

[Report 1947] / Medical Officer of Health, Blackpool County Borough.

Contributors

Blackpool (England). County Borough Council.

Publication/Creation

1947

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County Borough of Blackpool.



ANNUAL REPORT

For the Year 1947

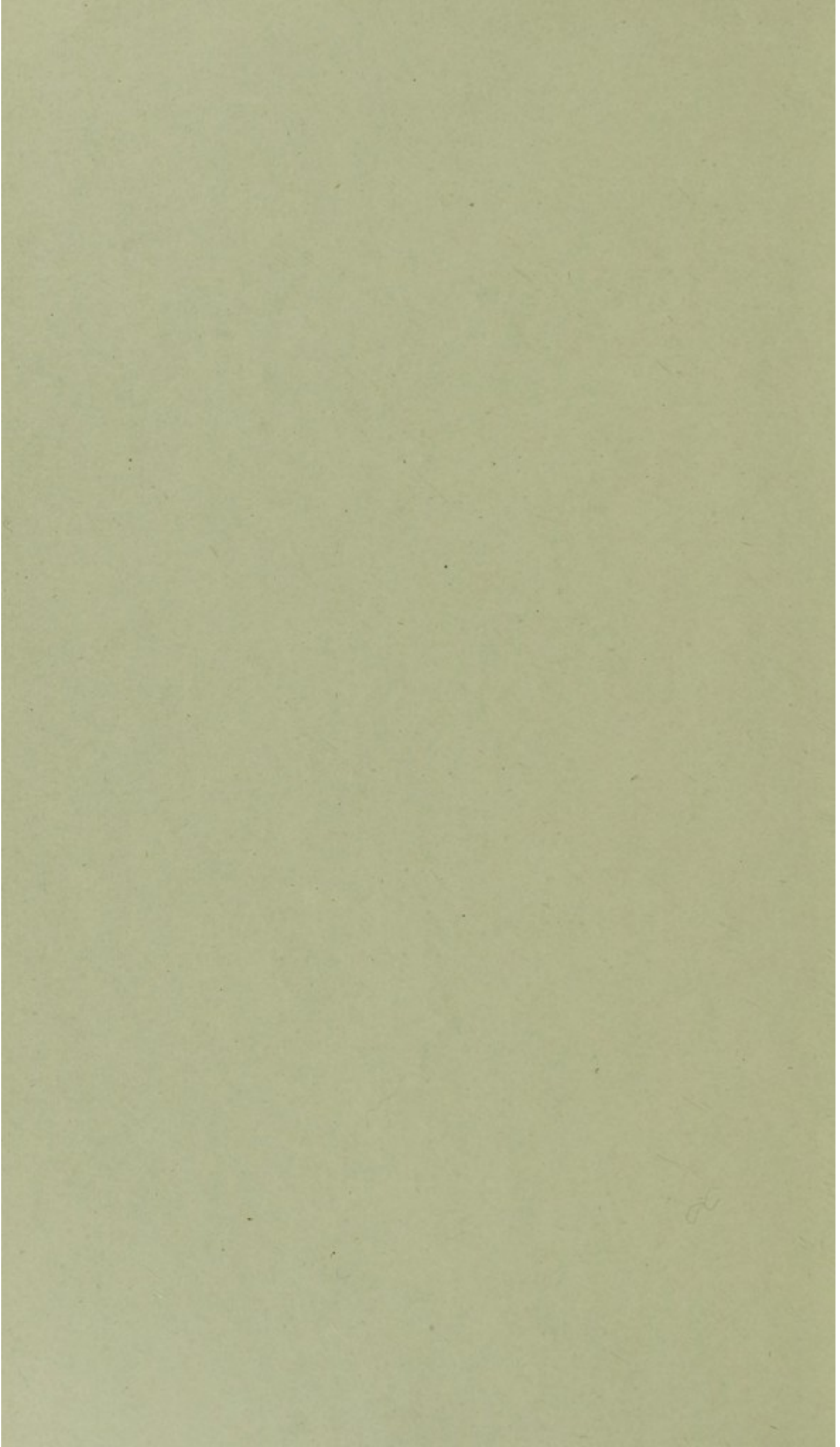
By

GEORGE W. MURRAY

M.B., Ch.B., D.P.H.

Medical Officer of Health, School Medical Officer,
and Medical Superintendent of the
Infectious Diseases Hospital.





County Borough of Blackpool.



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Medical Officer of Health, School Medical Officer,
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Infectious Diseases Hospital.



MUNICIPAL HEALTH CENTRE,
WHITEGATE DRIVE,
BLACKPOOL.
July, 1948.

*To the Chairman and Members of the Health Committee
of the County Borough of Blackpool.*

MR. MAYOR, LADIES AND GENTLEMEN,

I have the honour to present my Annual Report on the health of the Borough and the activities of the Public Health Department during the year 1947.

The Registrar General has estimated the population of the Borough as at mid-1947 to be 152,660 which again shows an increase on the previous year. A number of men and women were still returning from H.M. Forces at the end of 1946 and beginning of 1947 and this no doubt explains the increase of 2,550. This year saw the end of the Government Evacuation Scheme and the result of the last organised return of evacuees will probably show itself as a decrease in next year's estimated population.

The Birth Rate of 15·2 is higher than for any one year since 1924. It was to be expected the rate for this year would be abnormally high as the year 1946 saw the return of the major portion of the men and women from the Forces and the marriage rates for 1945 and 1946 were considerably higher than for some years previously. A similar state existed after the 1914-18 war. I do not anticipate that this high birth rate can be maintained indefinitely as a large proportion of Blackpool's population consists of middle-aged and elderly persons. There has, however, been a large influx of young people to Blackpool since the war and whilst a birth rate comparable with that for the country as a whole can not be expected it should tend to keep the rate above the average for the ten pre-wars, *i.e.*, 10·6. I am pleased to note that the Illegitimate Birth Rate has now returned to a figure approximate to the pre-war level.

I do not offer any special comment on the Death Rate beyond the fact that it is much higher than the rates for England and Wales as a whole. Area Comparability Factors have, as yet, not been re-introduced and a satisfactory comparison cannot be made with national rates, but any disparity can definitely be attributed to the preponderance of old people in the age distribution of the Blackpool population.

The Infant Mortality Rate was 43·4, a slight increase over the previous year. It is, however, lower than the rate for the earlier of the war years when there was considerable overcrowding resulting from the heavy influx of evacuees during that period.

The year 1947 saw an extensive epidemic of Poliomyelitis which spread to all parts of the country. Of the Blackpool residents notified only ten proved positive. Brief details of the nine positive cases admitted to the Infectious Diseases Hospital are given in the body of this report.

I am pleased to note the extent to which general practitioners continue to use the facilities of the Tuberculosis Dispensary. The number of new cases examined apart from contacts of known cases, is now well above double the pre-war figure. It is interesting to note though that the number of cases diagnosed by the Tuberculosis Officer has only risen by just over one-third. The incidence of the disease has again dropped this year. I hope this trend will continue in future years. By arrangement with the Lancashire County Council the services of a Mass Miniature Radiography unit have been obtained. The Unit is located at the Municipal Health Centre and is working in close collaboration with the Tuberculosis Dispensary staff. The report of the survey by the Unit will be available next year and I propose to include it in my Annual Report for 1948.

During the year "New Central" Maternity Home was closed and all maternity cases are now admitted to "Glenroyd" Maternity Home. It is interesting to note that there is an increasing tendency for women to have their confinements in institutions. Possibly the present overcrowding conditions will have had some influence on this tendency.

It is known there is a certain amount of overcrowding in the Borough. Unfortunately details of the extent of the overcrowding cannot at present be given until a complete survey of the town is made by the District Sanitary Inspectors. Whether the overcrowding can be eradicated within a reasonable time depends on the rate at which new houses are erected.

Since my last Annual Report the Ice Cream (Heat Treatment) Regulations, 1947, have come into operation and I would commend to your close attention a report set out in Appendix I on the manufacture and sale of Ice Cream in the Borough wherein the standards laid down by the above Regulations are commented on.

On 31st March, 1947, the Government Evacuation Scheme terminated after eight years and in Appendix II I submit an extract from a report on the Billeting Organisation in the Borough prepared by the Chief Sanitary Inspector and Billeting Officer.

Reference was made in my last Annual Report to the National Health Service Act which was placed on the statute books in 1946. One of the major elements of this Act, so far as Local Authorities are concerned, is that the responsibility for treatment of persons suffering from illness and the provision of institutional accommodation for such persons and for expectant and nursing mothers passes to Regional Hospital Boards to be set up by the Minister of Health. The Infectious Diseases Hospital and "Glenroyd" Maternity Home will, therefore, from the 5th July 1948 become vested in the Minister of Health and be controlled by a local Hospital Management Committee. The Tuberculosis Dispensary and Venereal Diseases Clinic will similarly be controlled by the Hospital Management Committee. On the other hand a number of duties are placed on local authorities (now to be termed "Local Health Authorities") and these are detailed in Part III of the Act and also Section 51. Briefly, they require the Local Health Authority to make arrangements for :

1. Provision of Health Centres.
2. Care of Mothers and Young Children.
3. Midwifery Services.
4. Health Visiting.
5. Home Nursing.
6. Vaccination and Immunisation.
7. Ambulance Services.
8. Mental Health Services.

The following services are permissive but as they touch on so many other aspects of the proposed public health service their implementation may be said to be a necessity :

1. Prevention of Illness, Care and After-Care.
2. Domestic Help Services.

Section 20 of the Act requires Local Health Authorities to submit their proposals for services to be rendered as from 5th July, 1948. The proposals submitted by this Authority have as yet not been approved. It is intended to include these proposals in full in the next Annual Report when it will be possible to obtain a more accurate picture of the future health services in the Borough. Many of the services listed above are already provided by this Authority. There are, however, a few points I would like to mention. Firstly, Vaccination formerly done by the Public Vaccinators is to be arranged by the Local Health Authority and is to be voluntary whereas formerly it was compulsory under the Vaccination Acts, now repealed.

Secondly, your Medical Officer of Health will be appointed Ambulance Officer and the scope of the ambulance services as envisaged will be far in excess of the present municipal ambulance facilities. This service is to be free of charge. Thirdly, the " Prevention, Care and After-Care " services will be extremely varied in scope. For example, it will include the ascertaining of Contacts of known cases of tuberculosis, the following-up and visiting of patients discharged from hospital, supply of sick room equipment and health education. Lastly, the Mental Health Service opens up an entirely new field for this department. At present the provisions of the Lunacy and Mental Treatment Acts are administered by the Public Assistance Departments acting through the Relieving Officers. The Mental Deficiency Acts are, in Lancashire, administered by the Lancashire Mental Hospitals Board and a number of Mental Welfare Associations. As from the " appointed day " these Acts will be administered by this department acting through officers to be known as " Duly Authorised Officers."

In conclusion I would again like to place on record my appreciation of the loyal and efficient work of all members of my department—medical, nursing, inspectorial and administrative staff, alike. The active support of the Chairman and Members of the Health Committee has at all times been a great encouragement to me.

I remain,

Your faithful servant,

GEORGE W. MURRAY,

Medical Officer of Health.

HEALTH COMMITTEE

The Worshipful the Mayor,	
Mr. Councillor	J. R. F. HILL, M.M., J.P. (to November 1947).
" "	J. ANDERSON, Senr., J.P. (November—11th December 1947).
" "	J. R. FURNESS, J.P. (from December 1947).
Mr. Alderman	D. J. BAILEY, J.P. (Chairman).
" "	J. R. QUAYLE, J.P.
Mr. Councillor	ANDERSON, Senr., J.P. (Deceased 11/12/47).
" "	Dr. BAIRD, J.P.
" "	BARNES.
" "	BURTON (from November 1947).
" "	DUNN.
" "	FAIRCLOUGH.
" "	FAIRHURST (Vice-Chairman).
" "	FURNESS.
Mrs. "	HALTON (from November 1947).
Mr. "	HILL, JOSEPH.
Miss "	HILL (from November 1947).
Mr. "	HUDDART.
" "	MACHIN.
" "	MORRIS.
" "	OGDEN.
" "	PARKER (to November 1947).
" "	RICHARDSON.
Mrs. "	SUDLOW (to November 1947).
Mr. "	WELLS.

MATERNITY AND CHILD WELFARE SUB-COMMITTEE

The Worshipful the Mayor,	
Mr. Councillor	J. R. F. HILL, M.M., J.P. (to November 1947).
" "	J. ANDERSON, Senr., J.P. (November—11th December 1947).
" "	J. R. FURNESS, J.P. (from December 1947).
Mr. Alderman	D. J. BAILEY, J.P. (Chairman).
" "	J. R. QUAYLE, J.P.
Mr. Councillor	ANDERSON, Senr., J.P. (Deceased 11/12/47).
" "	Dr. BAIRD, J.P.
" "	BARNES.
" "	BURTON (from November 1947).
" "	DUNN.
" "	FAIRCLOUGH.
" "	FAIRHURST (Vice-Chairman).
" "	FURNESS.
" "	HILL, JOSEPH.
" "	HUDDART.

Mr. Councillor	MACHIN.	
"	"	OGDEN.
Mrs.	"	SUDLOW (to November 1947).
Mr.	"	WELLS (from November 1947).
Mrs. H. ROBINSON	}	Co-opted members representing the Ladies' Sick Poor Association, the Women's Co-operative Guild, the Blackpool Insurance Committee, and the British Medical Association, respectively.
Mrs. M. OATES		
Mrs. A. OLIVER		
Dr. J. LONGWORTH		
Mrs. J. PARKER	}	Co-opted members.
Mrs. J. HENSON		
Miss O. WELLS		

TUBERCULOSIS SUB-COMMITTEE

The Worshipful the Mayor,	
Mr. Councillor	J. R. F. HILL, MM., J.P. (to November 1947).
"	" J. ANDERSON, Senr., J.P. (November—11th December 1947).
"	" J. R. FURNESS, J.P. (from December 1947).
Mr. Alderman	D. J. BAILEY, J.P. (Chairman).
Mr. Councillor	ANDERSON, Senr., J.P. (Deceased 11/12/47).
"	" BARNES.
"	" BURTON (from November 1947).
"	" DUNN.
"	" FAIRCLOUGH
"	" FAIRHURST (Vice-Chairman).
"	" FURNESS.
"	" HILL, JOSEPH.
"	" HUDDART.
"	" MACHIN.
"	" OGDEN.
Mrs.	" SUDLOW (to November 1947).
Mr.	" WELLS (from November 1947).
Dr. H. E. MARTIN	} co-opted members representing the Blackpool Insurance Committee.
Mrs. A. OLIVER	
Mr. J. A. HURSTFIELD	

PUBLIC HEALTH OFFICERS OF THE LOCAL AUTHORITY

Medical Officer of Health and School Medical Officer :
 GEORGE W. MURRAY, M.B., Ch.B., D.P.H.

