	53	.37	103	124	69	35

Year	Deaths from Heart Disease	Deaths from Cancer	Deaths from Cerebral Haemorrhage	Deaths from Diabetes	Diphtheria		Scarlet Fever	
					New Cases	Deaths	New Cases	Deaths
1939	449	193	89	26	129	5	184	2
1940	408	187	232	8	311	15	166	nil
1941	381	235	179	17	230	12	97	nil
1942	374	216	164	19	196	5	669	nil
1943	373	205	179	20	127	4	411	nil
1944	366	177	199	19	118	4	481	nil
1945	398	219	237	15	92	5	173	nil
1946	464	206	182	16	17	nil	74	nil

Notification.

The following Table shows the number of notifications of infectious disease received during the year :—

Disease					Number
Smallpox	...	...	...	...	—
Dysentery	...	...	...	...	—
Typhoid Fever and Enteric Fever	...	...	...	...	2
Para-Typhoid	...	...	...	...	71
Scarlet Fever	...	...	...	...	74
Malaria	...	...	...	...	—
Diphtheria	...	...	...	...	17
Puerperal Pyrexia	...	...	...	...	6
Erysipelas	...	...	...	...	17
Ophthalmia Neonatorum	...	...	...	...	4
Encephalitis Lethargica	...	...	...	...	—
Acute Poliomyelitis	...	...	...	...	1
Cerebro-spinal Fever	...	...	...	...	—
Measles	...	...	...	...	65
Whooping Cough	...	...	...	...	153
Pneumonia—					
Influenzal	...	...	...	...	—
Primary	...	...	...	...	69
Tuberculosis—					
Respiratory	...	...	...	...	53
Other Forms	...	...	...	...	16
Total					548

Road Traffic Accidents.

During the year there were 4 deaths attributable to Road Traffic Accidents. The following table affords a comparison with the number of fatal accidents occurring in previous years:

	1941	1942	1943	1944	1945	1946
Fatal	18	9	7	6	9	4

The Growth of the Borough of Halifax.

Year	Population	Note
1848	40,000	Borough Incorporated.
1861	51,937	
1871	65,510	
1881	63,360	
1891	82,864	
1892	83,364	Borough extended by the additions of Ovenden and Illingworth Wards.
1899	90,934	
1900	96,684	
1901	104,936	Borough extended by the addition of Copley Ward.
1911	101,556	
1921	100,700	Borough extended by the additions of Warley and Northowram Wards.
1931	98,115	
1945	89,390	

Mid year density of population per acre 6.3.

Are we as fit as our Vital and Mortal Statistics suggest?

Only a few facts of our community health are revealed by vital and mortal statistics. Such statistics do not afford any index of the amount of sickness present in the population. Morbidity (sickness) statistics are imperfect and can therefore be accepted only provisionally and regarded merely as a rough indication of the state of our community health. The morbidity figures we possess suggest that diseases of the Respiratory System (including "colds") accounted for over a third of all cases of sickness. Diseases of the gastro-intestinal tract come next. Rheumatic and nervous diseases closely followed. The incidence of skin diseases—particularly boils, sores and vague rashes (possibly nutritional) has increased. More variety in respect of our food, more fat and more cane sugar would probably help to reduce the incidence of these conditions.

CONTROL OF MEASLES.

Measles has again assumed its biennial periodicity. But measles—although still a serious disease of childhood—has lost ground as a killing disease. There has been a remarkable reduction in measles mortality. I attribute this reduction to improved environmental conditions; to the delayed age of attack associated with smaller families and to the more successful treatment of secondary pneumonia with the sulphonamide drugs.

It is interesting to note that whilst mortality has declined, morbidity remains about the same. Not more than 15 per cent. of children in this area escape an attack of measles. The incidence is highest in the 3 to 4 age group. It is possible, by injection methods, (convalescent measles serum and normal adult serum) to modify an attack of measles. An attenuated attack is often preferable since it gives immunity. In Halifax we have endeavoured to make increasing hospital provision for cases of measles, but it must be remembered that the group nursing of children with measles is not without its attendant complications. Our cubicle isolation scheme is not adequate for dealing with this problem on a large scale. No doubt this matter will receive serious consideration under the new hospitals scheme which will come into operation in 1948.

THE ISOLATION HOSPITAL.

Isolation per se makes little impression on the incidence of infectious diseases. A modern isolation hospital is a specialist hospital. The doctors at an isolation hospital have a wide knowledge of clinical medicine, including bacteriology, chemotherapy and serotherapy. The nursing staff have special training and experience in respect of infectious diseases. Under present conditions there is no incentive for a good doctor to remain in a small Isolation Hospital and specialise. A first class Isolation Hospital should attract a first class staff.

SECTION 2



Public Health Act, 1936

**General Provision of
Health Services**

General Provision of Health Services

(Arranged as required by the Ministry of Health)

Hospitals provided or subsidised by the Halifax Corporation :

Tuberculosis—The Sanatorium at Shelf, near Halifax, provides accommodation for 50 adults (25 early and 25 other cases) and for 12 children. It is provided by the Halifax Corporation and receives cases from other districts, including Lancashire County.

The Health Committee has a call on 5 beds at the Bermer-side Residential School for children in the pre-tubercular stage, or children suffering from non-pulmonary tuberculosis of a non-infectious character.

Maternity Hospital—Maternity cases are provided at the Halifax General Hospital and the Royal Halifax Infirmary. There is an increasing demand for Maternity Hospital beds and some extension of maternity accommodation is a priority need. The Corporation makes a grant of £300 per annum towards the Infirmary Maternity Home.

Hospital for Children—By arrangement with the Education Committee operations for Tonsils and Adenoids are carried out at the Halifax General Hospital.

There is a ward at the Halifax General Hospital for the treatment of sick or crippled children sent there by the Maternity and Child Welfare Committee, also an arrangement by that Committee with the Royal Halifax Infirmary for the treatment of cases of Ophthalmia Neonatorum.

An Orthopædic Service has been set up at the Halifax General Hospital for the treatment of cases sent by the Maternity and Child Welfare and Education Committees.

Fever Hospital—The Corporation provides the Isolation Hospital which admits cases of Scarlet Fever, Diphtheria, Enteric and other fevers from Halifax, and from the areas of neighbouring local authorities. Accommodation for 96 cases.

Smallpox—The Halifax Corporation has, consequent upon the closure of the Smallpox Hospital at Belle Vue, Mount Tabor, concluded an agreement with the Bradford Corporation for all cases of smallpox occurring in this area to be admitted to the Bradford Smallpox Hospital.

Venereal Diseases—The Corporation has an arrangement with the Royal Halifax Infirmary for both out-patient and in-patient treatment.

Hospital Facilities.

Hospital and Situation	Purpose	Total Beds	Authority	Medical Staff	Consultants
Isolation Hospital, Northowram Hall	Fevers	96	Halifax Health Committee	1 Res. Medical Officer	As required
Halifax Sanatorium, Shelf	Tuberculosis	62	Do	1 Res. Medical Officer The Sen. Asst. M.O.H. and Tuberculosis Officer	As required
The Halifax General Hospital	General Surgical Medical Children and Maternity	450	Do	1 Medical Superintendent (Resident) 1 Dep. Medical Superintendent (Resident) 5 Resident Assistant Medical Officers	1 Pathologist & Bacteriologist 2 Physicians 8 Surgeons 1 Anaesthetist 1 Radiologist 1 Paediatrician 1 Psychiatrist 1 Dermatologist 1 Director of Radium Treat.

General Nursing—Under the Local Government Act 1929, the Halifax General Hospital was, on April 1st, 1931, transferred to the Local Authority and is administered by the Health Committee as a General Hospital.

AMBULANCE FACILITIES.

(a) For Infectious Cases—

Two "Austin" 18 H.P. Ambulances, worked from the Isolation Hospital, Northowram Hall, serves Halifax and the other districts from which cases are admitted to the Hospital.

(b) For non-Infectious and Accident Cases—
(From 1st November, 1944)—

(1) The Corporation's Motor Ambulance Service, worked by the Halifax General Hospital (Tel. 5816).
1 "Humber" 25 H.P., 2 "Austin" 20 H.P., and 1 "Austin" 18 H.P.

(2) The Ambulance Service of the St. John Ambulance Brigade and British Red Cross Society. ("Austin" 20 H.P.).

Transport Officer—Mr. L. Chambers (Tel. 3831).

Nursing in the Home—This is provided by :—

Halifax District Nursing Association.

Illingworth Nursing Association.

Luddenden Nursing Association.

Diphtheria Immunisation.

Immunisation is carried out at the Maternity and Child Welfare Clinic, the School Clinic and by general practitioners in the town. Immunising material is supplied free to Halifax doctors. The incidence of young people immunised has increased, but there is still plenty of room for improvement in this direction. It is very important that all pre-school children should be immunised against Diphtheria.

Bacteriological Examinations.

The arrangements are as follows:—

Bacteriological examinations are carried out at the Royal Halifax Infirmary, where swabs, etc., may be sent direct.

Tuberculosis.

Sputum and other material is examined only at the Tuberculosis Clinic, 8, Clare Road, Halifax, and should not be sent to the Royal Halifax Infirmary. Sputum must be sent in special outfits which will be supplied on the application of the practitioner.

Chemical Work.

All chemical analyses are performed by Mr. R. Mallinder, B.Sc., F.I.C., Borough Analyst. This work includes not only the analysis of samples taken under the Sale of Food and Drugs Acts, but also the examination of water from wells and other sources, which from time to time occupy the attention of the officers of the Health Department.

Public Health Act, 1936.

Child Life Protection.

It is the duty of the Local Authority to appoint Infant Protection Visitors to visit from time to time, to satisfy themselves as to the proper nursing and maintenance of such infants, or to give necessary advice or directions thereon.

The following is a summary of the work carried out during the year :—

(a) Number of foster parents on the Register at the end of the year					
...	...	...	...	...	6
(b) Number of children on the Register :—					
At end of the year					
...	...	...	...	...	6
(c) Number of Visitors at the end of the year who were :—					
(1) Health Visitors	...	...	...	...	5
(2) Female, other than Health Visitors	...	...	...	...	1
(3) Male	...	...	...	...	—

My thanks are due to Mr. Butler, the local Inspector of the National Society for the Prevention of Cruelty to Children, for his courteous and valued co-operation during the past year.

CLINICS.

(Excluding School Clinics which appear in the Annual Report of the School Medical Service).

Name of Clinic	Purpose	Where held	Times	
			Days	Hours
Tuberculosis Dispensary Maternity and Child Welfare 1. Infant Welfare Centre	Tuberculosis Sunlight and Massage Posterior Schick Babies, Massage Sunlight and Massage Immunisation and Massage Ante-Natal Babies and Massage Sunlight and Massage Babies	8, Clare Road 66, 68, Northgate Do Do Do Do Do Queen's Road	Monday & Thursday Monday Do Wednesday Friday Do Do Saturday Tuesday Wednesday	2 p.m. to 4 p.m. Morning Afternoon Morning 9-30 a.m. to 10-30 a.m. 10-30 a.m. to 12 noon Afternoon Morning Morning & Afternoon Morning
2. Queen's Road Clinic 3. Ovenden Clinic	Babies Ante-Natal Ante-Natal Psychiatric	Nursery Lane Methodist School, Ovenden Kirby Leas, Savile Road The Halifax General Hospital Do	Monday Thursday Mon., Tues., Thurs. and Friday Tues., Wed., Thurs. and Friday Wednesday Thursday Tuesdays (Women and Children) Thursdays (Men) Auxiliary Centre for Men :—Daily Sunday	Afternoon *Morning & Evening Morning 2-30 p.m. to 5 p.m. Afternoon & Evening Afternoon 3-30 p.m. to 4-30 p.m. and 6 p.m. to 8 p.m. 6 p.m. to 8 p.m. 10 a.m. to 12 noon and 6 p.m. to 8 p.m. 10 a.m. to 12 noon
+Halifax District Nursing Association The Halifax General Hospital Royal Halifax Infirmary	 Ante-Natal Venereal Diseases	 Royal Halifax Infirmary		

+ Subsidised by Corporation.

* Doctor in attendance.