Deputy Medical Officer of Health and Tuberculosis Officer :
 FRANCIS A. MCGENNIS
 L.R.C.P.I. & L.M., L.R.C.P.S.I. & L.M., D.P.H.

Assistant Medical Officers of Health :
 MARY D. BANIM, M.B., Ch.B., B.A.O., D.R.C.O.G.
 Maternity and Child Welfare Medical Officer.

MURIEL ESSEX-LOPRESTI, M.B., B.S., M.R.C.P., L.R.C.P., D.R.C.O.G.
Resident Obstetrical Officer, Glenroyd Maternity Home (to 14/1/47)

JOHN L. WILD, M.A., M.B., B.Ch., M.R.C.S., L.R.C.P., D.P.H.
(17/2/47 to 24/6/47)

CONSTANCE G. LEE, M.B., Ch.B., M.R.C.S., D.R.C.O.G.
Resident Medical Officer, Glenroyd Maternity Home (from 14/6/47)

JAMES BAXTER, M.B., Ch.B., D.P.H. (from 1/9/47)

BERYL G. PETRIE, M.B., Ch.B., D.P.H. (from 12/10/47)
Assistant Maternity and Child Welfare Medical Officer

Consultant Aural Surgeon :

IAN B. THORBURN, M.B., Ch.B., F.R.F.P.S., F.R.C.S.

Dental Surgeons (Part Time) :

Miss H. GARFORTH, L.D.S.

Mr. J. B. ELTON, L.D.S.

Mr. F. MULLER, L.D.S.

Chief Sanitary Inspector, and
Chief Billeting and Complaints Officer (to 31/3/47)

¶||HARRY PRIESTLEY, M.B.E.

Chief Administrative Officer :

||GEORGE E. FIELDING.

Matron, Infectious Diseases Hospital and " Glenroyd " Maternity Home

†*‡Miss M. H. WHITTAKER, M.B.E.

Matron, Day Nurseries :

†*Miss MARGARET WHITEHEAD.

Health Visitors :

†*C. HILL.

§†*M. FLETCHER.

§†*D. LEA.

§†*P. WROE.

§†*F. E. AINSWORTH.

§†*E. DEATON (from 1/4/47).

§†*W. WALSH

Municipal Midwives :

†*L. HILL.

*A. PARKINSON.

*G. DIXON.

*F. H. C. SAVAGE.

*E. V. FISHER.

Infectious Diseases Nurses :

§†B. McCORMACK.

‡†*M. PARTINGTON.

Tuberculosis Health Visitors :

§†*M. PARKER.

§†*D. HARRISON.

‡†*K. WATSON

District Nurses :

†*A. B. WHITE.

†J. SADLER (to 13/9/47).

†E. M. OWEN.

†M. E. PARKER (to 8/11/47).

†L. HALL.

†K. MARSON.

†K. BIRKIN (from 8/9/47). †M. VAUGHAN (from 10/11/47).

Special Treatment Nurse :

†E. LAND.

Radiographer :

‡†M. EASTER (from 13/1/47).

General Service Nurse :

‡†M. EASTER (to 13/1/47).

Physio-therapists :

J. BULCOCK, C.S.P. (13/1/47—17/5/47).
 M. RILEY, C.S.P. (from 6/1/47).
 B. CHESTER, C.S.P. (from 5/6/47).
 D. K. THORPE, C.S.P. (from 15/12/47).

Deputy Chief Sanitary Inspector :

||J. TOLMAER (retired 30/6/47).
 ¶||J. PICKARD (from 1/7/47).

District Sanitary Inspectors :

||A. E. FITTON.	¶||J. PICKARD (to 30/6/47).
¶||E. SHUTTLEWORTH.	¶||A. DANIEL.
||E. SMITH.	||F. WALLIS.
||W. MOISTER.	||A. RONEY.
¶||T. I. ROWORTH (H.M.F.).	||T. W. LOMAX (Pupil—appointed District Sanitary Inspector 1/6/47).

Meat and Food Inspectors :

¶||H. V. DIXON, Chief Meat and Food Inspector.
 ¶||L. H. SHEPLEY, Junior Meat and Food Inspector.
 ¶||W. RILEY, Abattoirs Superintendent.

Clerical Staff :

G. BOOTH.	Miss M. TOPPING.
R. PRYAR.	Miss N. HOWE.
H. R. DOWLING.	Mrs. F. N. HIRST (to 29/3/47).
S. G. H. LUND.	Mrs. H. McCLELLAN.
J. RICHARDSON.	Miss J. ARROWSMITH.
D. H. TAYLOR.	Mrs. E. G. STIRLING.
F. CURWEN.	Miss B. McCLELLAN.
T. RAY.	Miss P. SANDERSON.
H. S. SCHOFIELD.	Miss L. INGHAM.
B. P. BATTLE.	Miss M. CARLEY.
S. WOOD.	Miss E. B. ROBINSON.
J. TYLDESLEY.	Miss W. KERSHAW (from 6/1/47).
A. NELSON.	Miss C. M. SHAW (from 6/1/47).
Miss N. BROWN.	Miss E. J. ARCHER (from 10/3/47).
Mrs. M. BOOTH (to 29/3/47).	Miss E. FYFFE (from 17/3/47).
Mrs. T. FERRIER (to 31/5/47).	Miss C. F. NODEN (31/3/47—6/9/47).
Miss J. TOMLINSON.	Miss A. TAYLOR (from 25/8/47).
Miss I. RADWAY.	Mrs. F. M. PEARSON (from 24/9/47).

W. A. DICKINSON, Telephonist (to 7/6/47).
 C. J. GRAY, Telephonist (from 8/9/47).

Meteorological Observer :

J. WILLIAMS.

Laboratory Technician :

¶||G. A. COX.
 J. F. WILLIAMS (Junior Assistant).

Public Vaccinators :

Dr. H. L. LUCAS
 Dr. E. P. HYDE
 Dr. B. G. KELLY } to April 1947.
 Dr. B. G. KELLY (from April, 1947).

Vaccination Officers :

GEORGE W. MURRAY, M.B., Ch.B., D.P.H.—Northern Area.
 JOSEPH BOOTLE—Southern Area.

Public Analyst (Part Time) :

T. R. HODGSON, M.A., F.I.C., F.C.S.

|| Holders of Certificates of the Royal Sanitary Institute.

¶ Holders of Certificates of the Royal Sanitary Institute for Meat and Other Foods.

† General Trained.

‡ Fever Trained.

* Central Midwives Board Certificate.

§ Health Visitor's Certificate of the Royal Sanitary Institute.

GENERAL STATISTICS

Area (exclusive of foreshore)	8,512 acres
Area of foreshore and Crown Lands	2,068 acres
Population (Registrar General's estimate)	152,660
Number of inhabited houses	43,009
Number of empty houses	102
Rateable Value	£1,790,476
Sum represented by a penny rate	£7,176 16s. 3d.

EXTRACTS FROM VITAL STATISTICS

	M.	F.	Total
Live Births : Legitimate	1,112	1,064	2,176
Illegitimate	93	57	150
Birth Rate	15·2 per thousand population		
Stillbirths : Legitimate	25	32	57
Illegitimate	4	4	8
Rate per 1,000 total (live and stillbirths)			27·1
Deaths			2,236
Death Rate	14·6 per thousand population		

Number of women dying in or in consequence of childbirth :

	Deaths	Rate per 1,000 total (Live and still births)
(a) Puerperal sepsis	1	0·418
(b) Other puerperal causes	4	1·672
Total	5	2·090

Death Rate of Infants under one year of age :

(a) All infants per 1,000 live births	43·4
(b) Legitimate infants per 1,000 legitimate live births	42·7
(c) Illegitimate infants per 1,000 illegitimate live births	53·3
Deaths from Cancer (all ages)	318
" " Meales (all ages)	3
" " Whooping Cough (all ages)	2
" " Diarrhoea (under 2 years)	9

Births.—During the year 2,326 births were registered as against 2,064 in 1946. This gives a Birth Rate of 15·2 per thousand of the population compared with 13·75 in the previous year. Again our Birth Rate shows a marked increase although it still does not approximate to that of the country as a whole for which the Rate is 20·5. It does indicate, however, that in our increasing population there is a greater proportion of young married people though there still continues to be a preponderance of old people in the town. I give below the number of births for each of the past 10 years, and the birth rates for Blackpool and the country as a whole for comparison.

Year	No. of Births	Birth Rates	
		Blackpool	England & Wales
1938	1376	10.9	15.1
1939	1460	10.6	15.0
1940	1399	9.4	14.6
1941	1761	11.5	14.2
1942	1929	12.7	15.8
1943	1884	12.5	16.5
1944	2030	13.8	17.6
1945	1799	12.5	16.1
1946	2064	13.7	19.1
1947	2326	15.2	20.5

Illegitimate births numbered 150 (93 boys and 57 girls), representing a percentage of 6.4 of the total births. This again shows a drop on the previous year.

It is gratifying to note that the figure is again approximating to the pre-war level, the conditions inherent in wartime having been overcome to some extent. Possibly shortage of housing may have some effect in keeping up the Illegitimate Rate.

The Illegitimate Birth Rates for the present year and the past nine years are set out below :

	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938
Per 1,000 inhabitants ...	0.98	1.30	1.70	1.40	1.20	1.30	0.97	0.69	0.78	0.63
Percentage of total Live Births ...	6.4	9.8	13.6	10.4	9.5	10.2	8.4	7.4	6.8	5.8

Deaths.—During 1947 there were 2,236 deaths of Blackpool residents. This figure includes 186 deaths of Blackpool patients in the Fylde Institution, Wesham, Nr. Kirkham.

On the Registrar General's estimate of population—152,660—as at mid-1947, the Death Rate was 14.6 per thousand as compared with 13.8 in 1946.

A comparison of the rate with other parts of the country is as follows :

England and Wales	12.0
126 Great Towns	13.0
148 Smaller Towns	11.9
London Admin. County	12.8
Blackpool	14.6

Again the preponderance of older people in the town's population gives this greater figure.

The percentage of deaths in the various age groups with figures for a number of previous years is given below :

Year	Under 12 months	1 and under 5 years	5 and under 65 years	65 years and over
1947	4.5	0.6	32.2	62.7
1946	3.7	0.9	34.0	61.4
1945	3.1	0.8	34.1	62.0
1944	4.0	0.5	36.4	59.1
1943	5.3	0.9	35.1	58.7
1942	6.3	1.3	37.3	55.1
1941	4.5	1.5	35.9	58.1
1940	3.4	1.0	38.9	56.7
1939	3.7	1.0	39.3	56.0
1938	3.5	1.5	40.5	54.5

The Registrar General has furnished a list of the causes of deaths, divided into sexes and age groups and this is set out on the following two pages. The classification does not agree with the statistics compiled locally, and this will invariably occur where you have different persons allocating the causes and specifying which of the certified causes should take precedence.

**CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE
IN THE COUNTY BOROUGH OF BLACKPOOL**

CAUSES OF DEATH	Sex	All Ages	0—	1—	5—	15—	45—	65—
ALL CAUSES	M	1115	60	10	6	67	334	638
	F	1121	41	3	7	72	235	763
1 Typhoid and Paratyphoid Fevers	M	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—
2 Cerebro-spinal Fever... ..	M	1	—	—	—	—	—	1
	F	—	—	—	—	—	—	—
3 Scarlet Fever	M	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—
4 Whooping Cough ...	M	1	—	—	1	—	—	—
	F	1	1	—	—	—	—	—
5 Diphtheria	M	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—
6 Tuberculosis of respiratory system	M	46	—	—	—	11	27	8
	F	28	—	—	1	17	5	5
7 Other forms of tuberculosis	M	6	—	1	—	1	3	1
	F	2	—	1	—	1	—	—
8 Syphilitic diseases	M	10	—	—	—	1	4	5
	F	1	—	—	—	—	1	—
9 Influenza	M	4	—	—	—	1	—	3
	F	2	—	—	—	—	—	2
10 Measles	M	2	1	1	—	—	—	—
	F	1	—	—	1	—	—	—
11 Acute Polio-myelitis & polio-encephalitis	M	2	—	1	1	—	—	—
	F	—	—	—	—	—	—	—
12 Acute infective encephalitis	M	2	—	—	—	1	—	1
	F	—	—	—	—	—	—	—
13 Cancer of : buccal cavity, oesophagus(Males) uterus (Females)	M	18	—	—	—	2	5	11
	F	20	—	—	—	2	14	4
14 Cancer of stomach & duodenum	M	28	—	—	—	—	12	16
	F	35	—	—	—	1	11	23
15 Cancer of breast	F	33	—	—	—	3	21	9
16 Cancer of all other sites	M	99	—	1	—	6	38	54
	F	85	—	—	—	4	33	48
17 Diabetes	M	10	—	—	1	1	2	6
	F	14	—	—	—	1	2	11

CAUSES OF DEATH	Sex	All Ages	0—	1—	5—	15—	45—	65—
18 Intracranial vascular lesions	M	127	—	—	—	1	37	89
	F	169	—	—	—	2	32	135
19 Heart Diseases	M	361	—	—	—	7	116	238
	F	377	—	—	1	10	48	318
20 Other diseases of Circulatory system	M	33	—	—	—	2	7	24
	F	26	—	—	—	1	4	21
21 Bronchitis	M	62	1	—	—	4	16	41
	F	62	3	—	—	1	10	48
22 Pneumonia	M	32	6	1	—	4	7	14
	F	22	4	—	—	1	3	14
23 Other respiratory diseases	M	14	—	—	—	1	10	3
	F	9	—	—	—	1	3	5
24 Ulcer of stomach or duodenum	M	16	—	—	—	1	5	10
	F	5	—	—	—	—	4	1
25 Diarrhoea under 2 years	M	4	4	—	—	—	—	—
	F	5	5	—	—	—	—	—
26 Appendicitis	M	1	—	—	—	1	—	—
	F	2	—	—	—	—	2	—
27 Other digestive Diseases	M	20	1	—	—	1	5	13
	F	24	2	—	—	2	6	14
28 Nephritis	M	37	—	—	—	4	14	19
	F	19	—	—	1	4	6	18
29 Puerperal & Post-abortive sepsis	F	1	—	—	—	1	—	—
30 Other maternal causes	F	4	—	—	—	4	—	—
31 Premature birth	M	12	12	—	—	—	—	—
	F	8	8	—	—	—	—	—
32 Congenital malformations birth injuries, Infant diseases	M	30	27	—	1	—	1	1
	F	18	15	—	—	3	—	—
33 Suicide	M	10	—	—	—	1	5	4
	F	10	—	—	—	3	6	1
34 Road traffic accidents	M	8	—	—	—	—	3	5
	F	11	—	—	—	—	5	6
35 Other violent causes	M	25	6	2	1	5	1	10
	F	22	1	1	2	1	4	13
36 All other causes	M	94	2	3	1	11	16	61
	F	95	2	1	1	9	15	67

Tuberculosis was the cause of death in 82 cases—74 respiratory and 8 non-respiratory. The number of deaths attributed to tuberculosis does not vary greatly from previous years in spite of an increased incidence of the disease. This in itself does not give a clear picture of the results of our efforts to combat the disease and I would draw your attention to the mortality rates for the past 37 years which are set out below. It will be observed that apart from certain years there has been a fairly steady decline since 1925. This is most encouraging.