SECTION 3



Cancer

Year	Rate	Year	Rate
1971	1.0	1971	1.0
1972	1.1	1972	1.1
1973	1.2	1973	1.2
1974	1.3	1974	1.3
1975	1.4	1975	1.4
1976	1.5	1976	1.5
1977	1.6	1977	1.6
1978	1.7	1978	1.7
1979	1.8	1979	1.8
1980	1.9	1980	1.9
1981	2.0	1981	2.0
1982	2.1	1982	2.1
1983	2.2	1983	2.2
1984	2.3	1984	2.3
1985	2.4	1985	2.4
1986	2.5	1986	2.5
1987	2.6	1987	2.6
1988	2.7	1988	2.7
1989	2.8	1989	2.8
1990	2.9	1990	2.9
1991	3.0	1991	3.0
1992	3.1	1992	3.1
1993	3.2	1993	3.2
1994	3.3	1994	3.3
1995	3.4	1995	3.4
1996	3.5	1996	3.5
1997	3.6	1997	3.6
1998	3.7	1998	3.7
1999	3.8	1999	3.8
2000	3.9	2000	3.9
2001	4.0	2001	4.0
2002	4.1	2002	4.1
2003	4.2	2003	4.2
2004	4.3	2004	4.3
2005	4.4	2005	4.4
2006	4.5	2006	4.5
2007	4.6	2007	4.6
2008	4.7	2008	4.7
2009	4.8	2009	4.8
2010	4.9	2010	4.9
2011	5.0	2011	5.0
2012	5.1	2012	5.1
2013	5.2	2013	5.2
2014	5.3	2014	5.3
2015	5.4	2015	5.4
2016	5.5	2016	5.5
2017	5.6	2017	5.6
2018	5.7	2018	5.7
2019	5.8	2019	5.8
2020	5.9	2020	5.9
2021	6.0	2021	6.0
2022	6.1	2022	6.1
2023	6.2	2023	6.2
2024	6.3	2024	6.3
2025	6.4	2025	6.4
2026	6.5	2026	6.5
2027	6.6	2027	6.6
2028	6.7	2028	6.7
2029	6.8	2029	6.8
2030	6.9	2030	6.9
2031	7.0	2031	7.0
2032	7.1	2032	7.1
2033	7.2	2033	7.2
2034	7.3	2034	7.3
2035	7.4	2035	7.4
2036	7.5	2036	7.5
2037	7.6	2037	7.6
2038	7.7	2038	7.7
2039	7.8	2039	7.8
2040	7.9	2040	7.9
2041	8.0	2041	8.0
2042	8.1	2042	8.1
2043	8.2	2043	8.2
2044	8.3	2044	8.3
2045	8.4	2045	8.4
2046	8.5	2046	8.5
2047	8.6	2047	8.6
2048	8.7	2048	8.7
2049	8.8	2049	8.8
2050	8.9	2050	8.9
2051	9.0	2051	9.0
2052	9.1	2052	9.1
2053	9.2	2053	9.2
2054	9.3	2054	9.3
2055	9.4	2055	9.4
2056	9.5	2056	9.5
2057	9.6	2057	9.6
2058	9.7	2058	9.7
2059	9.8	2059	9.8
2060	9.9	2060	9.9
2061	10.0	2061	10.0
2062	10.1	2062	10.1
2063	10.2	2063	10.2
2064	10.3	2064	10.3
2065	10.4	2065	10.4
2066	10.5	2066	10.5
2067	10.6	2067	10.6
2068	10.7	2068	10.7
2069	10.8	2069	10.8
2070	10.9	2070	10.9
2071	11.0	2071	11.0
2072	11.1	2072	11.1
2073	11.2	2073	11.2
2074	11.3	2074	11.3
2075	11.4	2075	11.4
2076	11.5	2076	11.5
2077	11.6	2077	11.6
2078	11.7	2078	11.7
2079	11.8	2079	11.8
2080	11.9	2080	11.9
2081	12.0	2081	12.0
2082	12.1	2082	12.1
2083	12.2	2083	12.2
2084	12.3	2084	12.3
2085	12.4	2085	12.4
2086	12.5	2086	12.5
2087	12.6	2087	12.6
2088	12.7	2088	12.7
2089	12.8	2089	12.8
2090	12.9	2090	12.9
2091	13.0	2091	13.0
2092	13.1	2092	13.1
2093	13.2	2093	13.2
2094	13.3	2094	13.3
2095	13.4	2095	13.4
2096	13.5	2096	13.5
2097	13.6	2097	13.6
2098	13.7	2098	13.7
2099	13.8	2099	13.8
2100	13.9	2100	13.9

Cancer

A Radium Clinic, in charge of Dr. F. E. Chester-Williams, has now been established at the Royal Halifax Infirmary, towards the cost of which the Health Committee of the Halifax Corporation pay the sum of £50 per annum. Patients from Halifax are now admitted through this clinic for radium treatment at the Royal Infirmary, Bradford.

In addition to the Radium Clinic at the Royal Halifax Infirmary, facilities for diagnosis and treatment (clinical, laboratory and X-Ray) exist at the Halifax General Hospital.

In the 1945 Annual Report I gave a detailed survey of the cancer problem and there is nothing new I can add to this report. The following table shows the death-rate from Cancer in Halifax from the year 1927 :—

Year.	Death-rate per 1,000 population.		Year.	Death-rate per 1,000 population.
1927	1.6		1937	1.8
1928	1.7		1938	1.9
1929	1.7		1939	1.9
1930	1.7		1940	1.9
1931	1.9		1941	2.5 Note Increase
1932	1.8		1942	2.3
1933	1.6		1943	2.2
1934	1.8		1944	1.9
1935	1.9		1945	2.5
1936	1.9		1946	2.2

Cancer of the Stomach.

The stomach and intestines are the organs most frequently attacked in males.

Early symptoms and signs of Cancer of the Stomach.

- (1) Gradual loss of appetite.
- (2) Lack of feeling of well-being.
- (3) Abdominal discomfort.
- (4) Nausea.
- (5) Change in bowel habits.
- (6) Pallor lemon tint.
- (7) Loss of weight.

In persons of middle-age, or past middle-age, a combination of the above symptoms should suggest a medical examination. The majority of cancer cases come for treatment too late.

Other points re Cancer.

1. There is no evidence that Cancer is infectious or contagious.
2. The fundamental cause or causes of Cancer are unknown.
3. In certain animals heredity plays a part in rendering some individuals more susceptible to cancer than others.
4. The incidence of cancer tends to rise even when allowances are made for improved diagnosis and more accurate certification.
5. Liability to cancer is not an attribute of any particular social class, profession or occupation.
6. There is no evidence that the use of any particular food increases the liability to cancer.
7. Apart from cancer of the prostate, there is no known drug that will prevent or cure cancer.
8. Cancer frequently follows chronic and prolonged irritation.

SECTION 4

Infectious Diseases

Isolation Hospital

Prevalence of, and Control over Infectious Diseases

Enteric Fever.

No case of this disease was notified during the year. No death occurred.

Typhoid Fever.

The following Table shows the incidence of Typhoid Fever in Halifax during the past 10 years:—

1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
1	—	—	5	1	1	2	—	—	2

Small-Pox.

No case of this disease occurred during the year.

Ophthalmia Neonatorum.

The following Table shows the number of cases notified, and where they were treated:—

Notified	Treated	
	at Home	at Hospital
2	-	2

Cerebro-Spinal Fever :—

No case of this disease was notified during the year.

Diphtheria Immunisation.

Number of persons having had full course of injections since inception of Scheme :—

Year	Under 5 years	Over 5 years	Total
1943	853	671	1524
1944	689	296	985
1945	841	315	1156
1946	636	219	855

SCARLET FEVER.

In Halifax Scarlet Fever continues a very mild disease. Its incidence remains low. Scarlet Fever is a disease caused by several, but not all, varieties of streptococci and characterised, *inter alia*, by fever and a scarlet rash. The usual channel of infection is the throat, and the disease is spread by droplet infection. Scarlet Fever could be transmitted by persons who were not suffering from the clinical disease but who were disseminating the scarlet fever streptococcus. Scarlet Fever is only one of the clinical manifestations of infection by the streptococcus *hæmolyticus*. Immunisation for scarlet fever was not so satisfactory as immunisation for diphtheria. There was a relationship between scarlet fever and puerperal septicæmia. It sometimes happens that a child suffers from a typical attack of scarlet fever and after two or three weeks develops another rash similar to the first. This is due to the fact that the child has not developed an all-round immunity to the attack of the *hæmolytic streptococcus*, and is therefore susceptible to a further attack by a different strain of the same germ. These second attacks suggest there are different species of the same germs capable of causing scarlet fever. I am of the opinion that throat swabbing has a limited value in these cases, because, although it would confirm the presence or absence of streptococci, it would not demonstrate whether the streptococci were going to cause scarlet fever or not. Throat swabbing is a valuable indicant of a carrier of *hæmolytic streptococci* in a midwife in special circumstances and in a person associated with milk supplies.

The administrative measures taken in connection with scarlet fever include isolation, exclusion of contacts from school and their supervision. The policy of admitting all cases of scarlet fever to hospital is not sound. Cases should be considered for admission to hospital on their clinical and environmental merits and not as a matter of routine. If the former virulent variety of scarlet fever returned to this country it would be quite an easy matter to adapt administrative measures to meet the changed circumstances. Hospitalisation, *per se*, has had very little, if any, effect upon the prevalence of either scarlet fever or diphtheria. The reason is that endemicity is maintained not by clinically recognisable cases, but by the far more numerous unrecognised carriers and cases of sub-clinical infection. The desquamated skin after scarlet fever is not infectious.

Terminal Disinfection.

Modern medical opinion is, I believe, generally in favour of the abolition of terminal disinfection. Secondary cases are not increased when terminal disinfection is abolished. The procedure is ineffective and expensive and should be dropped.

ISOLATION HOSPITAL.

The Isolation Hospital is situated at Northowram, on a site of 32 acres and at a height of 800 feet above sea level. The nearest railway station is Halifax, 3 miles distant. The bus route between Halifax and Bradford is one quarter of a mile away.

There are about 10 acres available for expansion. Cases are admitted from surrounding areas if accommodation and nursing staff are available. During August and September an outbreak of Para-Typhoid Fever (Phage 1) occurred in Halifax (see appendix to the general report) and, on account of the shortage of nursing and domestic staffs, we were compelled to send about half the cases that occurred to Isolation Hospitals in Bradford, Huddersfield, Wakefield, Brighouse and Menston. Each of these hospitals could only take a few cases because of their shortage of nursing and domestic staffs. In the circumstances the outbreak threw a great strain on the Hospitals concerned.

Accommodation is as follows :—

	Beds
Scarlet Fever. 2 blocks of 26 beds each...	52
Diphtheria. 1 block of 26 beds...	26
1 Cubicle block ...	12
1 other block ...	6
	<hr/> 96

It should be noted that we admit all types of infectious diseases to the Hospital according to the circumstances of the case in question. There is an Administration Block (the Old Hall), a Nurses' Home (built at the time when the ward blocks were erected) and the usual out-offices: Laundry, garage, laboratory, dispensary and mortuary. If the Hospital is extended I recommend an additional cubicle block—by far the most useful unit of the Hospital. At the time of writing it is difficult to envisage the future set up of our Hospitals but, I suggest that a considerable extension of this Hospital would—provided staff could be obtained—serve a large area. The erection of a Sanatorium on the Northowram Hospital site might be worth serious consideration. A complete unit (Isolation Hospital plus Sanatorium) under the administration of a Medical Superintendent and the necessary medical and nursing staff would I think serve a large area surrounding Halifax. Small hospitals are often inefficient and wasteful of staff and material. In view of the probable shortage of nursing staff for, perhaps, the next decade, the establishment of large Isolation Hospitals and Sanatoria will possibly have to be faced. This is my penultimate report on the Hospital, and I think it is wise (and might be helpful, to the future Hospital authority), to state my views on the matter.

I am indebted to Dr. R. I. S. Lewis, the Resident Medical Officer, for the following report :—

Scarlet Fever.

The number of cases admitted was 81 of whom 62 were Halifax cases and 19 non-Halifax cases.

Diphtheria.

During the year 49 cases (40 Halifax and 9 non-Halifax cases) were admitted for Diphtheria. Of these 30 were found to be not suffering from Diphtheria. The average length of stay was 62 days. There was 1 death from Diphtheria, an out of the Borough case.

Para-Typhoid—See appendix of the general report.

Typhoid—No cases were admitted.

Erysipelas—2 cases were admitted.

Measles—9 cases were admitted.

Chicken Pox—18 cases were admitted.

Mumps—5 cases were admitted.

Whooping Cough—25 cases were admitted. No cases died.

Pneumonia—1 case was admitted.

Cerebro-Spinal Fever—No cases were admitted.

Vincent's Angina—No cases were admitted.

Rubella—6 cases were admitted.

Poliomyelitis—No cases were admitted.

Enteritis—5 cases were admitted.

Dysentery—No cases were admitted.

Other Diseases.

Broncho-pneumonia—3 cases. 2 deaths.

Scabies—7 cases.

Urticarial Food Rash—2 cases.

Drug Rash—1 case.

Malaria—1 case.

Laboratory Report.

The following examinations were carried out :—

Test	Positive	Negative	Total
Swabs for K.L.B. ...	43	239	282

Disinfection.

The following articles were disinfected :—

Patients' articles	...	...	...	1023
Hospital bedding and clothing	...	...	...	4010
Sanatorium bedding and clothing	...	...	...	161
Private Patient's articles	...	...	...	99
Westfield Children's Home	...	...	...	10
				<hr/>
				5,303

370 "Stovings" were carried out.

During the year there were 5 deaths in the Hospital:—
 2 from Paratyphoid Fever, 2 from Broncho-Pneumonia and
 1 from Diphtheria.

SECTION 5



Tuberculosis

Tuberculosis

If we examine the records of mortality from pulmonary tuberculosis in Halifax since 1926 we find that—with the exception of a rise during the war years—the death rate has considerably declined. Our statistics indicate that among young adults tuberculosis is more fatal in females, whereas in middle and old age the incidence is heavier in males. I am of the view that part of the decline in pulmonary tuberculosis in recent years is in line with the biological attributes of the disease in general and has little to do with environmental factors. Insanitary overcrowded areas nearly always show a high death rate from pulmonary tuberculosis. Dusty trades, especially those dealing with siliceous material, are accompanied by high pulmonary tuberculosis death-rates. It is probable that the children of tuberculous parents inherit—not the disease—but a susceptibility to the disease. It is possible however, that mild tuberculosis in childhood confers some degree of immunity against subsequent tuberculosis infection. Tuberculin tests indicate frequency of infection in childhood, but not frequency of tuberculosis as children's disease. The great danger is massive or prolonged infection. Tubercle Bacilli may retain their vitality in dust for considerable periods. The undetected case of pulmonary tuberculosis (with a positive sputum) is probably the chief vehicle of the spread of the disease. The importance of the medical examination of contacts of cases of tuberculosis cannot be over emphasised. The examination of contacts is one of the best methods for detecting early cases which respond most favourably to treatment.

Mode of Onset—Symptoms

1. The onset is insidious.
2. There is often "bronchitis" and a "cold" which does not clear up.
3. Hæmoptysis (spitting or coughing up blood) is an important sign.
4. There may be some anæmia.
5. Loss of weight.
6. In early cases, slight pyrexia (fever) of irregular type, occasionally showing "inverse" type—i.e.: highest in the morning.
7. Sweating. Sometimes drenching sweat in the early hours of the morning.
8. Cough is a constant early symptom. In the early stages it is dry and irritating; later, loose with muco-purulent sputum.

A combination of the above symptoms—especially in a contact of a case of pulmonary tuberculosis—should suggest a check up by a doctor.

At the present time there is no drug that will prevent or cure tuberculosis. Streptomycin is still on trial. Penicillin and the M. and B. drugs will not cure tuberculosis.

I am indebted to Dr. W. Smith for the following report:

Halifax Sanatorium.

	Halifax Cases	Other Cases	Total
Remaining in on Dec. 31st, 1945...	40	13	53
Admitted during 1946	70	50	120
Discharged during 1946	65	40	105
Died during 1946... ..	14	2	16
Remaining on Dec. 31st, 1946 ...	31	21	52

The figures of new cases of Pulmonary Tuberculosis for Halifax since 1940, are as follows :

1940	1941	1942	1943	1944	1945	1946
120	110	98	106	90	90	53

The Health Committee in July, 1943, decided to put the new Tuberculosis Allowances Scheme into operation. It is at present too early to comment upon the effect of the scheme on the incidence of Tuberculosis. Miniature radiography has not yet come into force in this area.

TUBERCULOSIS DEATH-RATE.						
PERIOD				Respiratory only	All Forms	
10 years average 1936-45 ...				'51	'62	
'1946				'37	'44	

The following Table shows the number of notified cases of Tuberculosis remaining in the Borough on December 31st, 1946 :—

Total Cases	Pulmonary			Non-Pulmonary		
	Males	Females	Total	Males	Females	Total
585	258	244	502	39	44	83

The following Table shows the number of formal notifications received during the year classified for age, sex, and localisation of the disease.

AGE PERIODS		FORMAL NOTIFICATIONS.											Total Notifications
		Number of Primary Notifications of new cases of Tuberculosis											
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-		TOTAL (all ages)
Pulmonary Males	...	—	1	1	—	1	2	8	5	3	4	2	27
" Females	...	—	—	2	1	—	4	8	1	3	4	1	24
Non-Pulmonary Males		—	—	—	3	—	—	2	—	—	—	—	5
" Females		1	2	5	1	1	—	—	—	—	—	—	10

In the following Tables, new cases coming to the knowledge of the Medical Officer of Health otherwise than by formal notification, together with the sources of such information are set out.

AGE PERIODS	No. of Cases.											TOTAL
	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	
Pulmonary Males ...	—	—	—	—	—	1	—	—	1	—	—	2
Females ...	—	—	—	—	—	—	—	—	—	—	—	—
Non-Pulmonary Males	—	—	—	1	—	—	—	—	—	—	—	1
" Females	—	—	—	—	—	—	—	—	—	—	—	—

SOURCE OF INFORMATION.		No. of Cases.				
		Pulmonary	Non-Pulmonary	Pulmonary	Non-Pulmonary	Pulmonary
Death Returns { from local Registrars ...	...	1	—	—	—	—
transferable deaths from Registrar General ...	...	—	—	—	—	—
Posthumous notifications	...	—	—	—	—	—
"Transfers" from other areas (other than transferable deaths)	...	1	—	—	—	—
Other Sources ...	...	—	—	—	—	—

SECTION 6



Venereal Diseases

Venereal Diseases

In conjunction with the County Authority, a joint clinic for the treatment of venereal diseases is held at the Royal Halifax Infirmary.

The clinic is open for women and children every Tuesday afternoon from 3-30 to 4-30, and from 6 to 8 p.m. For men, every Thursday between 6 and 8 p.m. Also an auxiliary treatment centre for men is open daily from 10 a.m. to 12 noon, and 6 to 8 p.m., and on Sundays from 10 a.m. to 12 noon. It appears that these arrangements are sufficient and adequate for the Borough.

Dr. R. W. Hendry, M.B., F.R.C.S. (Ed.), and Dr. H. V. Phelon, M.R.C.P. (Lond.), are in charge of this Clinic.

Co-ordination between this and the Maternity and Child Welfare Service has been secured by the attendance of one of the Health Visitors at the Tuesday afternoon and evening sessions.

The following figures refer to local patients attending Treatment Centres:—

Number of persons dealt with for the first time during the year, and found to be suffering from					Local Clinic	Other Clinics
Syphilis	...	...	...	...	103	1
Soft Chancre	...	...	...	...	—	—
Gonorrhoea	...	...	...	...	124	4
Conditions other than Venereal				...	158	6
Total					385	11
Total attendances at the out-patient clinic					10686	—
Aggregate number of in-patient days...					667	—

Pathological Work.

Microscopical :—		Specimens examined at the Treatment Centre	Specimens sent to an Approved Laboratory
For Syphilis	...	246	193
For Gonorrhoea	...	4318	6512

SECTION 7



Maternity and Child Welfare Home Help Service

Maternity and Child Welfare

I am indebted to Dr. E. J. Simpson, Medical Officer-in-Charge Maternity and Child Welfare Centre for the following report : —

The first full post-war year has brought new records in the maternity and child welfare figures for Halifax. The figures for both maternal and infant mortality are the lowest ever attained here, and the attendances at clinics have been greater than ever before. The maternal and infant death rates are considerably lower than the average for England and Wales as a whole. There were two maternal deaths in Halifax during 1946. The infant mortality rate was 31.01 per 1,000 live births, while the figure for England and Wales, also the lowest ever recorded was 43 per 1,000. In the pre-war quinquennium, New Zealand led the world in the fewness of her infant deaths with 32 per 1,000. It should not pass unnoticed that this was the figure achieved by Halifax last year. An analysis of our 54 infant deaths show that 33 occurred in the first four weeks of life giving a neo-natal mortality of 18.9 per 1,000. Ten of the deaths were due to congenital malformations. We do not know why some babies are born with such defects and therefore we cannot prevent their occurrence. The majority of other neo-natal deaths are referable to the condition of the mother during pregnancy or to her physique, and therefore with more ante-natal treatment, careful obstetrics, and special facilities for the care of premature infants, we can hope to reduce the figures of these deaths still further. Deaths in the succeeding 11 months mainly depend on conditions which favour infection, and are a challenge to our housing conditions and general environment, as well as to the Infant Welfare Services.

Midwives.

Number of Midwives practising in the Borough during the year (including Midwives working in Institutions)	29
Number holding the Central Midwives' Board Certificates	29
Number of Independent Midwives	3
Number of cases in which medical aid was summoned by the Midwives	92
Medical Aid Notices sent on behalf of child	17

Of these :—

Unsatisfactory condition of child	4
Discharging Eyes	8
Prematurity	2
Spina-bifida	1
Swollen Hands and Feet	1
Abnormality of Feet	1

Notifications received in accordance with C.M.B. Rules from Midwives.

Intention to resort to artificial feeding	...	...	27
Luddenden—Number of cases in the Borough of			
Halifax	...	...	2

Notification of Births (Public Health Act, 1936).

Number of births notified (including births transferred to other districts)	...	...	...	...	3,043
Number of births registered	...	...	...	...	3,082
Number of stillbirths...	...	...	...	...	48
Number of notified births attended by doctors with and without midwives	...	...	...	...	53
Number of notified births attended by midwives only					290
Number of births notified from the Royal Halifax Infirmary	...	...	...	...	582
Number of births notified from the Halifax General Hospital	...	...	...	...	2,042
Number of births notified from Nursing Homes	...				73
Number of births transferred to other districts...	...				1,313

Infant Welfare Centres.

Northgate—

Number of Sessions	...	...	...	...	136
Number of new cases	...	...	...	...	762
Number of repeat visits	...	...	...	...	6679
Average attendance per Session	...	...	...	...	54.7
Percentage seen by the Doctor at each Session	...	...	...	...	44.87

Queen's Road—

Number of Sessions	...	...	...	...	90
Number of new cases	...	...	...	...	566
Number of repeat visits	...	...	...	...	8870
Average attendance per Session	...	...	...	...	104.84
Percentage seen by the Doctor at each Session	...	...	...	...	20.4

Ovenden—

Number of Sessions	...	...	...	...	45
Number of new cases	...	...	...	...	184
Number of repeat visits	...	...	...	...	2339
Average attendance per Session	...	...	...	...	56
Percentage seen by the Doctor at each Session	...	...	...	...	38.6

Ante-Natal Clinic.

Number of Sessions	...	...	...	...	40
Number of new cases	...	...	...	...	66
Number of repeat visits	...	...	...	...	122
Average attendance per Session	...	...	...	...	4'7

Number of children attending the Clinics—

Under 1 year	...	...	...	...	1323
Between the ages of one and five years	...	...	...	...	3587

Diphtheria Immunisation Clinic.

This Clinic is held each Friday at 10 o'clock.

Number of cases treated	...	...	...	...	680
Number of cases treated elsewhere	...	...	...	...	12
Number of Post-Schick Tests	...	...	...	...	627

The Work of the Health Visitors.**Visits to expectant mothers—**

First visits	...	...	...	...	93
Repeat visits	...	...	...	...	180

Infants under 1 year—

First visits	...	...	...	...	1611
Repeat visits	...	...	...	...	4415
Children 1 to 2 years	...	...	...	...	2070
Children 2 to 5 years	...	...	...	...	4121
Ophthalmia Neonatorum	...	...	...	...	2
Puerperal Fever and Pyrexia	...	...	...	...	0
Miscellaneous	...	...	...	...	72

One Health Visitor has attended the Venereal Diseases Clinic each week throughout the year, and has paid 20 visits in connection with this work.

Infant Mortality.

Of the 54 deaths of infants under 1 year, 31 were boys and 23 were girls.

Of these 33 deaths occurred during the first month.

Of the 33 Neo-natal deaths, 28 died within one week and of these 11 died within 24 hours.

Maternal Deaths.

There were two Maternal deaths in Halifax during 1946.

Maternity Homes.

There are two registered Maternity Homes in Halifax and these have been inspected by Dr. Simpson, Medical Officer-in-Charge, Maternity and Child Welfare Services.

Artificial Sunlight.

Number of Sessions	...	...	...	...	166
Number of cases treated	...	...	...	...	263
Number of attendances	...	...	...	...	4595
Number of attendances of non-tuberculous children of school age	...	...	...	...	1390
Number of attendances of non-tuberculous children under school age	...	...	...	...	3180
Number of attendances of tuberculous children	...	...	...	...	25
Average attendance at each Session	...	...	...	...	27'68

Staff.

Mrs. Beedsworth, clerk, left at the end of July and her place was taken by Mrs. Malton who commenced duties on 1st August, 1946.

I wish to make a most warm acknowledgment to the whole staff who have followed the friendly welcome they gave me, with such loyal co-operation during my first year. The excellent figures for clinics and home visits reflect the amount of work done and for the manner in which this work was carried out I have the highest praise.

Voluntary Helpers.

The help of the voluntary workers is a most valuable asset to the Child Welfare cause in the Borough and I should like to extend to them our cordial thanks for their willing and regular assistance at the clinics.

HOME HELP SERVICE.

The Home Helps Service was taken over by the Public Health Department on the 1st October, 1946 and placed under the direction of Mr. J. H. Bargh, Chief Clerk, and Miss E. Clarkson. In the Ministry of Health Circular 179/44 it was foreshadowed that the supply of helps would, in many areas, fall short of the demand. The cases assisted generally fall into one of the following groups:—

1. Aged and infirm people—often living alone.
2. People suffering from Chronic Ailments such as heart disease, arthritis and so on.
3. Cases of temporary illness.
4. Blind persons.
5. Maternity.

The following statement shows the cases dealt with during 1946 from the time the above scheme was put into operation :—

	Maternity	Other cases
Number of applications received ...	23	39
Number of families assisted ...	23	29

The period of service in Maternity cases is usually the 14 days following confinement. In non-maternity cases the periods vary.

The following are the chief difficulties so far met with in operating the scheme :—

1. Maternity cases often from 1 to 7 weeks later than the approximate date booked.
2. People who engage a full-time Home Help, and after a day or two decide part-time will meet their requirements.
3. Impatient members of the Public who expect a Home Help to be available at the moment of their application.
4. People who look upon the Home Help as a charwoman—a splendid opportunity of getting their Spring cleaning done.
5. Home Helps, who though good workers, are not to be relied upon to keep regular time.
6. Home Helps who like to pick and choose their places of employment.

I would point out that without the assistance of Miss Clarkson and Mr. Bargh, it would be quite impossible to run the present scheme from the Health Department. The successful operation of the scheme demands a lot of time, tact, and administrative ability from the officers who work it. Should the above officers leave the service of the Corporation and not be replaced immediately by competent successors, the whole scheme will break down. In my opinion Miss Clarkson should receive some financial recompense for the successful way she has operated a scheme which is intrinsically difficult and complex.

DAY NURSERIES.

In Halifax we have two Day Nurseries. These nurseries became the complete responsibility of the local authority on the 31st March 1946.

During the year there were no cases of Infectious Diseases at the nurseries. Any child under suspicion was excluded by the Matrons as a precautionary measure :—

NURSERIES.

Ling Bob Day Nursery, Pellon.—Matron: Mrs. M. R. Wilson.

Tel. 61030.

Craigie Lea Day Nursery, Ovenden.—Matron: Miss A. N. Gummerson. Tel. 2853.

Attendances :

	0—2	2—5
Ling Bob	6,441	5
Craigie Lea	4,065	4,279

Backhold Day Nursery. This Nursery was closed down on the 28th February, 1946. The number of attendances at this Nursery for January and February of 1946 totalled 751.