Year	No. of Deaths	Death Rate	Year	No. of Deaths	Death Rate	Year	No. of Deaths	Death Rates
1911	51	0.83	1924	71	0.92	1937	81	0.65
1912	49	0.79	1925	80	0.99	1938	74	0.59
1913	49	0.76	1926	69	0.78	1939	79	0.58
1914	71	1.07	1927	73	0.78	1940	73	0.49
1915	70	1.09	1928	73	0.74	1941	95	0.62
1916	67	1.06	1929	75	0.75	1942	75	0.49
1917	64	1.03	1930	66	0.66	1943	83	0.55
1918	87	1.34	1931	83	0.84	1944	78	0.53
1919	47	0.69	1932	76	0.75	1945	86	0.59
1920	61	0.86	1933	77	0.72	1946	79	0.53
1921	56	0.76	1934	81	0.79	1947	82	0.53
1922	65	0.87	1935	71	0.59			
1923	46	0.61	1936	79	0.65			

Cancer.—318 persons died from cancer. This represents 14.2% of the total deaths in the Borough and gives a mortality rate of 2.08 per 1,000 population. From the list of causes of deaths furnished by the Registrar General it will be observed that apart from Heart Diseases, cancer is the greatest single cause of death. Furthermore it takes its greatest toll from the middle-aged and elderly. As the expectation of life is increasing it must be expected, with present methods of treatment, that the cancer mortality rate will gradually rise. For comparison the figures for the period 1895 to date are given below :

Year	No. of Deaths	Death Rate	Year	No. of Deaths	Death Rate	Year	No. of Deaths	Death Rate
1895	16	0.486	1913	92	1.433	1931	217	2.227
1896	17	0.464	1914	94	1.416	1932	195	1.923
1897	30	0.746	1915	85	1.323	1933	214	2.055
1898	22	0.484	1916	93	1.475	1934	205	1.789
1899	34	0.705	1917	103	1.655	1935	253	2.104
1900	47	0.937	1918	102	1.580	1936	259	2.128
1901	54	1.064	1919	108	1.591	1937	275	2.221
1902	47	0.901	1920	112	1.588	1938	285	2.265
1903	52	0.981	1921	128	1.734	1939	284	2.108
1904	41	0.755	1922	123	1.661	1940	259	1.742
1905	54	0.969	1923	133	1.770	1941	347	2.269
1906	54	0.946	1924	133	1.718	1942	293	1.931
1907	52	0.890	1925	144	1.783	1943	324	2.161
1908	51	0.854	1926	156	1.759	1944	326	2.227
1909	59	0.960	1927	156	1.578	1945	337	2.34
1910	46	0.765	1928	167	1.690	1946	329	2.19
1911	72	1.179	1929	182	1.824	1947	318	2.08
1912	69	1.111	1930	199	1.994			

Infant Mortality.—101 children, residents of Blackpool, died during the year under the age of twelve months. This gives a mortality rate of 43·4 per 1,000 live births. There was an appreciable increase in the rate for the earlier of the war years but this may be attributed to the overcrowding conditions resulting from the heavy influx of evacuees during that period. It will be observed that the largest number of deaths occur under the headings, congenital malformations, birth injuries and infant diseases. Unfortunately these are not always preventable. The mortality rate for the present year, 43·4, whilst showing a slight increase over last year nevertheless is encouraging when compared with the rates over the last fifty years. Apart from the reduction in deaths due to infectious disease, the decrease in the rate can definitely be related to the improved obstetric practice, and ante-natal and post-natal services of the present day.

The mortality rates for the previous eight years are given below :

1939	...	53·5	1943	...	62·6
1940	...	53·0	1944	...	41·3
1941	...	56·8	1945	...	37·8
1942	...	68·4	1946	...	37·8

The table below classifies the infantile deaths in the Borough, according to the cause of death, and further sub-classifies according to the period of the year when the child died and method of feeding. Illegitimate children and instances where the mother was employed away from home are also indicated. It will be observed that the total number of deaths is 126 as opposed to 101 as stated above. The difference between these figures is explained by the fact that the 126 deaths includes 26 out-transfers, *i.e.*, non-residents, but does not include 1 in-transfer, *i.e.*, a resident of Blackpool who died out of the Borough.

CAUSES	YEAR		QUARTERS								FEEDING			No Information	Mother employed away from home	Illegitimate	
	Under 3 mths.	Total	First		Second		Third		Fourth		Not Fed	Breast Fed	Hand Fed partly or entirely				
			Under 3 mths.	Total	Under 3 mths.	Total	Under 3 mths.	Total	Under 3 mths.	Total							
1. Common Infectious Diseases (Measles Diphtheria and Whooping Cough) ...	...	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Diarrhoeal Diseases :— Diarrhoea, Enteritis and Gastritis ...	3	7	—	1	1	1	1	1	1	4	—	—	7	—	—	—	—
3. Congenital Malformations ...	19	21	7	8	4	4	2	2	6	7	3	1	4	13	—	4	—
4. Premature Births, Debility, Icterus, etc. ...	40	41	7	7	15	16	9	9	9	9	13	2	2	24	2	—	—
5. Tubercular Diseases ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Other Causes—Convulsions ...	1	2	1	2	—	—	—	—	—	—	—	1	1	—	—	—	—
Bronchitis ...	1	4	1	2	—	2	—	—	—	—	—	—	4	—	—	—	—
Pneumonia ...	8	15	3	4	3	4	—	—	2	7	1	2	9	3	—	—	—
Other Causes ...	29	36	10	11	10	11	3	4	6	10	9	4	8	15	1	2	—
TOTALS ...	101	126	29	35	33	38	15	16	24	37	26	10	35	55	3	6	—

Uncertified Deaths.—The Coroner held inquests in respect of 122 deaths. 57 deaths were registered without certification.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES

Poliomyelitis.—The overall picture of Infectious Disease in the Borough does not call for any particular comment except with regard to Poliomyelitis. During 1947 there has been an epidemic of this particular disease which has spread to all parts of the country. Blackpool has been rather more fortunate than some areas and only 10 positive cases have been recorded. As might be expected during such an epidemic a large number of suspected cases were referred to the Health Department and all of these were admitted to the Isolation Hospital as a precautionary measure. Of the 10 positive cases 9 were admitted to the Isolation Hospital, the remaining case being of a mild nature and the specialist to whom the child was referred did not consider hospitalisation necessary. There were 2 deaths among the Blackpool residents affected. Brief details of the remaining 7 cases are given below :

Patient	Age	Sex	Isolation Hospital		REMARKS
			Admitted	Discharged	
K.W.F.	7 years	M	26/8/47	16/9/47	Slight paresis thigh muscles. Condition improved. Discharged home well.
T.L.	6 years	M	13/9/47	16/10/47	Paresis left arm and back. Condition improved. Discharged home well.
After initial isolation, the following patients were transferred to the Orthopaedic Department of the Victoria Hospital :					
P.B.	5½ years	F	12/8/47	16/9/47	Condition on Admission Extensive involvement of both lower limbs, back, and to some extent, abdominal muscles. Treatment Double P.O.P. spica, with repeated changes. Physiotherapy. Condition on discharge Considerable improvement in back movements; only 1 degree of movement in the feet.
J.A.G.	18 months	M	13/9/47	15/10/47	Condition on Admission Bilateral gluteal paresis. Treatment Double P.O.P. spica with subsequent changes Left walking caliper and exercises. Condition on discharge Walking well with left leg iron and drop-foot-strap.
D.M.S.	28 years	F	2/11/47	26/11/47	Condition on Admission Could move arms; but not much leg movement; right facial palsy. Treatment Bilateral plaster spica; toe exercises; left leg iron with outside T. strap. Condition on discharge Ambulatory with leg iron.
J.M.A.	11 years	F	7/11/47	10/12/47	Condition on Admission Left foot drop; right quad involvement. Abdominal muscle involvement. Treatment P.O.P.; bed exercises; two sticks; inside leg iron. Condition on discharge Fully ambulatory with aid of leg iron. Abdominal musculature much improved.
B.C.	27 years	M	13/11/47	1/12/47	Condition on Admission Both legs and right arm involved. Right leg immovable. Treatment Re-education; physiotherapy. Condition on discharge Ambulatory with bilateral calipers.

Scarlet Fever.—The number of cases shows a slight decrease from the preceding year. This is most satisfactory and seems to indicate that the incidence of the disease, which reached its peak during the war years when there was considerable overcrowding, is now on the decline. In the majority of cases, 118 out of 140, it was not possible to isolate the patient at home satisfactorily and they were admitted to the Isolation Hospital. There were no deaths.

Diphtheria.—44 cases were recorded during the year and there was one death. All patients were admitted to the Isolation Hospital. It is hoped that the tendency for the incidence of the disease to fall can be maintained in future years.

PREVENTION OF DIPHTHERIA

Every opportunity is taken to encourage mothers to bring their children to the Health Centre for immunisation on or about the first birthday and the response is reasonably satisfactory. 1,314 children were immunised during the year, 801 of these were dealt with before their second birthday.

In addition to the above 1,281 children of school age were immunised or re-immunised under arrangements made by the School Medical Clinic.

The tables below give the numbers of children immunised in various age groups in relation to child population, and also the number of diphtheria notifications and deaths in relation to immunisation.

1. IMMUNISATION IN RELATION TO CHILD POPULATION.

NUMBER OF CHILDREN WHO HAD COMPLETED A FULL COURSE OF IMMUNISATION AT ANY TIME UP TO THE 31ST DECEMBER, 1947.

Age at 31/12/47 (i.e. Born in Year)	Under 1 1947	1 1946	2 1945	3 1944	4 1943	5—9 1938—1942	10—14 1933—1937	Total under Sixteen
Number Immunised	52	646	645	952	941	6620	8047	17903
Estimated Mid-year Population 1947	8630					15960		

2. DIPHTHERIA NOTIFICATIONS AND DEATHS IN RELATION TO IMMUNISATIONS.

Age at Date of Notification	Number of cases Notified	Number of cases included in previous column in which the child had completed full course of immunisation	Age at Date of Death	Number of Deaths	Number of cases included in previous column in which the child had completed full course of immunisation
Under 1	—	—	Under 1	—	—
1	—	—	1	—	—
2	2	1	2	—	—
3	3	3	3	—	—
4	3	2	4	—	—
5 to 9	15	11	5 to 9	1	—
10 to 14	5	4	10 to 14	—	—
TOTALS	28	21	TOTALS	1	—

Measles.—975 cases were notified, 36 of which were admitted to the Isolation Hospital. There were no deaths. The number of cases fluctuates from year to year and although the disease is notifiable little impression, if any, is made on its incidence by administrative measure. Measles, so far as it is controllable must be dealt with by domestic rather than general administrative action and the infectious diseases nurses always impress on the family the possible gravity of the disease, and the desirability of protecting children, particularly the younger ones, from known infection.

Puerperal Pyrexia.—34 cases were notified and 19 were admitted to hospital for observation and treatment. Whilst the number notified reveals an increase over last year's figures, which were unusually low, it is still below the average for the war years in spite of an increased number of births.

Chickenpox.—672 cases were notified, 15 of which were admitted to the Isolation Hospital. All cases recovered.

Whooping Cough.—During the year 267 cases were notified and 10 patients were admitted to the Isolation Hospital. 1 death was attributed to this disease. In conjunction with this Authority's scheme for Diphtheria immunisation arrangements are in operation whereby parents may bring their children to the Health Centre for whooping cough immunisation. It is yet too early to state the effect on the incidence of whooping cough. In 720 cases a course of immunisation was completed.

Supervision and Care.—Two whole time Fever trained nurses are employed by this department to visit and advise in the nursing of cases of infectious disease. They work under the direct supervision of the Medical Officer of Health.

Details of visits by nurses and sanitary inspectors to notified cases of infectious disease, houses disinfected, and other work involved in the control of infectious disease, are given below :

(a) Enquiries into cases of infectious diseases and subsequent visits by nurses and inspectors ...	2,133
(b) Houses disinfected after cases of infectious diseases	317
(c) Houses disinfected after cases of tuberculosis ...	118
(d) Other premises disinfected	113
(e) Isolation Notices served on head teachers ...	1,425
(f) Isolation Notices served on school attendance officers	1,425
(g) Other notices served on head teachers	1,339
(h) Other notices served on householders	1,339
(i) Other notices served on school attendance officers	1,339
(j) Notices to Public Library	1,997

Prevalence and Control.—The following tables give details of (1) cases of notifiable diseases notified during the past 12 years, and (2) cases notified and deaths attributable to the disease classified according to age groups.

TABLE 1.