SECTION 8



Mental Deficiency

Mental Deficiency Acts, 1913-1938

St. Catherine's Certified Institution.

The Council has full membership of the Joint Board of this Institution and under the terms of the agreement the accommodation allotted to Halifax is as follows :

Males, High Grade (Adults)	...	...	21	Beds
Females, High Grade	...	...	23	,,
Males, High Grade (under 16 years of age)	...	...	8	,,
Females, Low Grade	...	...	4	,,
Males, Low Grade	...	...	4	,,
Total	...	...	60	,,

The following Table shows the Institutional arrangements provided for the accommodation of local patients :—

Name of Institution	Sex of Cases Received	Ages	Accommodation for		Grade	Remarks
			Males	Females		
Mid-Yorkshire Institution, Whixley, nr. York	Males	Over 16 years	21	—	High	
St. Catherine's, nr. Doncaster	Males	Over 16 years	21	—	High	
		Do	4	—	Low	
		Under 16 years	8	—	High	
	Females	Do	—	4	Low	
		Over 16 years	—	23	High	
Welfare Home, Halifax	Males and Females	Over 16 years	6	6	Active Medium to Low Grade	

The following Table shows the position on December 31st, 1946 :—

Cases " Subject to be dealt with " :—	M.	F.	Total
...	45	47	92
1. Under " Order "			
In Institutions (excluding cases on licence)	...	...	...
...	67	59	126
On Licence from Institutions	...	3	1
...	4		
2. In " Places of Safety "	—	—	—
Under Statutory Supervision	...	30	34
...	64		

The following visits were paid by the Official Visitor during the year :—

To cases under Statutory supervision	...	...	102
Enquiries and reports re home surroundings of patients in respect of applications for holiday leave from Certified Institutions	...	...	7
To cases on Licence	...	...	12
Other visits (Petitions for Orders, Special Reports and Certificates, etc.)	...	...	21
Total			142

The particulars given above relate solely to cases under the care of the Statutory Committee, and have nothing to do with school children of school age, who, so long as they are capable of receiving benefit from instruction in a special school remain under the care of the Education Committee. Particulars regarding them are to be found in the reports of the School Medical Service published separately, in which the work of the special school at Quarry House is described.

1. The first part of the report is devoted to a general survey of the situation in the country. It is found that the country is in a state of general depression, and that the people are suffering from want and distress. The cause of this is attributed to the war, and the consequent destruction of property and the loss of life.

2. The second part of the report is devoted to a detailed account of the operations of the government during the year. It is found that the government has been successful in maintaining order and in carrying out its policy. The revenue has been increased, and the public works have been completed.

3. The third part of the report is devoted to a statement of the accounts of the government. It is found that the accounts are correct, and that the government has been successful in maintaining its financial position.

4. The fourth part of the report is devoted to a statement of the accounts of the public works. It is found that the accounts are correct, and that the public works have been completed.

5. The fifth part of the report is devoted to a statement of the accounts of the public health. It is found that the accounts are correct, and that the public health has been maintained.

6. The sixth part of the report is devoted to a statement of the accounts of the public education. It is found that the accounts are correct, and that the public education has been maintained.

7. The seventh part of the report is devoted to a statement of the accounts of the public justice. It is found that the accounts are correct, and that the public justice has been maintained.

8. The eighth part of the report is devoted to a statement of the accounts of the public police. It is found that the accounts are correct, and that the public police have been maintained.

9. The ninth part of the report is devoted to a statement of the accounts of the public fire. It is found that the accounts are correct, and that the public fire has been maintained.

10. The tenth part of the report is devoted to a statement of the accounts of the public water. It is found that the accounts are correct, and that the public water has been maintained.

SECTION 9



Vaccination

Vaccination Order 1930

incorporating

The Vaccination Acts 1867-1898 and the Vaccination Act 1907.

The duty of administering these Acts has been delegated by the Council to the Health Committee.

The Borough has been divided into 7 Vaccination Districts, and the following Table shows the constitution of the districts, together with the names and addresses of the Public Vaccinators:—

District.	Public Vaccinator.
No. 1. Copley Ward.	Dr. H. W. Morck, Orrell House, Sowerby Bridge.
No. 2. Central, Pellon. Southowram, East, South, Kingston, West and Skircoat Wards.	Dr. P. Milnes, Arden Lodge, Halifax.
No. 3. North and Akroydon Wards.	Dr. A. Garvie, Woodlands House, Halifax.
No. 4. Illingworth and Ovenden Wards.	Dr. J. Morrison, Oak Leigh, Halifax.
No. 5. Northowram Ward.	Dr. J. J. Murphy, 50, West End, Queensbury.
No. 6. Warley Ward.	Dr. C. S. Ogilvy, Woodbank, Luddenden Foot.
No. 7. The Halifax General Hospital and Halifax Welfare Home.	Dr. R. Davidson, Woodgate, King Cross, Halifax.

Stated quite briefly, the Acts make it obligatory—unless a statutory declaration of conscientious objection is made—upon all parents to have their infants vaccinated before they attain the age of six months.

The following short summary outlines the main provisions of the Acts, and indicates the lines of local procedure.

NOTES ON VACCINATION PROCEDURE.

Form A. This is handed by the Registrar to the person registering the birth. It contains:—

- (a) Form of statutory declaration of conscientious objection to vaccination. It must be completed and returned before the child attains the age of 4 months.

- (b) Medical certificate of postponement of vaccination owing to the state of child's health. Postponement must not exceed two months from the date of certificate, but may be renewed from time to time.
- (c) Medical certificate of postponement of vaccination owing to the condition of the house, or recent prevalence of infectious disease in the district. This also must not exceed two months.
- (d) Medical certificate of unsusceptibility to successful vaccination or of child having had smallpox. The number of times unsuccessfully vaccinated must not be less than three.
- (e) Medical certificate of successful vaccination must be completed and returned before the child attains the age of 6 months.

Form Q. If Form A has not been received by the Vaccination Officer before the child reaches the age of 3 months 8 days, Form Q is sent reminding the parents that they have still 3 weeks in which to complete and return the form.

Form H. This Form contains the names, addresses, etc. of those who have failed to secure exemption. It is completed by the Vaccination Officer and sent to the Public Vaccinator, whose duty it is, withing 4 weeks, to call and offer vaccination.

Form K. This is a final notice sent to parents who have failed to have their child vaccinated and gives them 14 days in which to comply. Failure to do so places the parent in default and the matter is reported to the Health Committee.

The following figures are extracted from the Return which was prepared for the Registrar General :—

Number of births returned in the "Birth List Sheets" as registered from 1st January to 31st December, 1945 ... 2388

Number of these births duly entered by 31st January, 1947, in columns 1, 2, 4, and 5 of the Vaccination Register, viz:

Successfully vaccinated	...	...	...	...	...	447
Insusceptible of vaccination	...	...	...	...	...	—
Had Smallpox	...	...	...	...	...	—
Number in respect of whom declarations of conscientious objection have been received	...	...	...	...	...	1504
Died unvaccinated	...	...	...	...	...	81

Number of these births which on 31st January, 1947 remained unentered in the Vaccination Register on account of :—

Postponement by Medical Certificate	...	...	...	...	8
Removal to other districts	...	...	...	...	220
(Vaccination Officers duly appraised)					
Removal to places unknown, or which cannot be reached or unfound	...	...	...	...	54

Number of these births remaining on 31st January, 1947 neither duly entered in the Vaccination Register nor temporarily accounted for in the Report Book	74
Total number of Certificates of successful Primary Vaccin- ation of children under 14 received during the Calendar Year, 1946	560
Number of Statutory Declarations of conscientious objection, irrespective of the dates of birth of the children to which they relate, during the Calendar Year 1946	1697
Number of children successfully vaccinated after declaration of conscientious objection had been made	4
Number of Certificates of successful primary vaccination of children under 14 sent to other vaccination officers ...	6

SECTION 10.



Public Health Propaganda.

Public Health Education.

The following Public Lectures were given by Dr. G. C. F. Roe, during the year :—

Title	Notes (if any)
Riddle of Cancer	
Tuberculosis	Illustrated by Epidiascope
Mental Deficiency	Illustrated by Epidiascope
Heredity and Environment	
The Work of a Public Health Department	
Elementary Psychology	
Function and Design	
The Mechanism of Mind	Illustrated by Epidiascope
Vital Statistics	
Vitamins	
Microbes and Men	Illustrated by Epidiascope
Infectious Diseases	Illustrated by Epidiascope
Immunisation	
The Road to Maturity	
Clinical Cases	For Nurses

SECTION 11

The Halifax General Hospital

The Halifax General Hospital

LIST OF MEDICAL OFFICERS

(31st December, 1946).

FULL TIME.

- Mr. H. I. DEITCH, M.S. (Lond.), F.R.C.S., Medical Superintendent and Surgeon.
 Mr. N. EMBLIN, M.D., F.R.C.S. (Edin.), M.M.S.A., M.R.C.O.G., Deputy Medical Superintendent and Obstetrician and Gynaecologist.
 Dr. J. D. ALLAN, M.D., F.R.C.P. (Edin.), Physician and Paediatrician.
 Dr. EMIL LEIGH, M.D., M.R.C.P., Medical Registrar.
 Dr. J. McKENNEL, M.B., Ch.B., Senior Resident Medical Officer.
 Dr. J. R. HESELTINE M.B., Ch.B., Senior Resident Surgical Officer.
 Dr. L. LANGTON, M.B., Ch.B.
 Dr. L. M. EDWARDS, M.B., Ch.B.
 Dr. E. RAWLINGS, M.B., Ch.B.
 Dr. H. SLESS, M.B., Ch.B.

PART TIME.

- Dr. D. RAWSON, M.B., Ch.B. Dr. C. G. BLAKELEY, M.B., Ch.B.
 Visiting Anaesthetists.

ATTENDING ONCE OR MORE WEEKLY.

- Mr. W. J. L. FRANCIS, M.Ch., F.R.C.S., (On Active Service) Temporary Surgeon.
 Mr. R. W. HENDRY, F.R.C.S. (Edin.) Temporary Surgeon.
 Mr. W. O. LODGE, F.R.C.S. (Edin.), Ear, Nose and Throat Surgeon.
 Dr. W. MacADAM, M.D., F.R.C.P., Consulting Physician.
 Dr. L. GLICK, M.R.C.P., Temporary Consulting Physician.
 Dr. B. L. JEAFFRESON, F.R.C.S., L.R.C.P., M.R.C.O.G. Consulting Obstetrician and Gynaecologist.
 Mr. G. HYMAN, F.R.C.S., Orthopaedic Surgeon.
 Dr. H. V. PHELON, M.R.C.P., Pathologist.
 Dr. A. POLLITT, B.A.O., D.M.R.E., Radiologist.
 Dr. N. M. MONTGOMERY, M.B., Ch.B., D.P.M., Psychiatrist.
 Dr. I. A. FELDMAN, M.R.C.S., L.R.C.P., Physician for Functional Nervous Diseases.
 Mr. R. ROSS, L.D.S., Dental Surgeon.

CONSULTANTS ATTENDING ON REQUEST.

- Dr. R. W. GREATOREX, M.B., Ch.B., Ophthalmic Surgeon.
 Dr. C. W. VINING, M.D., F.R.C.P., Paediatrician.
 Mr. P. R. ALLISON, M.Ch., F.R.C.S., Thoracic Surgeon.
 Mr. E. R. FLINT, F.R.C.S., Consulting Surgeon.
 Mr. W. R. HENDERSON, F.R.C.S., Neuro-Surgeon.

LIST OF OUT-PATIENT CLINICS.

MONDAY—Mr. W. O. Lodge.	Ear, Nose and Throat ...	2-0 p.m.
TUESDAY—Dr. I. A. Feldman.	Functional Nervous Disorders and Child Guidance (By appt.) ...	2-0 p.m.
Dr. J. D. Allan.	Medical Consultations ... (Adult)	2-0 p.m.
WEDNESDAY—Mr. G. Hyman .	Orthopaedic (By appt.)	9-30 a.m.
Dr. N. M. Montgomery.	Psycho-Neurosis ... (By appt.)	2-30 p.m.
THURSDAY—Mr. R. Ross.	Dental ...	9-30 a.m.
Dr. N. M. Montgomery.	Psycho-Neurosis ... (By appt.)	2-30 p.m.
FRIDAY—Dr. I. A. Feldman.	Functional Nervous Disorders and Child Guidance (By appt.) ...	2-30 p.m.
Dr. J. D. Allan.	Medical Consultations ... (Children)	2-0 p.m.
TUES., WED. and THURS.—		
Mr. N. Emblin.	Gynaecological Cases ...	10-0 a.m.
TUES. and THURS.—Mr. N. Emblin.	Obstetrical Consultations	11-0 a.m.
DAILY—Mr. H. I. DEITCH.	Surgical Cases ...	10-30 a.m.

DEPARTMENTS OPEN DAILY.

Ante-Natal Clinic—Daily (Except Wed.)	10-0 a.m.
Post-Natal Clinic—Wednesday	10-0 a.m.
Physio-Therapy Department	9 a.m. to 12 noon and 2 p.m. to 4 p.m.
X-Ray Department	
Pathological Department	

Patients can be referred to any department directly by General Practitioners.

WORK OF THE HOSPITAL DURING THE PAST YEAR.

X-Ray Department. Radio-diagnosis only.

The work of this department is steadily increasing, the total number of patients being examined during the past year being 4768. The Staff now consists of 2 qualified Radiographers and 2 Students. Patients can be referred directly to the Department by the general practitioners.

Pathological Department. Examinations carried out.

Year	Morbid Anatomy	Bacteriology	Bio-Chemistry	Total
1940	—	—	—	5538
1941	—	—	—	6005
1942	—	—	—	6854
1943	2442	3451	1440	7333
1944	2926	3948	1346	8220
1945	2790	3831	1780	8401
1946	3272	4402	2066	9742

The present staff is as follows :—

- 1 Chief Technician, F.I.M.L.T.
- 3 Junior Technicians.
- 1 Apprentice.

Ambulance Service.

The Service, by agreement, is not limited to Halifax but includes the whole Hospital area, and this enables any case requiring an Ambulance for which a local Ambulance cannot be obtained, to be rapidly procured.

Charges for Ambulance.

Halifax cases transferred inside the Borough 5/- flat rate. Residents inside the Borough transferred distances, 1/6 per mile for the first 50 miles, 1/- thereafter. Residents outside the Borough 1/6 per mile.

Charges for Sitting Case Car.

Transfers for patients inside the Borough 3/- flat rate. Residents outside the Borough 9d. per mile.

The Sitting Case Car is one of the most important of the Ambulance adjuncts, its main purpose is to bring Out-patients to the Hospital and to take them home again. The charge for this service is 3d. per mile but the Almoner has been given authority to waive this in whole or part in necessitous cases.

The total number of calls for the year were :—

Ambulances 4699.	Sitting Case Car 1986
------------------	-----------------------

The total mileage run during the year was :—

Ambulances 34152	Sitting Case Car 12959
------------------	------------------------

Total number of patients admitted or born in Hospital	...	9338
Total number of deaths	... ..	564
Number of deaths among children under 1 year of age	...	70
Total number of discharges (incl. infants born in hospital)	...	8764
Daily average number of patients in the Hospital	... ..	491

Duration and stay of patients:—

(a) Four weeks or less	... ..	8275
(b) Exceeding 4 weeks but under 13 weeks	...	901
(c) Thirteen weeks or more	... ..	152

Number of E.M.S. Patients admitted	...	...	...	...	504
Daily average number of E.M.S. patients	...	...	...	...	36
Number of Royal Halifax Infirmary Fund Contributors admitted	...	...	...	...	1035
Number of West Riding Public Health cases admitted	...	...	...	...	1027
Number of Private Patients admitted	...	...	...	...	207
Number of operations performed	...	...	...	...	2583
Number of operations for Tonsils and Adenoids	...	...	...	...	397
Number of Maternity Beds	...	...	...	...	92
Number of Maternity Cases admitted during the Year	...	...	...	...	2685
Number of Maternity Cases delivered	...	...	...	...	2088
(a) Midwives	...	...	...	...	1935
(b) Doctors	...	...	...	...	153
Maternal Deaths	...	...	...	...	2
Still Births	...	...	...	...	54
Infants deaths within 10 days of Birth	...	...	...	...	39
West Riding Maternity Cases admitted	...	...	...	...	423

Out-Patients.

There is no regular Out Patient or Casualty Department but many cases (chiefly surgical) attend for re-examination after discharge. Cases are also seen in consultation with reference to admission, and a considerable amount of Out-patient work is done in the Massage, X-Ray and Psychiatory Department.

Total number of persons seen in the Out-Patient Dept.	...	...	...	...	5600
Total number of attendances	...	...	...	...	14382
Ante-Natal Clinic :—					
Number of women seen	...	...	...	...	2525
Number of attendances	...	...	...	...	18090

Comparative Table of Various Classes of Patients Treated in the Hospital.

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Daily average number of Patients in the Hospital	318	354	330	333	365	384	412	471	506	491
Total number of Patients admitted or born	3439	4293	4392	4701	6106	6603	7591	8725	8101	9338
Number of operations performed	837	1173	808	1109	1770	1635	2112	2392	2737	2583
Number of deliveries	644	754	898	850	1044	1213	1446	1821	1461	2088
Number of maternal deaths	4	4	5	2	6	2	6	4	3	2
Number of E.M.S. Patients admitted	—	—	—	297	872	1089	1049	1958	1630	504
Number of operations for Tonsils and adenoids during year	213	278	142	180	295	270	362	267	247	397
Number of Royal Halifax Infirmary Fund contributors	Nil	Nil	Nil	Nil	Nil	Nil	228	717	727	1035
Number of West Riding assisted cases	565	721	559	479	575	516	680	629	650	1027
Number of West Riding maternity cases...	172	270	167	141	179	193	251	425	290	423
Number of private Patients	128	194	189	204	222	223	238	209	174	207

SECTION 12

Inspection and Supervision of Food

Inspection & Supervision of Food

I am indebted to Mr. J. Flanagan, Meat and Foods Inspector, for the following Report:—

Meat Inspection.

The abattoir is a supply centre for Halifax Borough, Sowerby Bridge, Hebden Bridge, Ripponden, Queensbury and Shelf and Todmorden. Since January, 1940, the slaughter of food animals has been under Ministry of Food Control at the abattoir.

The following Table shows the number of visits paid to the slaughterhouses, butchers' shops, markets, etc. :—

Description of Premises	Number of Visits
Public Slaughterhouses	566
Borough Market	254
Wholesale Market	263
Lairages	55
Potted Meat Houses	22
Tripe Boiling Houses	42
Butchers' Shops	189
Other Visits	316
Total	1,707

The following Table shows the number of animals slaughtered during the year and the number condemned :—

	Cattle.	Calves.	Sheep and Lambs.	Pigs.	Total.
Number of Animals slaughtered at the public slaughter-house	7496	2918	22,212	233	32,859
Do. condemned...	104	9	20	4	137

The following Table shows the total approximate weight of meat and offals destroyed on account of tuberculosis, and from other causes :—

Total Amount of Meat Destroyed	lbs. 52,513
Total Amount of Offals Destroyed	97,064
Total Amount of Meat Destroyed on account of Tuberculosis	45,627
Total Amount of Offals Destroyed on account of Tuberculosis	49,550
Total Amount of Meat Destroyed from other causes	6,886
Total Amount of Offals Destroyed from other causes	47,514
Total Meat and Offals Destroyed ...	149,577

Food Inspection.

The following Table shows the amount of foods condemned:

Kinds of Food Condemned				Quantity in Lbs.
104 Carcases of Beef	...	...	...	47,465
Beef not in Carcase	...	...	...	3,397
9 Carcases of Veal	...	...	...	441
Veal not in Carcase	...	...	...	64
20 Carcases of Mutton	...	...	...	565
Mutton not in Carcase	...	...	...	79
4 Carcases of Pork	...	...	...	330
Pork not in Carcase	...	...	...	172
Offals	...	...	...	97,064
Fish	...	...	...	3,841
Fruit and Vegetables	...	...	...	4,689
Canned Provisions	...	...	...	11,084
Biscuits	...	...	...	14
*Sugar	...	...	...	219
Sweets	...	...	...	24
Sauce and Pickles...	...	...	...	11
Fish Cakes	...	...	...	178
Pikelets	...	...	...	182
Puddings	...	...	...	65
Preserves	...	...	...	289
Prunes	...	...	...	90
*Dates	...	...	...	1,590
*Raisins	...	...	...	548
*Margarine	...	...	...	103
*Butter	...	...	...	292
*Cheese	...	...	...	209
Tea	...	...	...	32
Flour	...	...	...	12
Beverage	...	...	...	28
*Dried Milk	...	...	...	17,850
Cake Mixture	...	...	...	37
Sausages	...	...	...	48
Lard	...	...	...	11
Cereals	...	...	...	227
Patent Medicines	...	...	...	45
Total Weight ...				191,295

The greater part of items marked * were left at the disposal of the Ministry of Food (Salvage Division).

Shell Fish.

Supplies of shell fish coming into the Borough received attention in an endeavour to ensure that they had first been subjected to treatment in purification tanks before being offered for sale. Certain known suspect sources were excluded.

Date	Description	Amount	Total	Balance
1890	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1891	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1892	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1893	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1894	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1895	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1896	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1897	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1898	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1899	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			
1900	Jan 1			
	Feb 1			
	Mar 1			
	Apr 1			
	May 1			
	Jun 1			
	Jul 1			
	Aug 1			
	Sep 1			
	Oct 1			
	Nov 1			
	Dec 1			

SECTION 13



Sanitary Circumstances

Housing

**Milk Production and
Distribution**

Food Sampling

Factories

Smoke Abatement

Atmospheric Pollution

Sanitary Circumstances

AND

Sanitary Inspection of the Area

I am indebted to Mr. J. W. Beaumont, Chief Sanitary Inspector for the following report :—

Inspection and Visits.

Dwellinghouses :—

Primary Inspections under the Housing Acts	5
Subsequent inspections under the Housing Acts.....	24
Visits re works in progress under the Housing Acts	8
Visits re removals and disinfestations	551
Visits re overcrowding	20
Re sanitary defects (complaints etc.)	1105
Re notifiable disease	299
Re dirty and/or verminous premises	153
Common Lodging Houses	7
Houses-Let-in-Lodgings	22

Drainage :—

Special drainage inspections	765
Special drainage tests	246

Factories, etc.:—

Factories with mechanical power	128
Factories without mechanical power	4
Workplaces (general)	9
Workplaces (offices)	3
Outworkers' premises	2

Shops :—

Inspections, etc., under Shops Act, 1934. Section 10	15
Other visits under Shops Acts	2

Food Inspection :—

Cowsheds	335
Dairies and Milkshops	210
Ice Cream premises	177
Fried Fish Shops	111
Bakehouses	113
Restaurant Kitchens	12
Other food premises	59

Smoke Abatement :—

Smoke observations	57
Visits to works	35

Sampling :—

Food and Drugs Act, 1938	350
Bacteriological samples	109
Water	7
Fertilisers and Feeding Stuffs	9

General :—

Fertilisers and Feeding Stuffs premises	10
Rat infested premises	495
Stables re nuisances	10
Swine, fowls and other animals	21
Schools, Theatres, Cinemas, etc.	26
Public Sanitary Conveniences	94
Civilian Billets and Requisitioned Houses	40
Pharmacy and Poisons Act	73
Sewer inspections	44
Visits with Rodent Officer	18
Building Licences	3486
Visits re para-typhoid B outbreak	367
Visits re flooding	20
Visits re smallpox contacts	168
Miscellaneous visits	1754
Total number of inspections and visits	11578
Total number of Re-inspections	4717

Sanitary Improvements Effected.**Dwellinghouses :—**

	Informal Action
General repairs	584
Dirty houses cleansed	19
Council houses found bug infested and disinfested	12
Other houses found bug infested and disinfested	26
Houses cleared of other vermin	104
Houses-let-in-lodgings. (Nuisances abated, etc.)	17
Common Lodging Houses. (Nuisances abated, etc.)	4

Drainage :—

Drains cleansed and/or repaired	207
Drains reconstructed or new drains provided	33

Factories :—

Mechanical. (Nuisances abated, etc.)	7
--	---

Workplaces :—

General	1
Offices	1

Shops :—

Nuisances abated etc., under Section 10	1
---	---

General :—

Premises cleared of rats	100
Cowsheds—improvements effected	3
Dairies and Milkshops—improvements effected, etc.	2
Fried Fish Shops—improvements effected, etc.	8
Bakehouses—improvements effected, etc.....	5
Boiler Plants improved	5
Stables—nuisances abated, etc.	1
Swine, fowls, etc., nuisances abated, etc.	4
Theatres, Cinemas, etc., improved.....	1
Public Sanitary Conveniences improved	15
Sewers cleansed and/or repaired	20
Town's water provided	3
Miscellaneous improvements effected	37

Prosecutions during 1946.

Date of Hearing	Act	Offence	Penalty
29/1/46	Housing Act, 1936. Section 6.	Failure to supply information required, after service of formal notice.	Defendant fined £3.
13/2/46	Housing Act, 1936. Section 6.	Refusing to afford access to an officer of the Corporation.	Defendant fined 10/-.
4/6/46	Food & Drugs Act, 1938. Section 3.	Selling milk deficient in fatty solids.	Two defendants each fined £2 and 2/6 costs.
12/7/46	Food & Drugs Act, 1938. Section 3.	Selling milk deficient in fatty solids.	Defendant fined £2.
17/12/46	Food & Drugs Act, 1938. Section 3.	Selling milk deficient in fatty solids.	Defendant fined £5.

Factories.

H.M. Inspector of Factories sent 10 notices under Section 9 of the Factories Act, 1937, all of which referred to Factories with mechanical power. In addition there were 14 complaints brought forward from 1945.

Complaints dealt with during the year numbered 6, all of which referred to Factories with mechanical power. There were 18 outstanding complaints at the end of the year.

There were 3 outworkers on the register at the end of the year.

Table 1.

Premises	No. on Register	Number of		
		Inspections	Written Notices	Occupiers Prosecuted
(i) Factories in which Sects. 1, 2, 3, 4 & 6 are to be enforced by Local Authorities	—	4	—	—
(ii) Factories not included in (i) to which Section 7 applies				
(a) Subject to the Local Authorities (Transfer of Enforcement Order, 1938*	Nil	Nil	Nil	—
(b) Others	—	128	10	—
(iii) Other premises under the Act ‡ (excluding outworkers' premises	—	13	—	—
Total	—	145	10	—

* S.R. & O. 1938. No. 488.

‡ Works of Building and Engineering Construction, Electrical Stations should be reckoned as factories.

Table 2.
Cases in which defects were found.

Particulars	Number of cases in which defects were found				No. of cases in which prosecutions were instituted
	Found	Remedied	Referred		
			To H.M. Inspector	By H.M. Inspector	
Want of Cleanliness (S.1)	—	—	—	—	—
Overcrowding (S.2)	—	—	—	—	—
Unreasonable temperature (S.3)	—	—	—	—	—
Inadequate Ventilation (S.4)	—	—	—	—	—
Ineffective drainage of floors (S.6)	—	—	—	—	—
Sanitary Conveniences (S.7)	—	—	—	—	—
(a) Insufficient	2	1	—	2	—
(b) Unsuitable or defective	12	11	—	12	—
(c) Not separate for sexes	1	—	—	1	—
Other offences (not including offences relating to homework)	—	—	—	—	—
Total	15	12	—	15	—

Bakehouses.