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
Small Pox	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and Membraneous Croup	58	70	169	177	65	179	114	81	56	95	44	44
Erysipelas	52	27	44	44	39	51	34	35	51	44	46	33
Scarlet Fever	265	161	211	336	298	460	435	566	530	219	148	140
Enteric Fever	—	7	6	3	7	38	2	3	7	17	9	1
Puerperal Fever	5	5	} 28	61	49	69	55	56	65	34	8	34
and Puerperal Pyrexia	20	23										
Measles	2478	428	1430	441	3254	1388	1646	913	1526	715	883	975
Tuberculosis :												
(a) Pulmonary	114	127	133	152	190	205	194	188	189	202	201	204
(b) Non-Pulmonary	46	56	60	78	75	64	83	81	61	68	60	32
Cerebro-Spinal Meningitis	—	—	2	7	40	134	114	18	12	4	8	5
Poliomyelitis	—	2	—	1	2	2	2	—	—	—	2	10
Ophthalmia Neonatorum	14	16	9	10	11	9	9	11	7	1	—	2
Encephalitis Lethargica	1	—	1	—	—	1	1	—	1	—	—	—
TOTALS	3128	935	2128	1339	4889	2600	2689	1952	2505	1399	1409	1480

Isolation Hospital.—The following table gives the number of patients admitted to and discharged from the Isolation Hospital during the year, classified according to disease :

DISEASE		Remaining in at end of 1946	Admitted during 1947	Discharged during 1947	Died during 1947	Average stay of Non-fatal Cases	Average stay of Fatal Cases	Remaining in at end of 1947
Scarlet Fever	...	1	55	54	—	32	—	2
	M. F.	11	63	64	—	32	—	10
Diphtheria	...	1	10	8	—	55	—	3
	M. F.	5	34	37	1	55	1	1
Enteric Fever	...	—	1	1	—	40	—	—
	M. F.	—	—	—	—	—	—	—
Measles	...	2	22	24	—	17	—	—
	M. F.	1	14	15	—	20	—	—
Puerperal Pyrexia and Fever	...	—	19	19	—	11	—	—
Erysipelas	...	—	7	7	—	11	—	—
	M. F.	1	14	14	—	12	—	1
Tuberculosis	...	7	21	22	—	106	—	6
	M. F.	5	19	22	—	97	—	2
Other Diseases	...	7	128	120	9	16	1	6
	M. F.	6	180	172	8	20	8	6
TOTALS	...	47	587	579	18	—	—	37

TUBERCULOSIS

Notifications.—The total number of cases notified during the year was 236 comprising 204 Respiratory and 32 non-respiratory cases. Of these 78 (67 respiratory and 11 non-respiratory) were supplementary notifications as follows :

- (i) 8 from Death Returns.
- (ii) 19 cases Lost Trace Returned.
- (iii) 47 In-transfers from other areas, and
- (iv) 4 posthumous notifications.

During the war years there was a considerable increase in the number of primary notifications suggesting an increase in the incidence during those years. In the present year the figure 158 is again a reduction on the previous year and seems to bear out my remark in last year's Report that the incidence appears to be on the decline. For comparison the figures for years since 1938 are given below :

1938 ...	131	1943 ...	181
1939 ...	139	1944 ...	157
1940 ...	185	1945 ...	190
1941 ...	190	1946 ...	185
1942 ...	194	1947 ...	158

Mortality.—The number of deaths registered during 1947 as being attributable to tuberculosis was 82 (74 respiratory and 8 non-respiratory). This figure includes 12 cases who had not previously been notified as suffering from the disease.

Notification Register.—The following table shows the number of cases of Tuberculosis on the register at the end of 1946, the fluctuation of patients during the year under review and the number remaining at the end of 1947.

Type and Sex of Cases	Remain- ing on Register, 31/12/46	Notifi- cations including Inward Transfers	Died	Recovered	Transferred	Lost Trace	Altered Diag- nosis	Remain- ing on Register at 31/12/47
Respiratory Tuberculosis :								
Male	300	117	54	16	19	8	2	318
Female	243	87	31	13	16	5	2	263
Non-Respiratory Tuberculosis :								
Male	115	15	2	4	4	3	—	117
Female	145	17	3	3	9	3	—	144
TOTALS	803	236	90	36	48	19	4	842

The following table gives the number of notifications of tuberculosis during the year and the deaths occurring as shown from the Notification Register, both analysed according to Age Groups :

AGE PERIODS	PULMONARY TUBERCULOSIS				NON-PULMONARY TUBERCULOSIS			
	Notifications Males	Notifications Females	Deaths Males	Deaths Females	Notifications Males	Notifications Females	Deaths Males	Deaths Females
0 to 1 ...	—	1	—	—	—	—	—	—
1 to 5 ...	3	—	—	—	3	1	1	—
5 to 10 ...	2	—	—	—	3	4	—	—
10 to 15 ...	—	3	—	1	3	3	—	—
15 to 20 ...	7	6	—	—	3	2	—	—
20 to 25 ...	14	19	—	4	—	1	—	—
25 to 35 ...	34	31	8	11	3	4	—	1
35 to 45 ...	17	13	7	4	—	1	—	—
45 to 55 ...	22	6	19	5	—	1	—	—
55 to 65 ...	15	3	14	1	—	—	—	—
65 and upwards	3	5	6	5	—	—	1	—
Totals	117	87	54	31	15	17	2	3

It should be noted that the deaths shown in the above tables are the total number of deaths of persons on the register and not necessarily those whose death was classified as due to tuberculosis.

Compulsory Isolation of Cases.—It was not found necessary during the current year to take action under Section 172 of the Public Health Act, 1936, for the removal of patients to hospital.

The Dispensary.—This is the focal point of the Tuberculosis service maintained by this Authority. The following important functions are carried out: (a) examination and diagnosis of suspected cases referred by general practitioners, (b) recommendations for treatment of definite cases of tuberculosis, (c) treatment of cases under domiciliary care, including the giving of artificial pneumothorax refills.

The Tuberculosis Officer and a Tuberculosis Health Visitor are in attendance at each dispensary. Dispensaries are held on Monday, Tuesday and Friday afternoons—Monday afternoons being reserved for new cases and contacts.

Of the 842 cases on the Notification Register at the end of the year, 774 or 90·7% were attending the dispensary. It is gratifying to report such a large percentage of patients take advantage of our dispensary services. During the year under review 156 cases were removed from the dispensary register for the following reasons:

Recovered	...	...	...	...	31
Removed to other areas	...	...	...	...	34
Died	...	...	...	...	72
For other reasons	...	...	...	...	19

During the year 1,599 cases, excluding contacts, were examined, and there were 6,067 attendances in all. Of the 1,599 cases examined, 785 were new cases, i.e. patients referred to the dispensary for the first time, and does not include in-transfers from other areas or contacts. Of these new cases 142 (122 respiratory and 20 non-respiratory) were diagnosed as tuberculous by the Tuberculosis Officer.

I am again able to comment favourably on the co-operation between general practitioners and the dispensary. This co-operation is evidenced by the large number of new cases examined. Whilst there is a slight decrease in comparison with 1946, the number is still well above double the pre-war figure. Co-operation between family doctor and the dispensary invariably results in patients being referred for treatment earlier with the consequent improved chances of complete recovery. It should be observed that although the number of cases examined has more than doubled since pre-war the number of cases diagnosed by the Tuberculosis Officer has only risen by just over one-third.

The figures given below indicate to what extent the work of the Dispensary has increased during recent years.

Year		Total cases examined	Total attendances	Cases seen for first time	Cases diagnosed as T.B.
1938	...	645	5323	331	115
1939	...	833	4504	382	107
1940	...	845	3174	380	145
1941	...	942	3331	508	130
1942	...	1053	3879	579	175
1943	...	1260	4476	713	166
1944	...	1286	4832	748	136
1945	...	1357	6242	748	171
1946	...	1521	6169	814	172
1947	...	1599	6067	785	142

Appended is a further table built up from the quarterly reports submitted to the Ministry of Health, which summarises the work of the Dispensary.

DIAGNOSIS	PULMONARY				NON-PULMONARY				TOTAL				GRAND TOTAL
	Adults		Children		Adults		Children		Adults		Children		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
A.—(1) Number of definite cases of Tuberculosis on the Register at the beginning of the year	253	214	7	7	35	62	77	66	288	276	84	73	721
(2) Transfers from Authorities of areas outside that of the Council or Board during the year	19	19	2	—	2	4	2	—	21	23	4	—	48
(3) Lost sight of cases returned during the year	12	7	—	—	—	—	—	—	12	7	—	—	19
B.—Number of NEW CASES diagnosed as tuberculosis during the year :—													
(1) Class T.B. minus	27	21	3	3	—	—	—	—	27	21	3	3	54
(2) Class T.B. plus	39	29	—	—	—	—	—	—	39	29	—	—	68
(3) Non-Pulmonary	—	—	—	—	2	3	6	9	2	3	6	9	20
C.—Number of cases included in A. and B. written off the Dispensary Register during the year as :—													
(1) Recovered	14	13	1	—	—	—	1	2	14	13	2	2	31
(2) Dead (all causes)	43	25	—	—	1	2	—	1	44	27	—	1	72
(3) Removed to other Areas	11	13	1	—	1	4	1	3	12	17	2	3	34
(4) For other reasons	7	5	1	—	1	—	2	3	8	5	3	3	19
D.—Number of definite cases of Tuberculosis on the Dispensary Register at the end of the year	275	234	9	10	36	63	81	66	311	297	90	76	774

Treatment Allowances.—Ministry of Health memorandum 266/T empowers Local Authorities to make a maintenance allowance to certain patients suffering from Tuberculosis of the respiratory tract where the Tuberculosis Officer advises them to cease employment to undergo treatment and their income as a result ceases. Three types of allowances may be recommended under this scheme, viz. :

- (i) Standard maintenance allowance, which includes allowances for dependants and rent,
- (ii) Special payments, to be made in certain circumstances, e.g. travelling expenses for near relatives visiting patients in Sanatoria and pocket money for patients.
- (iii) Discretionary payments, payable on proof of need, in cases where extra expenditure is incurred by the patient which could not reasonably be met out of the standard maintenance allowance referred to above.

At the commencement of the year under review 47 cases were receiving allowances ; during the year 57 new cases were granted an allowance, thus making a total of 104 patients receiving benefits under the scheme.

The number of cases remaining at the end of the year was 56. The cost of the scheme was £4,640 14s. 2d. but it should be observed that Local Authorities are reimbursed by Government grant for any expenditure involved.

Necessitous Cases.—Whilst all active cases of tuberculous are entitled to priority supplies of milk, eggs and fats, certain other cases on domiciliary treatment receive, on grounds of financial hardship, free supplies of milk. Usually each patient concerned receives one pint of milk daily but in exceptional instances the Tuberculosis Officer recommends two pints daily. During the year under review 143 patients received supplies of free milk at a total cost to this Authority of £537 10s. 2d.

Artificial Pneumothorax Treatment.—The artificial pneumothorax clinic is operating to full capacity and serves an excellent purpose—many cases who would otherwise require rest therapy can now remain ambulant. This frees hospital beds and staffs for more complicated cases and there is undoubtedly a psychological benefit to the patient who may to a limited extent resume his or her place in society.

Refills are given at varying intervals according to the individual need of the patients and during the year 2,156 refills were given. A total of 132 patients (75 male and 57 female) were treated and of these 34 (20 male and 14 female) were induced for the first time.

Contacts.—Perhaps one of the most vital elements in any anti-tuberculosis scheme is the examination of contacts, particularly children and adolescents, with a view to preventing, if possible, the occurrence of tuberculosis, or in the event of the disease being present, of making a diagnosis early when treatment may be expected to have the most beneficial results.

During the year under review 464 contacts were examined, of whom 255 were new cases. There were 671 attendances in all and of the cases examined 5 were found to be suffering from active pulmonary tuberculosis.

As a result of increased efforts by the Tuberculosis Health Visitors it has been found possible to persuade an increasing number of contacts to attend the dispensary for periodical clinical and radiological examination. The increased attendances of contacts over the past 10 years, as indicated below, is most gratifying.

Year	Attendances	Year	Attendances
1938	135	1943	259
1939	163	1944	298
1940	126	1945	345
1941	358	1946	386
1942	264	1947	464

Sputum Examination.—3,439 specimens of sputa were examined at the Municipal Health Centre Laboratory. This again shows an increase on the number examined in the previous year. Of the specimens examined 390 proved positive for tubercle bacilli.

X-Ray Examination.—The fullest use of the Radiological Department is made by the Tuberculosis Officer and during 1947 the number of tuberculous patients and contacts dealt with was 2,499. In addition screening facilities are available at the weekly artificial pneumothorax clinic.

Sunlight Treatment.—Considerable use is made of ultra violet radiation therapy in certain cases of non-pulmonary tuberculosis. 185 new cases were treated during the year and a total of 2,378 exposures given. Local exposures with the Kromayer lamp were given in 101 instances.

Home Visitation.—All notified cases, patients under observation, and contacts, are visited periodically by the Tuberculosis Health Visitors, except in a few isolated instances where the person has expressed a desire not to be visited. Details of visits are given below :

	Pulmonary.	Non-Pulmonary.	Total.
Primary Visits	161	37	198
Subsequent Visits...	3549	1834	5383
Special Visits to Contacts	...	...	157
do. Observation Cases	...	...	66
Death Enquiries	...	...	20

In addition a number of cases are visited at home by the Tuberculosis Officer—these visits are arranged chiefly in consultation with the family doctor.

Sanatorium Treatment.—Annexes A and D at the Victoria Hospital, Blackpool, and Wards VI and VII at the Isolation Hospital, Blackpool, remained open throughout the year in spite of staffing difficulties. The accommodation was utilised to the full extent so far as suitable cases were available, e.g. chronic cases and patients undergoing rest therapy preparatory to induction of artificial pneumothorax. Patients requiring prolonged rest and treatment or surgical intervention are admitted to sanatoria and hospitals in various parts of the country. The four patients in institutions marked below with an asterisk made their own arrangements for admission thereto and subject to the submission of periodical progress reports from the medical officer of the Institution, the Health Committee makes a grant towards the fees payable by the patient. The following table shows the admissions and discharges for the various institutions during the year 1947.