The number of bakehouses on the register at the end of the year was 83.

There were 113 inspections made and the premises were generally found to be satisfactory.

Smoke Abatement.

The number of smoke observations taken during the year numbered 57, details of which are given in the following table.

Visits to works in connection with smoke emission numbered 35 and the average emission of black smoke was 1 minute per observation or 2 minutes per hour.

Chimney	No. of observations (30 minutes each)	Average minutes black smoke per observation
Billinghay Mills	1	Nil
Bowling Dyke Dye Works	4	1.5
Bowling Dyke Mills	4	1
Brunswick Mills	1	Nil
Central Laundry	1	Nil
Crosslands Timber Yard	1	Nil
Dean Clough Mills (Stone)	3	1
Dean Clough Mills (Brick)	3	1
Dunkirk Mills	1	Nil
Electricity Works (South)	2	Nil
Electricity Works (North)	2	Nil
Globe Mills	2	2
Halifax Steam Laundry	1	Nil
Keighley Mills	1	Nil
Kingston Biscuit Works	1	Nil
Kingston Toffee Works	1	Nil
Lee Bank Mills	1	Nil
Lewis Street Mills	3	0.166
Ovenden Wood Brewery	1	1
Pellon Lane Mills	2	0.875
Perseverance Mills	4	Nil
Pioneer Iron Works	2	Nil
Prescott Works	1	Nil
Royal Mills	2	15.666
Stone Trough Brewery	1	3.5
South Parade Cabinet Works	2	Nil
Sun Works	1	Nil
The Brewery	4	Nil
Victoria Mills	1	Nil
West Croft Mills	1	Nil
West Grove Mills	2	Nil
Total	57	1.02

Housing

Housing Statistics.

1. Inspection of Dwellinghouses during the year :—
 - (1) (a) Total number of dwellinghouses inspected for housing defects (under Public Health or Housing Acts) 1506
 - (b) Number of inspections made for the purpose 3114
 - (2) (a) Number of dwellinghouses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 and 1932 5
 - (b) Number of inspections made for the purpose 5
 - (3) Number of dwellinghouses found to be in a state so dangerous or injurious to health as to be unfit for human habitation 4
 - (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 1
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 934
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 1
 - (2) Number of dwellinghouses which were rendered fit after service of formal notices :—
 - (a) By owners Nil
 - (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 21
 - (2) Number of dwellinghouses in which defects were remedied after service of formal notices :—
 - (a) By owners 7
 - (b) By Local Authority in default of owners 15

(c) Proceedings under Section 11 and 13 of the Housing Act, 1936 :—		
(1)	Number of dwellinghouses in respect of which Demolition Orders were made	4
(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 made fit	Nil
4. Housing Act, 1936 (Part IV)—Overcrowding.		
(a)	(1) Number of dwellings overcrowded at the end of the year	1057
	(2) Number of families dwelling therein	1057
	(3) Number of " persons " dwelling therein	3820
(b)	Number of new cases of overcrowding reported during the year	Nil
(c)	(1) Number of cases of overcrowding relieved during the year	5
	(2) Number of " persons " concerned in such cases	20
(d)	Particulars of any cases in which dwellinghouses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding	Nil
(e)	Any other particulars with respect to overcrowding conditions upon which the Medical Officer of Health may consider it desirable to report	Nil

Eradication of Bed-Bugs.

(1)	(a)	(1) Number of Council Houses found infested	2
		(2) Number of Council houses disinfested	10
	(b)	(1) Number of other houses found infested	26
		(2) Number of other houses disinfested	26
(c)	Number of houses where furniture was disinfested with HCN gas at Charlestown		25

Closing and Demolition Orders : Housing Act, 1936.

Continuing the information given in previous reports the following table shows the position on the 31st December 1946.

Ref. No.	Situation	Date of Report	Date of Closing Order	Date of Demolition Order	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
98	Caravans, Nos. 1, 2, 3, 4, 5, 6, Brackenbed Lane.	25/1/40	—	27/2/40	Demolished by owner 3/7/40.
99	Bank Cottage, Stocks Lane, Highroad Well	22/2/40	—	—	Undertaking not to use for human habitation accepted 23/5/40.
100	4, Waterside	21/3/40	—	—	Undertaking not to use for human habitation accepted 18/4/40.
101	25, Bottoms, Siddal	21/11/40	—	—	Undertaking not to use for human habitation accepted 20/3/41.
102	6, 7, 8, 9, 10, 11, 12, Back Shaw Lane	21/11/40	—	—	Undertaking to make houses fit for habitation accepted 24/4/41 (See Ref. No. 111).
103	1, Peel Street	19/2/42	26/3/42	—	Now used as a wash-kitchen.
104	28a Fitzwilliam St.	17/12/42	27/1/43	—	Now used as a wash-kitchen.
105	9, Gibbet Street	17/12/42	27/1/43	—	Closed.
106	5, Gleanings	16/12/43	1/2/44	—	Closed.
107	62, Lower Skircoat Green	16/12/43	—	1/3/44	Demolished 9/5/47.
108	15, Rose Grove, Siddal	20/1/44	—	1/3/44	Demolished 14/3/45.
109	75, 77, 83, 85, 196, 198, 202, 204, Beacon Hall Road	25/1/45	—	5/4/45	Notice to quit served on occupiers 12/7/45. Houses still occupied.
110	2, Morton's Place, Siddal	22/3/45	—	2/5/45	House demolished by owner 2/10/45.
111	6, 7, 8, 9, 10, 11, 12, Back Shaw Lane	24/5/45	6/7/45	—	All houses empty excepting No. 11.

Closing and Demolition Orders—Continued.

Ref. No.	Situation	Date of Report	Date of Closing Order	Date of Demolition Order	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
112	1, Gaol Lane	20/9/45	6/12/45	—	Undertaking not to use for human habitation accepted.
113	8/9, Dam Head, Shibden	11/10/45	—	—	Undertaking to make fit accepted 11/12/46. Work completed 3/9/46.
114	46, Haigh Street	20/12/45	10/5/47	—	Undertaking not to use for human habitation accepted.
115	65, 67, 69 Crossley Hill	19/12/46	—	29/1/47	Notices to quit served on occupiers. Houses still occupied.
116	Lower Hagstocks Farm	19/12/46	—	29/1/47	House vacated. Demolition not yet commenced.

To complete observations made in previous annual reports, the following information is given :—

No. 81.—Undertaking to make premises fit for occupation accepted.
Works completed 31/8/39.

No. 86.—Undertaking to make premises fit for occupation accepted
Works completed 1/3/40.

No. 87.—Houses demolished by owner 15/4/42.

No. 89.—Demolished by owner 11/10/40.

No. 90.—House demolished by owner 5/10/42.

No. 92.—Demolished by owner 18/11/41.

Common Lodging Houses.

There are only 2 Common Lodging Houses in the Borough and 7 inspections of the same have been made during the year. They were found to be in a satisfactory condition.

Houses-let-in-Lodgings.

At the end of the year there were 38 Houses-let-in-Lodgings providing accommodation for 188 families. There were 22 inspections made during the year and conditions were fairly satisfactory. In 17 cases nuisances were abated or improvements effected.

Theatres, Cinemas, etc.

During the year 26 inspections were made of premises for which stage play licences were necessary and improvements were carried out in 3 cases.

Inspection & Supervision of Food

Milk Supply.

There are 149 producers of milk with premises situated within the Borough.

Of these there are 2 holding licence to produce Tuberculin tested milk and 21 with the requisite licence to produce accredited milk.

During the year 335 inspections of cowsheds were made and improvements were effected in 3 cases.

There are 161 registered retailers of milk with premises within the Borough and 85 with premises outside our area. The number of registered dairy premises is 139.

In addition to the above there are 287 registered retailers of milk in sealed bottles only.

During the year there were 210 inspections of dairies and milkshops.

Bacteriological Examination of Milk.

During the year 109 samples were examined. Of these 15 were ungraded milk, 11 were T.T. 53 pasteurised and 30 farm samples of accredited and T.T. milk.

Of the ungraded milks 9 were produced within the Borough and 6 were produced outside.

The Resazurin test was applied in the case of locally produced milk and none failed to pass this test. In the case of milk produced outside the Borough, 2 failed.

Of the 11 samples of T.T. milk, 1 failed to pass the test whilst of the 62 samples of pasteurised milk, 10 failed to pass the tests.

Of the 30 farm samples of Accredited and T.T. milk—this milk is not retailed as such—4 or 13.33 per cent failed to pass the tests applied.

Food and Drugs Act, 1938.

A total of 350 samples of Foods and Drugs was obtained during the year and submitted to the Public Analyst.

These included 196 samples of milk and 154 samples of foods and drugs.

Samples of milk not genuine according to the sale of milk regulations numbered 4 giving a percentage of 2.

Of the 154 samples of other foods and drugs 3 or 1.95 per cent were reported not genuine.

Full details of all samples taken will be found in the following table :—

TABLE 1.

Nature of Sample	No. of Samples taken			No. not genuine		
	Formal	Informal	Total	Formal	Informal	Total
Milk	189	7	196	4	—	4
“ All-Fours ” chest mixture	—	1	1	—	—	—
Beef	—	1	1	—	—	—
British Wine—Port Type	1	—	1	—	—	—
Bronchial Cream	—	1	1	—	—	—
Bronchial Mixture	—	3	3	—	—	—
Butter	4	—	4	—	—	—
Cereal Flakes	—	4	4	—	—	—
Coffee	—	11	11	—	—	—
Cooking Fat	1	—	1	—	—	—
Cordial	10	—	10	1	—	1
Fish—tinned	—	5	5	—	—	—
Fruit Cup	1	—	1	—	—	—
Gin	1	—	1	—	—	—
Glycerine	—	1	1	—	—	—
Glycerine, Ipecac, Lemon Balsam	—	1	1	—	—	—
Ice Cream	—	16	16	—	—	—
Indian Bandy	—	1	1	—	—	—
Indian Bark	—	1	1	—	—	—
Jam	6	—	6	1	—	1
Jelly Sets	—	1	1	—	—	—
“ Kilkof ”	—	1	1	—	—	—
Liquid Paraffin	—	1	1	—	—	—
Margarine	3	—	3	—	—	—
Meat Paste	—	3	3	—	—	—
Meat Pies	—	7	7	—	—	—
Meat—tinned	—	3	3	—	—	—
Mince-meat	6	—	6	1	—	1
Mineral Waters	—	5	5	—	—	—
Old Algerian Wine	1	—	1	—	—	—
Orange Juice	—	1	1	—	—	—
Peppermint Solution	—	1	1	—	—	—
Peas—tinned	—	8	8	—	—	—
Pearl Barley	—	4	4	—	—	—
Petroleum Emulsion	—	1	1	—	—	—
Potatoes dehydrated	—	3	3	—	—	—
Raspberry Vinegar	—	1	1	—	—	—
Rum	1	—	1	—	—	—
“ Rumange ” (Wine)	1	—	1	—	—	—
Sauce	—	6	6	—	—	—
Sausage	5	—	5	—	—	—
Sausage Rolls	—	1	1	—	—	—
Saccharin Tablets	—	3	3	—	—	—
Soup	—	6	6	—	—	—
Syrup of Figs	—	1	1	—	—	—
“ Venos ” Cough Cure	—	1	1	—	—	—
Vinegar	4	1	5	—	—	—
Yeast	—	3	3	—	—	—
“ Zubes ” Cough Cure	—	1	1	—	—	—
Total	234	116	350	7	—	7

TABLE 2.

Administrative Action taken in respect of Samples reported by the Public Analyst to be Not Genuine or otherwise irregular.

No. of Sample	Nature of Sample and Result of Analysis, etc.	Administrative Action taken
1	Orange Flavour Cordial—excess of 40 ppm of Benzoic Acid.	Warning letter from Chief Sanitary Inspector to manufacturer.
77	Milk—1.7% added water	Sample from retailer, followed by "in course of delivery" samples* from producer to retailer, which were genuine. No action taken.
113	Milk—9.3% deficient in fat.	Sample from producer-retailer. "Appeal to Cow" samples were obtained by the Sampling Officer of the West Riding County Council and these were reported upon as satisfactory. Prosecution in Borough Police Court on 4th June, 1946, when the two defendants were each fined £2, with 2/6 costs.
166	Milk—17.3% deficient in fat.	Sample from retailer, followed by "in course of delivery" sample from wholesaler to retailer, which was genuine. Prosecution against retailer in Borough Police Court on 12th July, 1946, when defendant was fined £2.
235	Milk—21.0% deficient in fat.	Sample from retailer, followed by "in course of delivery" samples, which were satisfactory. Prosecution against retailer in Borough Police Court on 17th December, 1946, when the defendant was fined £5
254	Jam—containing artificial colouring matter.	Warning letters sent by Chief Sanitary Inspector to manufacturer and retailer.
329	Mincemeat—deficient in soluble solids.	Warning letters sent by Chief Sanitary Inspector to manufacturer and retailer.

TABLE 3.
Monthly Average Composition of Milk Samples.

Month	No. of Sample	Analytical Data	
		Milk Fat per cent.	Non-fatty solids per cent.
January	14	3.9	8.86
February	15	3.8	8.91
March	34	3.78	8.77
April	9	3.93	8.73
May	31	3.80	8.93
June	8	3.46	8.77
July	22	3.80	8.90
August	—	—	—
September	9	3.85	8.93
October	46	4.08	8.86
November	—	—	—
December	8	3.65	8.83
Total	196		
Average for year 1946		3.84	8.86
" " " 1945		3.79	8.85
" " " 1944		3.78	8.87
" " " 1943		3.83	8.83
" " " 1942		3.81	8.78
" " " 1941		3.73	8.78
" " " 1940		3.79	8.95
" " " 1939		3.74	8.95
" " " 1938		3.67	9.0
" " " 1937		3.77	9.07
" " " 1936		3.77	9.09

TABLE 4.