Institution	In Residence 1st Jan. 1947	Ad- mitted during 1947	Discharged during year			Re- maining 31st Dec. 1947
			Im- proved	Not Im- proved	Died	
Blackpool Isolation Hospital :						
Ward VI ...	6	22	12	8	—	8
Ward VII ...	9	20	10	14	2	3
Victoria Hospital :						
Annexe A ...	17	65	19	23	19	21
Annexe D ...	15	50	11	26	8	20
General Ward ...	—	2	—	2	—	—
Abergele Sana- torium, N. Wales	1	1	1	1	—	—
Crossley Sana- torium, Frodsham	4	6	1	4	—	5
David Lewis Hos- pital, L'pool ...	—	1	—	1	—	—
Douglas House, Bournemouth ...	—	1	—	—	1	—
Fairfield Sana- torium, York ...	—	1	—	1	—	—
Fazakerley Sana- torium, L'pool ...	—	2	1	1	—	—
High Carley Sana- torium, Ulverston	—	1	—	—	—	1
*King Edward VII Sanatorium, Mid- hurst	—	1	—	—	—	1
Lancaster Pulm. Hospital ...	—	2	—	1	—	1
L'pool Open Air Hospital for Children, Leasowe, Wirral	5	1	1	2	—	3
Oakwood Hall Sana- torium, Rotherham ...	1	—	—	—	1	—
Papworth Hall Settlement, nr. Cambridge ...	1	—	—	—	—	1
Robt. Jones & A. Hunt Hospital, Oswestry... ..	1	6	—	6	—	1
Westmorland Sana- torium, Meathop, Nr. Grange ...	19	26	11	14	2	18
Wrightington Hos- pital, Nr. Wigan	—	3	1	—	—	2
*Kurhaus, Clavadel, Nr. Davos, Switzerland ...	2	—	—	—	—	2
*Société des Estab- lissement Helio- therapique, Leysin, Switzerland ...	1	—	—	1	—	—

Mass Miniature Radiography.—It has for a long time been felt desirable that a mass radiography survey should be carried out in the Borough and in October of this year, by arrangement with the Lancashire County Council, the M.M.R. Unit opened at the Municipal Health Centre, Whitegate Drive, Blackpool. It is anticipated that the Unit will remain open for approximately 6 months.

Intensive propoganda has been carried out, including notices in the press, notices in places of employment, and addresses by the Organising Secretary of the Unit. I am indebted to the Local Trades Council for their co-operation in this particular aspect of the survey.

Staffs of the Municipal Offices, Civil Service Departments and employees in industrial establishments, staffs of shops and offices and members of the general public have been invited to take part in the survey. Arrangements have also been made for workers to be conveyed to and from the M.M.R. unit in transport provided by the Municipal Transport Department.

Full details of the survey will be given in the Annual Report for 1948.

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA

Laboratory Facilities.—As in previous years Bacteriological and Pathological specimens are examined at the undermentioned laboratories :

- (a) Municipal Health Centre Laboratory.
- (b) Department of Pathology, Victoria Hospital, Blackpool.
- (c) Public Health Laboratory, Manchester University.

Details of specimens are as follows :

Municipal Health Centre.

Throat swabs for Diphtheria Bacilli	1691
Sputa for Tubercle Bacilli	3439
Smears for Gonococci	1926
Urine for Tubercle, Sugar, etc.	400
	7456

Department of Pathology, Victoria Hospital.

Throat swabs...	436
Sputa ...	4
Faeces...	111
Urine ...	286
Widals	2
Cerebro-spinal fluids...	2
Blood ...	64
Food ...	20
Others...	9
	934

Public Health Laboratory, Manchester.

Wassermann Tests	3477
G.C.F. Tests	260
Kahn Tests	64
	<hr/>
	3801
	<hr/>

Ambulance Facilities.—The ambulance service for the Borough is as follows :

- (a) Infectious cases : Two ambulances stationed at the Isolation Hospital.
- (b) Maternity Cases : One ambulance stationed at the Isolation Hospital.
- (c) Non-infectious cases, accidents, etc. : Three ambulances stationed at and maintained by the Transport Department of this Authority.

HOSPITALS.

- (a) **Local Authority, etc., Hospitals.**—The hospitals provided or subsidised by this authority are as follows :
 - (i) One Isolation Hospital for the treatment of general infectious diseases and tubercular cases with accommodation for 120.
 - (ii) One hospital for smallpox cases, situated at Elswick, nr. Kirkham, Lancashire, and used jointly by the Borough of Blackpool, Preston, Lytham St. Annes and the Councils of the Fylde District.
- (b) **General Hospitals.**—There is one voluntary hospital, the Victoria Hospital, within the Borough, the number of beds available being 315. The General Superintendent of the Hospital has been good enough to supply me with the following details of patients dealt with during the year.

IN-PATIENTS :

No. of patients admitted during the year	6435
Average number of days each patient was resident ...	14·9

OUT-PATIENTS.—The number of attendances during the year may be classified as follows :

	First Attendances	Subsequent Attendances
Medical	1433	1553
Surgical	1900	1678
Ante-Natal (Obstetrics)	280	1743
Radium	159	1349
Orthopaedic	3065	6485
Ophthalmic	862	1571
Aural	1607	2586
Dental	50	61
Gynaecological	679	489
Psychiatric	199	434

CASUALTY DEPARTMENT :

New patients	...	...	...	...	...	9944
Post Casualties	...	...	...	...	...	9098

DEPARTMENT OF RADIOGRAPHY :

In-patients	...	...	...	...	...	2115
Out-patients	...	...	...	...	...	6326
No. of Radiographs	...	...	...	...	...	19967
No. of Screenings	...	...	...	...	...	6384

DEPARTMENT OF PHYSIOTHERAPY :

In-patients	3776
Out-patients	28213

DEPARTMENT OF PATHOLOGY :

No. of Units examined	95865
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OPERATING THEATRES :

Major Operations	4821
Minor Operations	1077

Social Welfare.—Under the provisions of the Local Government Act, 1929, responsibility for providing indoor and outdoor medical relief devolved on this Authority. For administrative purposes the Borough is divided into three areas—North, Central and South—the Medical Officers of which are Drs. Lucas, Hyde and Kelly respectively.

For the purposes of indoor medical relief under the provisions of the above Act, this Authority entered into an agreement with the Lancashire County Council for the use of the Infirmary at Wesham, Near Kirkham, Lancashire, for the treatment of Blackpool cases. The institution is under the management and control of the County Council, and the area served by it comprises Blackpool, Lytham St. Annes, Kirkham, Poulton, Thornton, Fleetwood and the Fylde Rural District, with a combined area of 67,509 acres and a population of 170,625 according to the 1931 census. The available accommodation is as follows—Males, 68 beds; Females, 69 beds; Children, 3 beds; Maternity Cases, 6 beds.

The following table gives numbers of persons in receipt of non-medical out-relief at the quarters ended 31st March, 30th June, 30th September, and 31st December, 1947.

Quarter ended	Men	Women	Children	No. of families
31st March, 1947 :				
North	38	57	34	81
Central	26	61	40	71
South	31	71	55	86
Total	95	189	129	238
30th June, 1947 :				
North	37	47	36	72
Central	26	59	25	72
South	26	60	47	76
Total	89	166	108	220
30th September, 1947 :				
North	38	46	34	70
Central	24	65	37	76
South	25	55	36	69
Total	87	166	107	215
31st December, 1947 :				
North	28	52	21	73
Central	41	75	35	93
South	32	72	63	89
Total	101	199	119	255

District Nursing.—Seven nurses are employed by this Authority for nursing duties amongst the sick poor in the Borough. Normally the nurses act under instructions from the patient's own doctor, but cases do arise where there is no doctor in attendance, as in many chronic bedridden patients, and in such circumstances the nurses receive their instructions from me or act on their own initiative. A small charge is made for this service, based on the patient's financial circumstances. Throughout the year 578 new patients were referred to the department and a total of 12,267 visits made.

Ladies' Sick Poor Association.—A total of 1,477 cases were dealt with by this voluntary association during the year. It should be noted, however, that the association works on a monthly basis and the number of patients to whom relief has been afforded is not synonymous with the number of cases. Many patients are chronic invalids and consequently receive assistance for protracted periods. The Association

has been instrumental in providing supporting belts, calipers and other surgical appliances. Ambulance fees have been met to convey patients to other towns for special treatment. Nourishments and other comforts have been supplied and are greatly appreciated. In a number of instances arrangements have been made for patients to receive treatment in convalescent homes. To ensure that assistance is given only to genuine cases the Association require that all requests are supported by Medical recommendation.

Public Vaccination.—Your Medical Officer of Health is Chief Public Vaccination Officer for the Borough and also Executive Vaccination Officer for the Northern Area. The Vaccination Officer for the Southern Area of the Borough is Mr. J. Bootle, the Registrar of Births and Deaths for that area.

The Public Vaccinators for the Borough are Drs. Lucas, Hyde and Kelly.

The following details have been extracted from the Annual Returns submitted to the Registrar General and relate to the year 1st January to 31st December, 1946.

(a) Births registered during 1946	1860
(b) Children successfully vaccinated	254
(c) Children insusceptible to vaccination	—
(d) Children in respect of whom a statutory declaration of conscientious objection has been received	572
(e) Children who died unvaccinated	71
(f) Cases where vaccination postponed by medical certificate	7
(g) Removals to other districts, the Vaccination Officers of which have been notified	244
(h) Removals to places unknown	22
(i) Number of the births remaining on 31st January, 1947 neither duly entered in the Vaccination Register nor temporarily accounted for in the Report Book	690

MATERNITY AND CHILD WELFARE

The work carried out under this branch of the social services is of a varied nature and may be reported under the following headings.

(1) **Inspection of Registered Midwives.**—There are 19 midwives engaged in private practice within the Borough—9 in domiciliary practice and 10 in Nursing Homes. The midwives in domiciliary practice are visited at least four times annually when their bags, appliances, registers, etc., are examined and they are advised of any defaults. 38 visits have been made throughout the year. Those midwives employed in Nursing Homes are visited periodically when the Maternity and Child Welfare Medical Officer and a senior health visitor of this department make their routine visits to these Homes. Midwives are compensated by the Local Authority in cases where they are temporarily suspended for purposes of disinfection or where their patients are taken into the Municipal Maternity Home.

(2) **Municipal Midwifery Service.**—Five midwives are employed in the Health Department for domiciliary midwifery duties. Throughout the year these midwives attended 339 cases as midwives and 105 cases as maternity nurses. This represents an increase of 49 cases over last year, in spite of the fact that there is undoubtedly an increasing preference being displayed by women to have their confinements in maternity homes.

(3) **Emergency Maternity Homes.**—The ante and post-natal hostel for ex-servicewomen, "Greystones," Lytham Road, remained open for the reception of the mothers and children until 22nd March, 1947. The premises were subsequently disposed of by the Ministry of Health. The mothers and children are now dealt with at the appropriate clinic either at the Health Centre, at Hawes Side Lane, South Shore, or at Red Bank Road, Bispham.

(4) **Ante-Natal Supervision.**—Four Ante-Natal clinics are held weekly, one of which is for patients booking accommodation for confinement in the Municipal Maternity Homes. Patients are advised to attend the clinic at least once a month with the exception of the last month of pregnancy when they should attend weekly. Each patient is medically examined on each attendance at the clinic and where necessary are referred to the Light Treatment Clinic for exercises, massage or light therapy—see paragraph 17 below.

A representative from the local Food Office attends each clinic and distributes orange juice, cod liver oil and vitamin capsules.

The Health Visitors for the district covered by the clinic attend at each session and also make frequent visits to the patients in their own homes. Where considered necessary, the Medical Officer of the Clinic makes home visits.

During the year the attendances at the clinics were as follows :

	First Visits	Subsequent Visits
General Ante Natal Clinic	800	5338
Maternity Home Clinic	1271	3798

(5) **Dental Treatment.**—Cases occasionally come to the notice of this department where women are in need of dental treatment which they cannot afford. In such circumstances the medical officer at the appropriate clinic refers the patient to one of three dental surgeons appointed by the Council. Throughout the year 27 women received treatment. They are expected to make some contribution to the cost according to their financial circumstances, and the council meets the balance of the charges, which for the year 1947 was £84 5s. 9d.

(6) **Home and Domestic Helps.**—This service continued to function during 1947 but only very inadequately. As I have stated in previous reports great difficulty is experienced in recruiting suitable personnel owing to the more attractive wages offered by the extensive catering, hotel and boarding house organisations operating in Blackpool. Throughout the year 3 women were employed (2 whole time and 1 part time) and 3 patients were supplied with a home help.

(7) **Medical Assistance or Attendance of Midwives at Confinement.**—Financial help is given by the Health Committee in appropriate cases to assist patients to pay the doctor's and midwife's fee, in whole or in part. All these cases are carefully investigated as to necessity. During the year fees were paid as follows :

Full doctors' fees	...	9
Part „	...	11
Full midwives' fees	...	5
Part „	...	Nil

(8) **Residential Accommodation for Maternity Cases.**—“ Glenroyd ” Maternity Home taken over from the Ministry of Health on the cessation of the Emergency Maternity Scheme continued to function during the year. “ New Central ” similarly taken over from the Ministry closed on 31st March, 1947. A special ante-natal clinic is held weekly for women desiring admission to these Homes for their confinement. Where necessary during the ante-natal period these cases are admitted for rest and treatment for any abnormality. It appears there is an increasing desire on the part of women to have their confinement in Maternity Homes, as indicated by the following figures showing cases admitted since 1940 :

Year	Admissions	Year	Admissions
1940	576	1944	884
1941	815	1945	913
1942	881	1946	1324
1943	858	1947	1503

Details of work in the Maternity Homes during the year is given below :

Patients admitted	...	...	...	...	...	1503
Patients confined	...	...	...	...	...	1446
Patients attended by midwives	...	...	...	...	...	1293
Patients attended by doctors	...	...	...	...	...	153
Infants not entirely breast fed whilst in the Home	...	...	...	...	...	71
Maternal Deaths	...	...	...	...	...	2
Stillbirths	...	...	...	...	...	38
Infantile Deaths	...	...	...	...	...	32
Cases of Puerperal Pyrexia	...	...	...	...	...	14
Cases of Pemphigus Neonatorum	...	...	...	...	...	Nil
Cases of Ophthalmia Neonatorum	...	...	...	...	...	2

The above cases of Puerperal Pyrexia and Ophthalmia Neonatorum were transferred to the Isolation Hospital for treatment.

The following abnormalities were encountered amongst the cases admitted :

Caesarian Section	...	...	...	8
Forceps delivery	...	...	...	45
Ante-partum haemorrhage	...	...	...	20
Post-partum haemorrhage	...	...	...	54
Secondary post-partum haemorrhage	...	...	...	2
Ruptured perineum	...	...	...	348
Episiotomy	...	...	...	88
Adherent Placenta	...	...	...	19

Breech Delivery	...	...	...	39
Premature Labour	...	...	...	88
Induction of Labour	...	...	...	97
Albuminuria	...	...	...	25
Eclampsia	...	...	...	4
Pyelitis	...	...	...	11
Abortion	...	...	...	1
Ante-Natal Rest	...	...	...	50
External Versions	...	...	...	25
Prolapsed Cord	...	...	...	1

(9) **Post-Natal Clinic.**—This clinic is held at the Health Centre once weekly. Patients are encouraged by the Health Visitors to attend after confinement so that any abnormality can be treated as soon as possible. Unfortunately in spite of every encouragement mothers do not take advantage of this service to the extent that is desired. As against the 2,542 who attended the Ante-Natal clinics only 537 attended the Post-Natal clinic. Nevertheless I am pleased to record that the figure of 537 shows an increase of 137 over the preceding year. It is hoped the efforts of the Health Visitors will meet with increased success in the future.

(10) **Infant Welfare Clinics.**—Throughout the year six clinics per week were held, as follows, commencing at 2 p.m. :

Monday :	Hawes Side Lane Clinic. Bispham Clinic.
Tuesday :	Municipal Health Centre.
Wednesday :	Hawes Side Lane Clinic.
Thursday :	Municipal Health Centre.
Friday :	Bispham Clinic.

Medical and Nursing advice is given to the mothers and the babies weighed. A strict record of the babies' progress is maintained and they are from time to time examined by the Maternity and Child Welfare Medical Officer. The large number of attendances—2,151 first attendances and 25,601 subsequent visits—is evidence of the mothers' appreciation of the work of the clinics. During the year 35,279 packets of dried milk were issued, 1,131 of which were issued free, 187 at less than cost price and the remainder at cost price.

(11) **Home Visitation.**—In addition to the supervision of the children at the clinics, home visiting by the Health Visitors has been carried out and work performed similar in nature to that at the infant welfare clinics. Home visiting has one definite advantage over clinic attendance in that it gives the Visitor an opportunity of observing home conditions and she is then in a better position to give advice on the upbringing of the child. During 1947 the following visits were made :

(a) To expectant mothers :	
First visits ...	668
Subsequent visits ...	535
(b) To children under 1 year of age :	
First visits ...	2527
Subsequent visits ...	6073
(c) To children between 1 and 5 years	9204

The following table summarises the visits by Health Visitors, attendances at Ante Natal and Infant Welfare Clinics, Issues of Dried Milk, etc., and affords a comparison with previous years.

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
A. VISITS BY HEALTH VISITORS.										
<i>Births</i> : First Visits	1204	1535	1218	1572	1707	1865	1863	1662	1959	2527
Subsequent visits	5841	7050	6584	6275	6793	7020	7012	5047	4099	6073
<i>Expectant Mothers</i> : First visits	728	1885	803	1148	1110	1082	1019	630	493	668
Subsequent visits	2417	4829	2372	1817	1880	1595	1851	899	535	535
Stillbirths	60	48	40	50	49	44	46	29	32	54
Deaths	39	43	64	63	86	82	66	39	50	69
Puerperal Fever	5	30	10	6	4	2	9	—	—	2
Ophthalmia Neonatorum	4	5	5	2	6	5	7	—	1	1
Midwives	190	90	106	82	150	39	46	37	9	38
Female Outworkers	—	—	—	1	—	—	—	—	—	—
Children other than newly born	10905	17990	13780	11863	12576	14871	13090	8985	6840	9204
TOTALS	21393	33505	24982	22879	24361	26605	25009	17328	14009	19171
B. ATTENDANCES AT CLINICS.										
<i>Expectant Mothers</i> : First visits	828	1767	1015	1251	1269	1617	1706	1620	2468	2071
Subsequent visits	4594	6994	5055	5760	6236	6607	7040	5865	8493	9136
<i>Children</i> : First visits	947	1486	1517	1400	1360	1616	1854	1546	1551	2151
Subsequent visits	16027	20057	16395	15969	16024	19045	20533	18736	22793	25601
TOTALS	22396	30304	23982	24380	24889	28885	31133	27767	35305	38959
C. SUPPLY OF DRIED MILK (Packets).										
Supplied Free	976	771	608	361	796	701	122	471	352	1131
At reduced charge	2976	3206	2788	909	1921	1964	1366	356	696	187
At nett actual cost	1282	2403	2810	5021	9919	20745	25486	24694	29531	33961
TOTALS	5234	6380	6206	6291	12636	23410	26974	25521	30579	35279
D. PROVISION OF DOCTORS & MIDWIVES.										
Full Midwife's Fee granted	6	—	4	7	8	1	5	1	3	5
Half Midwife's fee granted	20	3	147	78	53	18	7	3	—	—
Full Doctor's Fee granted	70	77	49	37	20	21	18	12	16	9
Half Doctor's Fee granted	37	47	28	31	24	32	14	23	22	11

(12) **Infant Life Protection.**—Before a child is boarded out a visit is made to the prospective foster mother by the Maternity and Child Welfare Medical Officer to ascertain the suitability of the person and her home. Further visits are made at regular intervals by the Health Visitors. 195 such visits were made during 1947.

The following details effectively summarise the work of the department under the Children and Young Persons Acts, 1932—1936.

(a)	Children on the Register at the end of 1946	...	48
(b)	Foster Mothers on the register at the end of 1946	...	35
(c)	New applications received during the year	...	24
* (d)	Applications granted by the Health Committee	...	20
(e)	Children returned to parents	... ..	15
(f)	Children legally adopted	... ..	4
(g)	Children who died during the year	... ..	—
(h)	Children who attained the age of 9 years	... ..	8
(i)	Children transferred to other towns	... ..	—
(j)	Children admitted to institutions	... ..	—
(k)	Children "Lost Trace"	... ..	—
(l)	Children removed to the care of another Foster Mother	... ..	—
(m)	Children remaining on the register at the end of 1947		41
(n)	Foster Mothers remaining on the register at the end of 1947	... ..	31

Note : * 4 applications not submitted for approval—children had left care of foster mother before meeting of Health Committee.

(13) **Dental Treatment for Children.**—Under a similar arrangement to that referred to in (5) above, children attending the Infant Welfare Clinics can be referred to a dental surgeon for treatment where necessary. Unfortunately mothers do not take full advantage of this service and only three children were treated in 1947.

(14) **Orthopaedic Scheme.**—This Authority became participants in the Orthopaedic Scheme maintained by the Lancashire County Council towards the end of 1928. Non tuberculous crippled children under the age of five years who are suffering from rickets, anterior poliomyelitis, spina bifida, talipes, flat foot, etc., are referred by the Maternity and Child Welfare Medical Officer to the Clinic at Fleetwood which is attended by an Orthopaedic Surgeon from Liverpool. During the year under review 22 children requiring advice or treatment were referred to the clinic.

(15) **Birth Control Clinic.**—Great care is exercised in selecting patients at this clinic. Only those women whose health would be endangered by further confinements are seen and advised and a doctor's recommendation is insisted upon. Advice is not given on purely economic or family planning grounds. 57 patients were dealt with and a total of 431 visits to the clinic made throughout the year.

(16) **Investigation of Maternal Deaths.**—These investigations are carried out by the Maternity and Child Welfare Medical Officer. There were 5 such deaths during the year—1 from sepsis and 4 from other causes. This gives a maternal mortality rate of 2.09 per 1,000 total births.

(17) **Light Treatment and Massage.**—The Light Treatment Clinic is open from 9 a.m. to 5 p.m., Monday to Friday, and from 9 a.m. to 12 noon on Saturday. Two Physiotherapists have been appointed to the clinic during the year.

Underdeveloped children begin to improve almost from the first exposure and the results are most satisfactory. Expectant and nursing mothers are also treated as light treatment is beneficial in such cases, it acting as a stimulant and a tonic. The following details summarise the work in the clinic. It will be noted that in addition to Light Treatment, Ante-Natal and Post-Natal exercises and massage is given by the Physiotherapists.

Ante-Natal :			
General U.V.L.	...	...	2799
Radiant Heat	...	...	125
Post-Natal :			
General U.V.L.	...	...	83
Radiant Heat	...	...	6
Babies and Toddlers :			
General U.V.L.	...	...	3758
Massage	...	...	344
Exercises at Clinics :			
Ante-Natal	...	...	534
Post-Natal	...	...	3996
Toddlers	...	...	332
Miscellaneous :			
General U.V.L.	...	...	220
Radiant Heat	...	...	69

(18) **Registration of Nursing Homes.**—Twelve Nursing Homes were on the Register at the end of 1947. These homes are visited periodically by the Maternity and Child Welfare Medical Officer and a senior health visitor of this Department. No orders refusing registration were made during the year.

The condition of the Nursing Homes was found to be satisfactory and any suggestions made for their improvement were carried out.

The following is a list of the Registered Nursing Homes together with the number of beds available :

ADDRESS OF NURSING HOME	BEDS		REMARKS
	Maternity	Others	
22, Moore Street ...	5	4	10 beds allocated as required
46, Sherbourne Road ...	3	8	
230, Hornby Road ...	—	—	
160, Reads Avenue ...	3	3	
412, Lytham Road ...	8	3	
254, Waterloo Road ...	—	8	
333, Lytham Road ...	—	1	
26, Leys Road ...	5	2	
13, Burgate ...	1	—	
104, Reads Avenue ...	6	—	
270, Norbreck Road ...	2	—	
67, Park Road ...	—	6	

(19) **Day Nurseries.**—The five nurseries continued to function fully throughout the year. The total accommodation is for 250 children. Charges for admission are made on a sliding scale based on the financial circumstances of the applicants. Undoubtedly these nurseries are appreciated by those mothers who for economic reasons are obliged to work. In view of the large number of mothers wishing to avail themselves of this branch of our social services it is necessary to maintain a fairly lengthy waiting list. The following table shows the admissions and discharges in respect of each nursery and the average daily attendance over the current year.

Nursery	Admitted	Discharged	DAILY AVERAGE ATTENDANCE	
			Under 2 years	2-5 years
Counce Street ...	60	53	6.4	22.4
Claremont Park ...	75	75	7.1	18.5
Glastonbury Ave.	76	70	9.5	22.0
Lostock Gardens	53	59	6.7	25.4
Lytham Road ...	61	65	9.9	24.2

(20) **Premature Children.**—Consequent on Circular 20/44 this Authority purchased three special infant cots and installed them in "Glenroyd" Maternity Home. As the premises used for this Home had been requisitioned it was not considered advisable to incur considerable financial outlay on structural alterations, but an improvised nursery was provided.

In the training of pupil midwives special attention is given to the care of premature infants.

For the conveyance of these infants to the Maternity Home a specially heated motor ambulance is available and this is equipped with the usual accessories.

On the discharge of the infant from the Maternity Home the Senior Municipal Midwife is notified and she "follows up" each case and reports progress direct to the Maternity and Child Welfare Medical Officer. Hot water bottles, special feeding bottles, thermometers and mucus catheters are available at the Health Centre for issue as required for domiciliary use.

Special Birth Notification cards were printed as a result of the above mentioned Circular and these provide space for recording the weight of the child at birth.

Details of Premature Births during 1947 are as follows :

(a)	Notified during 1947 (mother normally resident in Blackpool)	158
(b)	Premature babies born :	
	(i) At home	13
	(ii) In hospital or nursing home	145
(c)	Number of those born at home :	
	(i) Who were nursed entirely at home	13
	(ii) Who died during the first 24 hours	—
	(iii) Who survived at the end of one month	11
(d)	Number of those born in hospital or nursing home :	
	(i) Who died during the first 24 hours	10
	(ii) Who survived at the end of one month	130

(21) **Illegitimate Children.**—A Social Worker has not been appointed for the purposes of Circular 2,866 as it is considered that the District Health Visitors in collaboration with the Fylde House of Help and the Lancaster Diocesan Rescue Society can adequately cover all aspects of welfare work for the unmarried mother and her child. Where necessary close co-operation is maintained with the local Probation Officers. An annual grant is made to the Fylde House of Help by this Authority in addition to any maintenance fees incurred by the Home.

Medical Examination of Entrants to the Municipal Service.

—All entrants to the Local Government service in the Borough are medically examined at the Health Centre and a certificate of fitness or otherwise is forwarded to the department concerned. 1,790 examinations of a varying nature were carried out during 1947.

Cremations.—Your Medical Officer of Health and Tuberculosis Officer are respectively the Medical Referee and Deputy Medical Referee to the Crematorium. 1,396 cremations were authorised during the year under review. For comparison I give below the numbers of cremations authorised for each year since the crematorium opened in September, 1935 :

1935 (3 months only)	29	1942	... ..	698
1936	111	1943	... ..	900
1937	213	1944	... ..	891
1938	244	1945	... ..	997
1939	348	1946	... ..	978
1940	519	1947	... ..	1396
1941	613			

Venereal Diseases.—Clinics are held daily, except Sunday, at the Municipal Health Centre—four for males and two for females. In addition a special session for patients referred from the Maternity and Child Welfare Clinics is held on Thursday morning.

Notices giving details of clinics are displayed in all the public conveniences in the Borough, and similar notices are distributed annually to licencees of public houses with a request that the notice be affixed in the toilet accommodation of such premises.

At the commencement of the current year 633 patients were under treatment. During the year 980 new cases were dealt with and of these 620 were diagnosed as suffering from one of the venereal diseases. The table below gives details of all patients treated during the past 10 years.