Articles of Food examined for Preservatives in accordance with the Public Health (Preservatives, etc., in Food) Regulations, 1925/6/7.

Food (1)	No. of samples examined (2)	Nature of Preservative (3)	Amount		Remarks (6)
			Allowed (4)	Found (5)	
Milk	196	Nil	Nil	Nil	
Butter	4	Nil	Nil	Nil	
Coffee Essence	5	Sulphur Dioxide or Benzoic Acid	Nil	3-Nil	} Satisfactory
				Nil	
			450 ppm.	1-Nil 220 ppm.	
				1-Nil 240 ppm.	} Satisfactory
Cordials : Orange	1	Sulphur Dioxide or Benzoic Acid	350 ppm.	1-Nil 640 ppm.	
Lime Juice	1		600 ppm.	1-Nil 120 ppm.	} Satisfactory
Peppermint	2			1-204 ppm. Nil	
				1-307 ppm. Nil	} Satisfactory
Fish :					
Herrings (tinned)	1	Boric Acid	Nil	6-Nil	Satisfactory
Salmon (tinned)	2	"			
Sardines (tinned)	2	"			
Spread	1	"			
Fruit Drinks :					
Fruit Cup	1	Sulphur Dioxide or Benzoic Acid	350 ppm.	1-320 ppm.	} Satisfactory
Grapefruit				Nil	
Squash	1			1-330 ppm.	
Lemon Squash	1	Benzoic Acid	600 ppm.	Nil	} Satisfactory
Orange Squash	2			1-333 ppm.	
Orange Juice (Concentrated)				Nil	
				1-345 ppm.	} Satisfactory
				Nil	
				1-346 ppm.	} Satisfactory
				Nil	
				1-280 ppm.	} Satisfactory
				Nil	
Ice Cream	16	Boric Acid	Nil	Nil	
Jams :					
Apple and Blackcurrant	1	Sulphur Dioxide	100 ppm.	4-Nil	} Satisfactory
Blackcurrant	1			1-18 ppm.	
Gooseberry	1			1-20 ppm.	
Red Plum	1	"			
Strawberry and Gooseberry	2	"			

TABLE 4.—Continued.

Food (1)	No. of samples examined (2)	Nature of Preservation (3)	Amount		Remarks (6)
			Allowed (4)	Found (5)	
Margarine	3	Boric Acid	0.25%	Nil	
Meat :					
Paste	2	Boric Acid	Nil	2-Nil	
Pie	7	Boric Acid	Nil	7-Nil	
		or		Nil	
Stewed Steak	2	Sulphur Dioxide	Nil	2-Nil	
		Sulphur Dioxide			
Mincemeat	8	Sulphur Dioxide	350 ppm.	8-Nil	Satisfactory
Mineral Waters	5	Sulphur Dioxide	70 ppm.	5-Nil	} Satisfactory
		or		Nil	
		Benzoic Acid	120 ppm.		
Sauce	6	Sulphur Dioxide	Nil	6-Nil	} Satisfactory
		or		Nil	
		Benzoic Acid	250 ppm.		
Sausage	6	Sulphur Dioxide	450 ppm.	5-Nil	} Satisfactory
		or		Nil	
		Boric Acid	Nil	1-260 Nil	} Satisfactory
Soups :					
Meat	4	Sulphur Dioxide	Nil	8-Nil	
Meat & Vegetable	2	Dioxide		Nil	
Pea	1	or			
Vegetable	1	Boric Acid	Nil		
Vegetables :					
Peas (tinned)	8	Sulphur Dioxide	Nil	8-Nil	
Potatoes (dehydrated)	3	„	500 ppm.	1-50 ppm. 1-99 ppm. 1-189 ppm.	} Satisfactory
Wines :					
Algerian Old	1	Sulphur Dioxide	450 ppm.	3-Nil	} Satisfactory
British Port Type	1	Dioxide		Nil	
Ginger	2	or		1-65 ppm.	} Satisfactory
“ Rumange ”	1	Benzoic Acid	Nil	Nil	
				1-145 ppm. Nil	} Satisfactory

Manufacture and/or Sale of Ice Cream.

During the year 177 inspections have been made of 44 registered premises :—

Manufacturer vendors	.....	10
Vendors only	.....	34

A total of 73 samples were submitted to bacteriological examination, of which 26 were produced within the Borough and 47 were manufactured outside.

Only 48 of these complied with the local presumptive standard of not more than 100,000 bacteria per c.c. and no coliform bacilli in 1/100 c.c.

Of these 48 samples, 17 were of locally produced ice cream and 31 of ice cream produced elsewhere.

Note : In future, action will be taken along the lines indicated in Circular 69/47, respecting the Ice Cream (Heat Treatment etc.) Regulations, 1947.

Fried Fish Shops.

During the year 111 inspections were made of 140 registered premises. In 8 cases it was necessary to effect improvement.

General

Fertilisers and Feeding Stuffs Act, 1926.

Of 9 samples obtained during the year, 6 were of fertilisers and 3 of feeding stuffs.

The following were reported as unsatisfactory.

Case No. 1. An informal sample of "Sangral" Fertilizer was stated by the Agricultural Analyst to contain only 11.4 per cent. of Nitrogen, whereas the label declared a content of 13.27 per cent. This variation is outside the limit of variation (0.75 per cent.) allowed on a compound fertiliser.

A further and formal sample was taken which was stated to be satisfactory by the Analyst.

Case No. 2. An informal sample of Feeding Meat and Bone Meal was stated by the Agricultural Analyst to have a deficiency of oil outside the permitted limits of variation.

Case No. 3. An informal sample of Dried Blood was stated by the Agricultural Analyst to have a deficiency of nitrogen outside the limits of variation allowed.

As Cases Nos. 2 and 3 concerned a Corporation department, the matter was dealt with informally.

Rag Flocks Acts, 1911 and 1928.

There are no manufacturers of rag flock with premises within the Borough, and very few dealers in same.

No visits were paid to premises and no samples were taken during the year.

Pharmacy and Poisons Act, 1933 ; Pharmacy and Medicines Act, 1941.

At the end of 1946 there were 160 registered sellers of Part II poisons, occupying 217 registered premises.

There were 73 inspections of these premises during the year.

No samples were taken.

TABLE 2.
SULPHUR POLLUTION.—1946.
Lead Peroxide Method.

Station	Milligrams of SO ₃ per 100 square centimetres—Daily Average.												Total Daily Average
	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	
WADE STREET (Central)	5.09	3.64	4.48	2.74	4.66	1.61	1.48	1.69	1.94	4.75	4.03	5.29	3.45
WEST VIEW PARK (1½ miles West)	3.80	1.74	3.59	1.98	2.52	1.21	1.09	1.25	1.65	2.95	2.67	3.73	2.35
Total Daily Average	4.44	2.19	4.03	2.36	3.59	1.41	1.28	1.47	1.79	3.85	3.35	4.51	2.90

TABLE 3.
MEASUREMENT OF DAYLIGHT.—1946.
Potassium Iodide Method.

Station	Milligrams of iodine liberated—Daily Average												Total Daily Average
	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	
WADE STREET (Central)	2.35	3.79	5.56	7.33	8.01	9.23	9.35	7.83	4.48	1.34	0.65	0.42	5.03
WEST VIEW PARK (1½ miles West)	4.09	5.31	7.05	8.21	9.85	10.72	10.18	8.85	6.55	3.84	1.95	0.95	6.46
Total Daily Average	3.22	4.55	6.30	7.77	8.93	9.97	9.76	8.34	5.51	2.59	1.30	0.68	5.74

SECTION 14



Miscellaneous

Miscellaneous

WATER SUPPLY.

I am indebted to Mr. H. F. Lea, Waterworks Engineer and Manager, for the following report :—

During 1946 the usual care has been taken to ensure that the supply of water has been of the highest quality. The improved filtration processes have been adopted at all three Filter Stations with the best possible results. Daily routine analysis of both crude and treated water have been taken throughout the year and in addition independent samples, taken from various points in the area of supply, have been submitted to the Public Analyst and in no case has the treated water been of a lower standard than Class 1 of the Ministry of Health Specification for Water Supplies. Copies of the Analyses made by the Public Analyst are forwarded to the Medical Officer of Health.

As 1946 was the first year after the termination of the war a gradual return to peace-time operation was evident. The policy of re-conditioning old water mains proceeded and several miles were thoroughly scraped and re-coated with bitumen. In addition, new mains have been laid on Housing Estates.

Work was commenced on the erection of a new Pumping Station at Thrum Hall, to replace the old existing Station at Albert Reservoir. This should be completed during 1947 and will provide the supply to the high lying parts of the town by means of pumping machinery of the most up-to-date pattern.

Work on raising the Lower Walshaw Dean Dam was carried out during the year, including the raising of the puddle core to the required height above top water level.

CLEANSING.

I am indebted to Mr. A. J. Burrell, Director of Public Cleansing for the following notes :—

Refuse Collection.

This service has operated regularly throughout the year and has included a separate collection of kitchen waste and waste paper. The total refuse dealt with by the department was 26,215 tons.

Salvage.

The salvage of waste materials has again played a prominent part in the department's activities, and the income from the sale of these materials amounts to £17,153.

Appendix

Report on an Outbreak of Paratyphoid B Fever, 1946.

REPORT ON AN OUTBREAK OF PARATYPHOID B FEVER (Phage Type 1) IN HALIFAX AND DISTRICT.

An outbreak of Paratyphoid Fever (Phage Type 1) occurred in Halifax, Queensbury, Sowerby Bridge, Midgley, Hebden Bridge, Ripponden and Brighouse in August 1946. The statistics in this report refer to Halifax cases and do not include cases which after admission to Hospital proved not to be true cases. All cases and query cases were immediately admitted to Isolation Hospital.

Clinical Type of the Disease.

The majority of cases treated in the Halifax Isolation Hospital were of a mild type. Diarrhoea was a feature in 60 per cent. of the cases. Spleens were palpable in 10 per cent. of cases. Rose spots developed in 15 per cent of cases. Pyrexia was of an intermittent type. In one case meningism was present. From the point of view of public health administration, one of the difficulties connected with combating the outbreak was the prevalence of mild cases. I am of the opinion that some cases were so mild that a doctor was never consulted and they escaped detection.

Importance of Bulk Food Supplies.

The increasing use of bulk supplies of milk, cream and bakery products and the greater use of food without further cooking is an important factor in outbreaks of paratyphoid fever. Also a far higher proportion of cases of paratyphoid than of typhoid escape detection and notification. They are either too mild to require medical attention at all or are anomalous clinically.

Chronic Carriers.

In all probability hundreds of chronic carriers—many of the intermittent type—exist in the country as a legacy from previous outbreaks. The sporadic case which escapes early recognition is a source of outbreaks.

Mode of Conveyance of Infection.

Inquiry regarding the possible source or sources of infection involved consideration of the general sanitary circumstances, the sewerage and drainage, the water supplies and the milk and food supplies of the Borough. Special inquiries were made in respect of—

1. Ice cream (consumed by 60 per cent. of cases).
2. Bread (consumed by all cases but from different sources).
3. Cakes and pastries.
4. Soft drinks.
5. Salads.
6. Shellfish.
7. Watercress.
8. Cooked meat and/or hams.
9. Butter, margarine and cheese.

10. Corn beef (consumed by 60 per cent. of cases).
11. Fruit.
12. Sweets (consumed by approx. 50 per cent. of cases).
13. Minced meat foods.
14. Sausages (consumed by 20 per cent. of cases).
15. Dates and Raisins (consumed by 10 per cent. of cases).

Over 150 bacteriological tests were carried out in connection with foods, but with negative results. The difficulty about such tests is that one can never be sure that the conditions are the same as the conditions which actually prevailed at the time of infection. There were grounds for believing that the infecting agent was something consumed in the home, and that it came from a bulk supply, but it was impossible to pin down a food or drink factor common to all cases. Also 195 persons who handled foodstuffs were examined for the carrier state. Five carriers were found and excluded from handling food.

Water Supply.

With one exception, all the Halifax cases obtained their water supply from the Halifax County Borough Waterworks. Satisfactory reports have been received as the result of frequent bacteriological examinations of the Halifax water. The Halifax water is filtered and chlorinated. The employees of the Halifax Waterworks (who handle water) are bacteriologically examined for the enteric fevers (and carrier states) and only negative reactors are allowed to handle water. When new water mains are laid or old mains repaired, the whole system of pipes under operation are thoroughly flushed out with chlorine. The Queensbury cases (first cases notified) received their water from the Bradford Corporation. The one exception mentioned above, obtained water from a private supply. This supply was submitted to bacteriological examination and proved satisfactory.

Excrement Removal, Sewage and Refuse Disposal.

In respect of all Halifax cases, the water carriage system is the method by which excreta are disposed of. All house refuse is deposited in dustbins, the contents of which are removed periodically and disposed of by burning in a destructor.

Circumstances Associated with the Outbreak.

The first cases were admitted from Queensbury to the Halifax Isolation Hospital on the 5th and 10th August. The disease was bacteriologically confirmed as Para. B phage type 1. Owing to the inadequacy of the nursing staff at the Isolation Hospital, cases were sent to Isolation Hospitals at Bradford, Huddersfield, Brighouse, Menstone and Wakefield. This procedure added to the cost of the outbreak, but in the circumstances was inevitable.

Brief Resume of Major Action Taken.