		1947	1946	1945	1944	1943	1942	1941	1940	1939	1938							
NEW CASES ...	SYPHILIS ...	134	157	52	53	74	111	59	37	33	36	Male						
		72	70	60	63	50	60	36	36	30	23	Female						
	GONORRHOEA	340	256	124	231	101	115	132	140	170	192	Male						
		74	74	65	190	43	24	61	50	41	39	Female						
OTHERS ...		296	323	147	132	190	123	92	67	88	126	Male						
		64	102	138	133	117	49	69	69	78	41	Female						
	TOTALS	980	982	586	802	575	482	449	399	440	465	...						
CURED ...	SYPHILIS ...	15	10	3	1	4	1	—	1	1	4	Male						
		12	15	8	7	2	—	—	3	1	3	Female						
	GONORRHOEA	182	124	35	24	22	23	10	31	32	84	Male						
		27	35	35	30	8	12	19	11	11	10	Female						
OTHERS ...		351	298	102	97	153	95	74	73	80	124	Male						
		110	83	118	132	72	38	68	90	46	48	Female						
	TOTALS	697	565	301	291	261	169	171	209	165	273	...						
CEASED ATTENDING before completion of treatment ...	SYPHILIS ...	133	11	63	67	88	60	41	29	47	61	Male						
		76	10	41	43	23	30	31	32	29	29	Female						
	GONORRHOEA	98	36	71	116	56	66	86	97	211	176	Male						
		47	12	18	94	19	14	37	27	38	21	Female						
OTHERS ...		7	—	31	50	16	11	4	—	2	—	Male						
		—	—	13	19	13	—	2	—	—	—	Female						
	TOTALS	361	69	237	389	215	181	201	185	327	287	...						
NON-RESIDENTS INCLUDED IN ABOVE	SYPHILIS ...	17	25	18	39	39	35	35	30	26	31	...						
		56	53	55	46	30	34	66	58	50	115	...						
	GONORRHOEA	23	60	56	66	79	39	37	30	—	—	...						
		96	138	129	151	148	108	138	118	76	146	...						
ATTENDANCES TO MEDICAL OFFICERS IRRIGATIONS, ETC.		10480	8510	5764	6733	6014	7634	5431	4761	5455	6397	...						
		1751	1505	4470	5128	6313	3003	6983	8210	12165	17860	...						
	TOTALS	12231	10015	10234	11861	12327	10637	12414	12971	17620	24257	...						

SANITARY CIRCUMSTANCES OF THE BOROUGH

Water Supply.—The Water Supply in the Borough is under the jurisdiction of the Fylde Water Board and I am indebted to the Engineer to the Board for supplying me with the information incorporated in the tables given below.

The water delivered to Blackpool is supplied from two sources, (a) from Watersheds at Barnacre, and (b) at Stocks on the River Hodder, and has been satisfactory both in quality and quantity.

At both these head works upland surface water is collected and stored in reservoirs. The watershed at Barnacre is free from human habitation, and at Stocks the Board owns the watershed and controls all operations on it.

The raw water is stained with peat, and is treated with Sulphate of Alumina before Filtration to remove this colour during Filtration and Lime Water is added after Filtration to compensate acidity. Finally the water is sterilised with Chlorine. The pH of the filtered water as it leaves the filters is recorded continuously by a Multelec pH Recorder. The combined alkalinity, acidity and colour is taken at least daily at various stages of the treatment.

Full chemical analyses are not frequently made, as the waters do not vary significantly—a copy of the latest analysis is given below. Bacteriological Analyses of the Water and of samples collected at various points in the Borough are made at least once a month—reports on these analyses are summarised below.

There is no liability to plumbo-solvent action as the acidity is neutralised with Lime Water at the Filters.

At 31st March, 1947, there were 43,111 houses in the Borough, all of which, with the exception of one, had a piped supply of water. The population supplied, based on the Registrar General's estimate, is 152,660.

REPORT ON THE CHEMICAL ANALYSES OF SAMPLES OF FILTERED
WATER TAKEN FROM THE FOLLOWING SOURCES

	Stocks Filtration Plant	Barnacre Filtration Plant
Date samples taken	24th March 1947	9th April, 1947
Date of Report	1st April, 1947	22nd April, 1947
Remarks	Clear water free from sediment.	Clear water free from sediment.
pH value	7.4	7.7
ANALYSIS	PARTS PER MILLION	PARTS PER MILLION
Total solids dried at :		
100°C.	76.8	64.8
180°C.	71.6	58.4
Total calcium as Ca	15.4	8.5
Nitrates as N ²	0.09	0.14
Phosphates as P	Nil	Nil
Silica as SiO ₂	3.5	6.0
Chlorides as Cl ₂	9.5	10.5
Free Acidity as CO ₂	1.5	1.0
Free and Saline Ammonia as NH ₃	0.024	Nil
Albuminoid Ammonia as NH ₃ ...	0.044	0.014
Oxygen Absorbed Test :		
4 hours at 27°C.	0.80	0.42
Hardness as CaCO ₃ :		
Temporary hardness	Nil	Nil
Permanent hardness	40	30
Total hardness	40	30
ADDITIONAL INFORMATION :		
Colour :		
Mm. Hazen solution per 2 ft. depth		2
P.M.M. platinum		2
Alkalinity as CaCO ₃		11.0

SUMMARY OF BACTERIOLOGICAL ANALYSES OF FILTERED WATER
BEFORE CHLORAMINATION FROM HODDER WORKS

Date sample taken	pH value of sample	Aerobic micro-organisms growing in yeastrel agar		Probable number of coli-aerogenes per 100 m.l. of water (McCrary)
		No. of colonies per m.l. of water		
		in 2 days at 37°C	in 3 days at 22°C	
9th Jan., 1947	8.45	(say) 1	18	1
10th Feb. 1947	8.55	3	19	0
11th Mar., 1947	8.5	(say) 2	7	1
21st Apr., 1947	8.35	(say) 5	22	0
20th May, 1947	8.5	5	(say) 16	0
23rd June, 1947	8.6	1	36	0
16th July, 1947	8.5	1	30	0
27th Aug., 1947	8.4	(say) 2	46	0
1st Oct., 1947	8.45	(say) 1	29	0
6th Nov., 1947	8.5	0	19	2
8th Dec., 1947	8.5	2	14	1

SUMMARY OF BACTERIOLOGICAL ANALYSES OF FILTERED WATER
BEFORE CHLORAMINATION FROM BARNACRE WORKS

Date sample taken	pH value of sample	Aerobic micro-organisms growing in yeastrel agar		Probable number of coli-aerogenes per 100 m.l. of water (McCrary)
		No. of colonies per m.l. of water		
		in 2 days at 37°C	in 3 days at 22°C	
20th Jan., 1947	8.55	0	6	0
17th Feb., 1947	8.5	1	(say) 6	0
24th Mar., 1947	8.55	(say) 3	28	0
14th Apr., 1947	8.5	1	11	0
13th May, 1947	8.65	1	7	0
9th June, 1947	8.5	(say) 3	9	0
14th July, 1947	8.5	2	72	4
18th Aug., 1947	8.5	0	13	0
5th Sept., 1947	8.5	(say) 1	10	0
22nd Oct., 1947	8.5	0	1	0
5th Nov., 1947	8.6	0	(say) 3	0
3rd Dec., 1947	8.6	(say) 1	(say) 15	1

SUMMARY OF BACTERIOLOGICAL ANALYSES OF SAMPLES OF WATER
TAKEN IN THE BOROUGH OF BLACKPOOL

Date sample taken	pH value of sample	Aerobic micro-organisms growing in yeastrel agar		Probable number of coli-aerogenes per 100 m.l. of water (McCrary)
		No. of colonies per m.l. of water		
		in 2 days at 37°C	in 3 days at 22°C	
27th Jan., 1947	7.25	2	3	0
24th Feb., 1947	7.30	0	3	0
25th Mar., 1947	7.25	3	7	0
28th Apl., 1947	7.18	0	4	0
2nd June, 1947	7.25	2	10	0
30th June, 1947	7.30	3	3	0
11th Aug., 1947	7.45	0	33	0
8th Sept., 1947	7.40	1	4	0
13th Oct., 1947	7.15	0	3	0
17th Nov., 1947	7.25	0	2	0
18th Dec., 1947	7.1	1	3	0

Refuse Collection and Disposal.—This is carried out by the Cleansing Department of this Authority.

The Director of Public Cleansing informs me that the work of refuse collection is beginning to return to pre-war normality with the demobilisation of the staff from H.M. Forces.

The refuse collected is dealt with at the Refuse Disposal Works, and during the year under review this amounted to 33,576 tons, whilst in addition 21,221 tons were tipped away, and 1,227 tons of night-soil were removed.

Salvage collections still continue as a national economic necessity.

Sewerage of the Borough.—There are in the Borough 60,326 water closets and 305 pail closets. In outlying parts of the Borough there are a number of unsanitary septic tanks and cesspools, both of which give rise to unsatisfactory conditions where the latter overflow into watercourses, and especially when the cesspools are not emptied by the Cleansing Department. It is hoped that when more normal conditions permit, some of these unsatisfactory sewerage disposal arrangements will be eliminated.

No large main drainage scheme has been carried out since the end of hostilities but several minor improvements have been completed besides the extension of the existing systems to provide for drainage of the new housing estates under construction in the Borough.

WORKS COMPLETED OR IN PROGRESS

Grange Park Estate.—This covers some 145 acres, on which 616 houses have been planned. It has been completely sewered and drains in the Northern Area culvert with a 48 in. diameter sewer.

PROPOSALS FOR FUTURE MAIN SEWERAGE IMPROVEMENTS

Northern Area.—Two new pumps are to be ordered for the pumping station and when these are installed a considerable increase in the drainage will be possible.

Grange Park Estate Extension.—A scheme is to be prepared in the near future for the drainage of the 110 acres involved in the extension.

Gynn Screening Station.—This screening station when completed will be fully automatic and will considerably reduce the amount of beach pollution from this drainage area.

Spen Dyke Drainage.—This is principally a land drainage scheme designed to reduce flooding and improve the agricultural value of a large portion of Marton Moss. From the sanitation point of view the principal benefit derived from the scheme will be a reduction in the water level in the dykes which will avoid the frequent backing-up of the septic tanks.

Paddock Drive Area.—The planning layout of the area to the northern end of Buttermere Avenue has yet to be agreed and when this has been done plans will be prepared for providing main drainage to approximately 140 houses.

Sanitary Inspection of the District.—This is under the supervision of the Chief Sanitary Inspector who has submitted to me the following statement of the work carried out by him and his assistants.

COMPLAINTS RECEIVED	2806
VISITS AND INSPECTIONS (TOTAL)	70467
Houses fully inspected :	
(a) New Houses	—
(b) Old Houses... ..	3
(c) Basement Tenements	2
(d) Temporary Structures	128
Inspections of Work in Progress	975
Visits to Shops	55
Visits to houses and other premises	5487
Visits to requisitioned property	306
Visits re Building Repair Licences	38269
Re-inspections in relation to nuisances under Notice	6633
Inspection of basements	2
Inspection of manure heaps	14
Sands inspection	—
Enquiries into deaths	4
Smoke observations (half hour duration each)	38
Visits to temporary structures	596
Inspection of back passages	144
Offensive Trades	14
Inspections under Rats and Mice Destruction Order	8567
Inspections of Common Lodging Houses	395
Inspections of Factories and Workshops	774
Inspections of bakehouses	207
Visits in connection with Infectious Diseases	136

INSPECTION OF ASH RECEPTACLES :

Satisfactory	15
Unsatisfactory	355
Re-inspections under notice	373

NOTICES SERVED FOR THE ABATEMENT OF NUISANCES :

Statutory	243
Preliminary	485
Verbal... ..	341

HOUSE DRAINS TESTED :

Total number of tests made	769
New Houses :	
Satisfactory	307
Unsatisfactory	55
Rendered satisfactory after first test	47
Old Houses :	
First test satisfactory	34
First test unsatisfactory	108
Re-tested during relaying	132
Final Test satisfactory... ..	86

DRAINS :

Laid, relaid, disconnected and ventilated... ..	35
Repaired, cleaned out	1494
New gullies fixed	3
New W.C.'s fixed in lieu of privies, pail closets and defective w.c.'s	56
Water closets repaired	29
Fittings and water provided for w.c.'s	64
W.C. soil pipes repaired and ventilated	15
Cesspools abolished	—
Pail closets provided	—
Privies abolished	—
Privies constructed into Pail Closets	—
Pail closets abolished	—

WASTE PIPES :

Bath, lavatory and slop waste pipes disconnected over gullies	6
New slop waste pipes fixed	7
New rainwater pipes fixed	13
Rainwater pipes and roof gutters repaired	85
Slop waste pipes repaired	18
Water service pipes repaired	63

MISCELLANEOUS :

Houses where sanitary defects were found	...	...	887
Houses where sanitary defects were remedied	...	...	674
Number of sanitary defects remedied	...	...	3170
Houses cleaned and lime-washed	...	...	5
Houses disinfested :			
H.C.N. Gas	...	...	3
Insecticides	...	...	101
Sulphur	...	...	—
Other methods	...	...	59
Floors repaired or relaid	...	...	70
Back yards repaired	...	...	19
Back yards flagged, concreted or asphalted	...	...	22
Accumulations removed	...	...	72
Animals removed from improper situations	...	...	11
Roofs repaired	...	...	166
Rooms ventilated	...	...	—
Yards cleansed	...	...	9
Watercourses cleansed	...	...	14
Manure receptacles abolished	...	...	—
Manure receptacles provided	...	...	1
Sundry minor defects remedied	...	...	528
Manholes, gullies, back streets, etc., reported to Director of Cleansing	...	...	119
—do.— Borough Surveyor	...	...	11
Erections in yards reported to Borough Surveyor	...	...	5
New slop sinks fixed	...	...	18
New damp proof courses fixed	...	...	14
Dampness remedied	...	...	73
Fireplaces provided or repaired	...	...	96
Food stores provided	...	...	—
Food Stores ventilated	...	...	—
Hand rails to staircases fixed	...	...	1
Courts or back passages repaired	...	...	1
Courts or back passages cleansed	...	...	4

Building Licenses.—The position is as outlined in the reports for 1945 and 1946. As from 1st April, 1945, Local Authorities were authorised to issue building licences on behalf of the Ministry of Works and Buildings for work costing between £10 and £100.

In order to avoid duplication of departmental duties it has been arranged that the Borough Surveyor should deal with all applications for licences relating to work subject to bye-law control and that the Chief Sanitary Inspector should deal with applications concerning general repairs only. Close co-operation is maintained between the two officers concerned.

During the year building licences were issued by this department in respect of 3,383 houses and 824 properties other than houses, involving amounts of £130,785 and £36,657 respectively. Each house or other property concerned was inspected by a District Sanitary Inspector and a total of 384,269 visits were made in this connection.

Legal proceedings were instituted in two cases, both against the owners and the contractors, when fines ranging from £50 to £250 were imposed.

Factories Act, 1937.—In accordance with Section 128(3) of the Act I give below a report on the matters administered by the Local Authority

1.—INSPECTION OF FACTORIES.