- 1 All cases, or suspicious cases, admitted at once to the Isolation Hospital.
- 2 Widal's done in all cases.
- 3 All doctors and Hospitals notified re outbreak.
- 4 Ministry of Health, Leeds, informed. Several conferences took place.
- 5 Samples of suspected food stuffs sent for bacteriological examination.
- 6 Specimens of excreta from all handlers of suspected food stuffs sent for bacteriological examination.
- 7 Inquiries at each house where a case occurred, re ice cream, shell-fish, milk, water, cream cakes, etc.
- 8 All non-pasteurised milks connected with cases sent for bacteriological examination.
- 9 Special advice given to every household concerned re washing of hands after toilet, and the boiling of household utensils.
- 10 Bedding and clothing disinfected at Isolation Hospital.
- 11 One private water supply connected with one case examined and found negative for Para. B.
- 12 Conference of all doctors concerned on 19th August; Col. Bates, Ministry of Health, present. Periodical conferences followed until the outbreak abated.
- 13 Cases were flagged on a special map. This map showed a concentration of cases in the Ovenden area.
- 14 Daily onset, notification and age and sex distribution charts were kept.
- 15 A chart showing the number of houses invaded (and cases per house) was kept.

Statistical Data in respect of Halifax Cases.

Table A.

Previous Incidence of the Enteric Fevers in Halifax.

Year	Number of Cases of Typhoid and/or Paratyphoid
1926	3
1927	5
1928	8
1929	73 (last outbreak of Para. B.)
1930	9 (Para. B.)
1931	4
1932	1 (Typhoid)
1936	3 (Para. B.)
1937	1 (Typhoid)
1940	3 (Para. B.)
1942	1 (Typhoid)

Table B.

**Weekly Notifications, Corrected for True Cases,
Present Outbreak.**

Week ending			
10th August	...	...	2
17th August	...	...	25
24th August	...	...	13
31st August	...	...	8
7th September	...	...	14
14th September	...	...	7
26th October	...	...	1
Total			70

Table C.

Age and Sex Distribution.

Age	0-2	3-5	6-10	11-20	21-30	31-40	41-50	51	Total
M	5	4	8	5	2	2	1	2	29
F	7	8	4	11	6	2	1	2	41
Total	12	12	12	16	8	4	2	4	70

Table D.

Foodstuff and Cases.

Type of Food	Percentage consumed by cases
Ice Cream	65
Corn Beef	60
Meat Pies	38
Cooked Meats	
Potted Meats	
Groceries from Co-op. Societies	38
Shellfish	4

Bread.

Source of Supply.	Percentage consumed by Cases.
A.	20
B.	16
C.	14
D.	14

Table E.

(1)	Number of Persons examined for "carrier" state	...	195
	Ice cream employees	...	56
	Hotel employees	...	9
	Bakery employees (a) Economic	...	66
	(b) Scribbans-Kemp	...	59
	Further check on "carriers" found to have positive faeces specimens	...	5
(2)	Number of Foodstuffs examined :		
	Ice Cream	...	20
	Water (Dr. Phelon)	...	6
	Water (Borough Analyst)	...	5
	Bread	...	4
(3)	Number of visits paid by Inspectors in connection with the outbreak :		
	(a) To homes of people	...	253
	(b) To shops	...	138
	(c) To Hotels	...	8
	(d) Pathological Laboratory	...	38
	(e) Other visits	...	52

General Notes.

- (1) In the early stages of the outbreak our energies were devoted to looking for a food factor common to all cases. This entailed an elaborate system of visits and inspections.
- (2) Later, the line we pursued was not to seek a common aliment, but a common handler of many aliments.
- (3) We postulated that a shedder of the casual organisms was handling an unwrapped food which required no subsequent cooking.
- (4) We carried out a systematic inquiry into the channels through which the patients got their foods, particularly food eaten uncooked or ready cooked.

The outbreak emphasises the importance of a clean food supply and the danger of typhoid and paratyphoid "carriers" handling food for human consumption. "Carriers" are usually the victims of circumstance; they do not know that they are "carriers" and no blame attaches to them. I would like to thank all the manufacturers, distributors and handlers of the foods investigated for their willing co-operation in our endeavour to abate the outbreak.

The infecting strain belonged to Vi-Phage Type 1. I wish to thank Dr. A. Felix, F.R.S. whose assistance in examining sera, food-stuffs and typing cultures was invaluable.

I desire to thank the following for their co-operation, advice and help in a very anxious, complex, responsible and prolonged matter :

Col. Bates of the Ministry of Health, Leeds.

Dr. E. T. Conybeare of the Ministry of Health, Whitehall.

Dr. J. R. Hutchinson of the Ministry of Health, Whitehall.

Dr. F. J. Dowdall, M.O.H., Hebden Bridge.
 Mr. W. L. Kay, Sanitary Inspector, Hebden Bridge.
 Dr. J. Murphy, M.O.H., Queensbury and Shelf.
 Mr. W. E. Shelley, Sanitary Inspector, Queensbury and Shelf.
 Dr. A. O. Jollie, M.O.H., Sowerby Bridge.
 Mr. W. E. Foster, Sanitary Inspector, Sowerby Bridge.
 Dr. J. B. McKinney, Acting M.O.H., Brighouse.
 Dr. C. F. Brockington, M.O.H., W.R.C.C.
 Dr. J. Wood Wilson, Deputy M.O.H., W.R.C.C.
 Dr. S. Carter, R.M.O., Isolation Hospital.
 Dr. H. V. Phelon (and his staff), Bacteriologist.
 Mr. H. F. Lea, Waterworks Engineer.

I also wish to thank the following members of the Public Health Department for their willing co-operation and help during an extremely anxious period. Many of them performed additional duties outside routine office hours and I am grateful to them for their contributions towards abating the outbreak.

Sanitary Inspectors' Staff.

Mr. J. W. Beaumont, Chief Sanitary Inspector.
 Mr. H. Leaper, District Sanitary Inspector.
 Mr. A. Pearson, District Sanitary Inspector.
 Mr. G. Woodhead, District Sanitary Inspector.
 Mr. J. L. Moxon, District Sanitary Inspector.
 Mr. F. Burton, Housing Inspector.

Clerical and Statistical Staff.

Mr. J. H. Bargh, Chief Clerk.
 Mr. T. K. Boothman, Clerk.
 Miss D. Archbell, Clerk.
 Miss E. A. Barker, Clerk.

In conclusion I desire to thank the Chairman, Vice-Chairman and Members of the Public Health Committee for giving me a free hand and every facility in the matter of abating the outbreak.

GEORGE C. F. ROE,

Medical Officer of Health.

Public Health Department,
 Powell Street,
 Halifax.

31st January, 1947.

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General Summary of Meteorological Observations taken at the Central Public Library, Belle Vue, Halifax, from January 1st, 1946, to December 31st, 1946,

By FRANK HAIGH, CHIEF LIBRARIAN.

LATITUDE OF STATION = 53° 43' N.

LONGITUDE = 1° 52' W.

HEIGHT ABOVE SEA LEVEL = 826 FEET.

Month.	Pressure of Atmosphere in Month.		Temperature of Air in Month.										Mean Temperature.		Vapour.			Mean degree of Saturation at 100.	Mean Weight of a cubic foot of Air.	Mean Reading of Thermometer.		Wind.											Mean amount of Cloud.	Rain.		REMARKS
	Mean at 32° F. and Sea Level.	Range.	Highest.	Lowest.	Mean.					(Adapted.)	Dew Point.	In a cubic foot of Air.		Maximum	Minimum	Estimated Strength.	Relative proportion of											No. of Days it fell.	Amount Collected.							
					Of all Highest.	Of all Lowest.	Daily Range.	Air.	Dew Point.			Elastic Force.					Maximum			Minimum	N.	N.E.	E.	S.E.	S.	S.W.	W.			N.W.	Calm.					
												Mean.	Moist.																			Boys of Sun.		on Grass.		
	ins.	ins.	°	°	°	°	°	°	°	°	ins.	grs.	grs.	grs.	°	°	°	°	°	°	°	°	°	°	°	°	°	ins.								
January	29.989	1.572	51.5	17.8	33.7	40.8	30.9	9.9	36.1	33.5	0.193	2.2	0.3	91	54.22	51.0	28.0	3.0	—	2	—	10	3	18	7	2	6	7.3	21	3.91	The observations have been reduced to mean values by Glaisher's Barometrical & Diurnal Range Tables, and the Hygrometrical results have been deduced from the seventh edition of Hygrometrical Tables, after corrections for Index errors of the Instruments employed.					
February	29.878	1.644	51.0	23.0	28.0	44.4	35.8	8.6	40.1	37.7	0.226	2.6	0.3	92	53.77	67.9	33.3	4.5	—	2	2	—	—	7	10	21	2	7.4	15	5.21						
March	30.651	0.882	67.1	23.0	44.1	45.6	32.9	12.7	39.5	35.4	0.207	2.4	0.5	84	53.78	74.4	31.6	3.5	—	12	5	12	—	7	11	1	—	6.5	13	1.53						
April	29.992	1.134	73.8	33.9	39.9	54.1	39.3	14.8	47.2	39.6	0.243	2.8	1.0	73	52.91	92.0	36.4	3.0	—	10	5	2	—	9	14	4	6	7.3	13	1.39						
May	29.880	1.000	68.6	32.3	36.3	55.4	39.8	15.6	47.8	41.7	0.263	3.0	0.8	79	52.90	99.0	38.8	4.5	—	24	11	6	5	1	—	2	—	6.0	11	1.59						
June	29.891	1.238	75.9	40.0	35.9	59.0	45.2	13.8	52.2	45.9	0.310	3.5	0.9	80	52.46	105.1	42.9	4.5	—	—	—	5	1	3	19	14	3	—	7.2	20		2.41				
July	29.932	0.898	77.3	44.4	32.9	65.4	51.5	13.9	59.4	50.6	0.369	4.1	1.7	71	51.60	110.1	49.2	3.5	—	—	—	—	2	3	19	13	7	1	6.3	18		3.83				
August	29.762	0.918	73.5	43.9	29.6	64.1	49.0	15.1	55.4	48.1	0.334	3.8	0.9	80	52.23	104.5	46.2	3.5	1	1	6	—	—	3	19	14	10	—	7.0	22		4.75				
September	29.753	1.078	70.0	45.0	25.0	59.7	48.3	11.4	54.6	49.1	0.349	3.9	1.0	81	52.12	94.8	45.3	4.0	2	—	—	—	3	5	25	6	1	—	6.6	20		5.47				
October	30.011	0.894	66.1	28.8	37.3	51.1	42.9	8.2	47.2	42.8	0.275	3.2	0.5	86	52.99	73.9	40.2	3.5	—	12	13	10	—	1	4	3	4	7.3	13	0.92						
November	29.677	1.572	65.1	33.0	32.1	48.6	40.8	7.8	44.7	40.7	0.253	2.9	0.5	85	53.22	62.5	37.3	4.0	3	11	2	2	1	15	8	4	2	8.0	26	6.60						
December	29.932	1.504	47.0	23.2	23.8	41.2	33.3	7.9	37.3	34.6	0.200	2.3	0.3	91	54.10	52.1	29.3	2.0	4	5	1	4	—	8	9	9	6	7.1	24	2.62						
Annual Means	29.945	1.194	65.5	32.4	33.3	52.4	40.8	11.6	46.8	41.6	0.268	3.1	0.7	83	530.1	82.3	38.2	3.6	1	6	4	4	2	12	9	6	2	7.0	—	—						

The Mean Monthly Readings of the Earth Thermometer, four feet below the surface, were as follows:—

January, 43°

February, 43°

March, 40°

April, 45°

May, 48°

June, 50°

July, 54°

August, 55°

September, 54°

October, 52°

November, 48°

December, 45°

Highest Readings = 55° on July 12th to Sept. 4th.

Rain fell on 216 days, and measured 40.23 inches.

Lowest Readings = 40° on Mar. 19th and 20th.

General Summary of Meteorological Observations

MASSACHUSETTS. STATE HOUSE, 1887.

THE HOUSE OF REPRESENTATIVES.

Month.	Days.	Temperature of Air in Month.						Precipitation in Month.	Direction of Wind.	Barometer at Sea Level.
		Max.	Min.	Mean.	Range.	Wet Bulb.	Dew Point.			
January	31	40.983	1.512	24.317	39.475	33.740	30.9	2.9	38-41	30.983
February	28	39.878	1.844	21.030	38.036	34.438	31.0	3.0	38-41	30.878
March	31	50.551	0.832	27.128	49.726	44.148	32.0	12.7	38-41	30.551
April	30	59.932	1.131	32.833	58.802	54.180	34.1	11.3	38-41	30.932
May	31	69.880	1.008	38.323	68.872	63.415	36.1	10.4	38-41	30.880
June	30	79.501	1.232	45.400	78.269	73.138	38.2	13.8	38-41	30.501
July	31	89.982	0.808	57.344	89.176	84.517	40.3	18.9	38-41	30.982
August	31	89.702	0.818	57.344	88.884	84.140	40.3	18.9	38-41	30.702
September	30	89.702	1.078	50.440	88.670	83.713	41.0	11.4	38-41	30.702
October	31	80.011	0.804	46.128	79.207	74.129	41.0	11.4	38-41	30.011
November	30	69.877	1.512	36.139	68.351	63.415	38.2	13.8	38-41	69.877
December	31	59.932	1.504	27.023	58.427	53.511	36.1	10.4	38-41	59.932
Annual Means		69.945	1.184	46.334	88.872	83.811	40.3	14.8		69.945

The Mean Monthly Readings of the Month.

January, 43°; April, 54°; July, 64°; October, 54°.

Highest Readings - 89° on July 13th to 25th.

Rain fell on 216 days, and measured 40.38.