PREMISES	Number of		
	Inspections	Written Notices	Prosecutions
WITHOUT MECHANICAL POWER : Factories (including Laundries)	324	8	—
MECHANICAL POWER : Factories (including laundries)	644	15	—
WITHOUT MECHANICAL POWER : Other Premises (other than Outworkers Premises included in Part 3 of this report) ...	—	—	—
TOTAL	968	23	—

2.—DEFECTS FOUND IN FACTORIES.

PARTICULARS	Number of Defects					
	Not Remedied 1946	Found 1947	Remedied 1947	Not Remedied 1947	Referred to H.M. Insp.	Number of Prosecutions
NUISANCES UNDER THE FACTORIES ACT, 1937 (Sections 1—7) :						
Want of cleanliness	161	40	113	88	—	—
Want of ventilation	6	3	2	7	—	—
Overcrowding	1	—	1	—	—	—
Defective drains	—	1	2	—	—	—
Unreasonable temperature	—	—	—	—	—	—
Other nuisances	24	—	—	24	—	—
Sanitary accommodation :						
Insufficient	27	13	11	29	—	—
Unsuitable or defective	15	52	33	34	—	—
Not separate for sexes	4	2	4	2	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this report) ...	19	35	26	28	12	—
TOTAL	257	146	192	212	12	—

3.—HOMEWORK

NATURE OF WORK	OUTWORKERS' LISTS SECTION 110					
	Lists received from Employers					
	Twice in the year			Once in the year		
	Lists	Outworkers		Lists	Outworkers	
Con-tractors		Work-men	Con-tractors		Work-men	
Wearing Apparel—Making, etc.	6	6	—	—	—	—

Inspections of Outworkers' premises	6
Addresses of Outworkers received from other Authorities ...	6
Addresses of Outworkers forwarded to other Authorities ...	—

4.—REGISTERED FACTORIES.

Factories on the Register (Section 8(3)) at the end of the year.

	Mechanical power	Non-mechanical power
Making of wearing apparel	101	45
Workshop Bakehouses	152	13
Preparation of other foods	85	4
Building Trades	73	9
Furniture making, etc.	38	25
Conveyances & Engineering	137	15
Letterpress and Photographing, printing and bookbinding	35	7
Other Trades	41	6
Laundry Workshops	19	—
TOTAL	681	124

5.—OTHER MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES.

(a) Failure to affix Abstract of the Factories Act, Section 128(3b)	9
(b) Other	4

Offensive Trades.—The following offensive trades exist within the Borough :—

Tripe Boilers	2
Gut Scrapers	1
Rag and Bone Depots	4

With the exception of the Rag and Bone Depots the above are located at the Abattoirs. This is particularly satisfactory as they are under the daily observation of the Abattoirs Superintendent and further more the effluvia emitted by them is not detected by any large body of the public.

Fish Fryer.—The trade of fish fryer was scheduled as an offensive trade under a Declaratory Order which came into operation on the 13th March, 1914, when licences to carry on the trade were granted without limit of time. Businesses existing before that date did not require licensing. Under the Blackpool Improvement Act, 1925, all future licences were to be granted subject to yearly renewal.

In view of Section 107 of the Public Health Act, 1936, this Authority having adopted Town Planning Schemes, decided that in future the Town Planning Committee would deal with all applications for licence to carry on this trade.

Before new applications are considered or old ones renewed the Public Health Department is consulted as to the suitability of the premises in the case of new applications, and whether the business has been conducted satisfactorily in cases of applications for renewals of old licenses. During the year two new applications were considered, neither of which were approved. The total number of licences now in operation is 153.

Common Lodging Houses.—Under the Blackpool Improvement Act, 1901, Section 47, the Common Lodging Houses previously existing were re-registered. These premises, with their accommodation, are as follows :

Eden Street : 160 adults and 1 child.
Seed Street : 56 adults and 1 child.

395 visits of inspection were made and it was found that the lodging houses were, on the whole, maintained in a clean condition and conducted satisfactorily.

Rats and Mice (Destruction) Act, 1919.—A full time pestologist is employed by the Public Health Department and this ensures immediate attention to all complaints of infestation. The most effective method has been found to be the laying of poisoned bait and this is now the principal method used, although by this means it is not possible to assess the numbers of rats and mice destroyed.

No proceedings were instituted under the Act during the year.

Verminous Premises.—A total of 163 houses were disinfested during the year, a reduction of 131 on the previous year. There was again a decrease in the number of houses disinfested by cyanide gassing 3 as against 81 in 1946—on the other hand there is a greatly increased use of D.D.T. and other insecticides.

Sanitary Conditions of Theatres and Music Halls, etc.—There are in the Borough the following places of Public Entertainment :

Cinemas	...	...	...	...	...	13
Cinemas (also used for variety, etc.)	...	...	...	...	...	5
Variety, etc.	...	...	...	...	...	6
Ballrooms	...	...	...	...	...	5
Ice drome	...	...	...	...	...	1

From the Public Health point of view these halls are conducted satisfactorily.

The Shops Act, 1934.—The Watch Committee of this Authority who are responsible for the administration of the Shops Acts, 1912-1934, appointed the Chief Sanitary Inspector and the District Sanitary Inspectors to carry out the provisions of Section 10 of the 1934 Act relating to the lighting of shops and the provision of washing facilities.

Inspection of ventilation, temperature and sanitary conveniences in shops are the responsibility of the Health Committee and the carrying out of duties under the Shops Acts as above by the same officers prevents duplication of staff.

During the year under review 55 visits to shops were made and in three instances defects were found as indicated in the undermentioned table :—

Classified Defects	None	Defective or unsatisfactory
Sanitary accommodation ...	2	1
Washing facilities	—	1
Ventilation	—	—
Temperature	—	—

Housing :

1.—INSPECTION OF DWELLING HOUSES DURING THE YEAR.

(1) (a) Total number of dwelling houses inspected for housing defects under Public Health or Housing Acts	639
(b) Number of inspections made for the purpose ...	838
(2) (a) Number of dwelling houses (included under sub-heading 1 above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	311
(b) Number of inspections made for the purpose ...	484
(3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation (including clearance areas)	1
(4) Number of dwelling houses (exclusive of those referred to under the previous sub-heading) found not to be in all respects reasonably fit for human habitation... ..	183

2.—REMEDY OF DEFECTS DURING THE YEAR WITHOUT SERVICE OF FORMAL NOTICES—

Number of defective dwellings rendered fit in consequence of informal action by the Local Authority or the officers	262
--	-----

3.—ACTION UNDER STATUTORY POWERS DURING THE YEAR—

A.—Proceedings under Sections 9, 10 and 16 of the H.A. 1936 :

(1) Number of dwelling houses in respect of which notices were served requiring repairs	92
(2) Number of dwelling houses which were rendered fit after service of formal notices :	
(a) By owners	83
(b) By Local Authority in default of owners ...	—

B.—Proceedings under Public Health Acts :

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied ...	110
(2) Number of dwelling houses in which defects were remedied after service of formal notices	
(a) By owners. ...	81
(b) By Local Authority in default of owners. ...	—
(c) Proceedings under Sections 11 and 13 of the Housing Act, 1936 :	
(1) Number of dwelling houses in respect of which Demolition Orders were made ...	1
(2) Number of dwelling houses demolished in pursuance of Demolition Orders	—
(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	3
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	—

Housing—General.—In view of the depleted inspectorial staff in the sanitary section of the department it has not been possible to resume detailed house to house inspections under the Housing Act, 1936.

Caravans and Wooden Structures.—Owing to the heavy influx of population to the Borough during the war years and the increasing calls made on the department it is not possible to give details of these structures. Full details will be given after the inspectorial staff have made a complete survey.

Tents, Vans and Sheds.—There are four sites in the Borough which accommodate temporary structures for holiday purposes and over 400 of this type were on these sites during the summer months. The district sanitary inspectors make frequent visits for the purpose of ensuring the sanitary conditions are maintained.

Clearance Areas.—The present position with reference to these areas is as follows :—

AREA	No. of Structures	No. of persons displaced	Date of representation	REMARKS	
				Structures still occ.	Others awaiting Demolition
Waterloo Road No. 1	14	20	8/3/37 (C.P.O.)	1	2
Stanley Road No. 1	5	9	(7/2/38)	1	4
Common Edge Road No. 1	2	—	do.	—	2
Common Edge Road No. 3	9	26	do.	4	5
Daggers Hall Lane No. 1	9	13	do.	1	7
Vicarage Lane No. 2	11	16	do.	4	2
Abbey Road No. 2	2	4	do.	1	1
Waterloo Road No. 2	5	4	do.	4	1
Sedbergh Ave. No. 1	3	2	do.	1	1
Bloomfield Road No. 1	13	24	do.	3	1
Field Street No. 1	6	8	do.	—	2
Harcourt Road No. 1	7	2	do.	—	1
Layton Road No. 1	12	20	8/6/38	—	6
Little Layton No. 1	45	74	24/12/38	Awaiting confirmation by the Ministry of Health	
Little Layton No. 2	5	9	do.		
TOTALS	148	231	—	—	—

Overcrowding.—Owing to the considerable changes in the population of the Borough due in a large measure to the heavy influx in the war years, the department has no reliable statistics regarding the number of cases of overcrowding at the present time. These can only be obtained when a new and complete survey of the town has been made.

Temporary Overcrowding Licenses.—No applications were received during the year for temporary licences for occasional overcrowding for limited periods during the summer months.

Milk Supply.—The following is a list of Milk Purveyors in the Borough :

Milk Stores	4
Milk Shops selling by retail	6
Dairymen's Premises, not including farmers	50
Purveyors of Milk	141
Purveyors of Cream	—
Producers in the Borough	26
Milk Bars	—
Dairymen using Registered Dairies other than their own premises	16
Dairymen operating from premises outside the Borough	28
Producer Retailers	15

Milk (Special Designations) Orders, 1923 and 1936.—The following licences were in operation at the end of 1947 :—

(a) PRODUCERS' LICENCES.

Tuberculin Tested	...	...	...	...	...	1
Accredited ...	...	...	...	...	...	10

(b) LICENSED BOTTLING ESTABLISHMENTS.

Tuberculin Tested. At farms	...	...	...	...	1
Accredited. At farms	...	...	...	...	—
Accredited. Other premises	...	...	...	...	—
Pasteurised...	...	...	...	...	2

(c) DEALERS' LICENCES.

Tuberculin Tested and Tuberculin Tested (Certified)	15
Accredited ...	—
Pasteurised...	4

(d) SUPPLEMENTARY LICENCES.

Tuberculin Tested and Tuberculin Tested (Certified)	2
Pasteurised...	3

Milk and Ice Cream Analysis.—The following statistics relate to the chemical and bacteriological analysis of milk and ice-cream.

CHEMICAL ANALYSIS OF MILK.

The number of milk samples taken was 150, of which 10 were below the limits prescribed by the Sale of Milk Regulations, 1901 and 1939.

The average composition of the milk for the year was :—

Milk Fat.	Non-fatty Solids.	Water
3.49	8.82	87.69

BACTERIOLOGICAL EXAMINATION OF MILK.

62 samples of ordinary milk were examined for the Methylene Blue and Reduction Coli Test, and 14 samples failed to pass the test.

Comparing with the Accredited standard, it will be observed that 14 or 23% contained bacteria below that standard.

In addition 62 Primary samples were examined for the presence of Tubercle Bacilli. The details are as follows :

	No. of Samples	Found to contain T.B.
Produced outside the Borough ...	48	Nil
Produced inside the Borough ...	14	Nil

GRADED MILKS.

The following table shows the results of samples taken under the Milk (Special Designations) Orders 1923 and 1936:—

GRADE OF MILK	Outside the Borough		Inside the Borough	
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
Tuberculin Tested (Certified) ...	79	20	21	4
Tuberculin Tested (Pasteurised)	12	—	—	—
Accredited	—	—	150	52
Pasteurised	46	3	50	1
Sterilised	45	—	20	1
Heat Treated	34	—	22	—

In addition the following samples were submitted for the Phospotase Test:

GRADE OF MILK	Outside the Borough		Inside the Borough	
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
Pasteurised	49	—	49	2
Heat Treated	33	1	16	6
Sterilised	45	—	21	—
Tuberculin Tested (Pasteurised)	11	1	—	—

Animal Inoculation Test.—During the year 73 samples of Graded or Heat Treated Milk were sent to the Pathologist for animal inoculation test and the undermentioned table shows the results of his findings.

GRADE OF MILK	Outside the Borough		Inside the Borough	
	Satisfactory	Unsatisfactory	Satisfactory	Unsatisfactory
Tuberculin Tested (Pasteurised)	—	—	—	—
T.T. or Certified	13	13	5	5
Accredited	—	—	26	—
Pasteurised	6	—	6	—
Sterilised	5	—	3	—
Heat Treated	6	—	3	—

Tuberculosis Order, 1938.—The provisions of this Order are carried out by the Ministry of Agriculture Veterinary Surgeons.

Milk and Dairies Order, 1926.—Given below are details of work carried out under this Order :

Floor surfaces of Cowsheds reformed	...	...	...	...	3
Floor surfaces of Cowsheds repaired	...	...	...	...	Nil
Further lighting of Cowsheds	...	...	...	...	Nil
Underdrawing of roofs of cowsheds	...	...	...	...	Nil
Cowsheds abolished	...	...	...	...	2
Dairy premises abolished	...	...	...	...	2
Sterilisation equipment provided	...	...	...	...	Nil
Minor repairs to cowsheds	...	...	...	...	5
Walls of cowshed rendered with cement	...	...	...	...	3
Milk coolers repaired	...	...	...	...	Nil
New Dairies established	...	...	...	...	1

Ice Cream.—There are 323 Ice Cream premises on the register at the end of the year under review, all of which are kept under close supervision by the Food Inspectors. A total of 1,545 visits were made to Ice Cream premises, which includes manufacturing and selling establishments.

Thirty-two samples were sent for chemical analysis to the Public Analyst, Mr. T. R. Hodgson, and a similar number to the Pathological Department of the Victoria Hospital, Blackpool, for bacteriological examination. A synopsis of the reports on these samples is given at Tables I and II to the report on Ice Cream prepared by the Chief Sanitary Inspector and the Senior Food Inspector which is set out in pages 00 to 00 in Appendix I to this Annual Report.

Other Foods.—The following is a list of shops in the Borough where food is exposed for sale :—

Where Butcher's meat is sold	...	...	...	...	201
Meat Stalls	...	...	...	...	4
Fish Shops	...	...	...	...	94
Grocery and Provisions	...	...	...	...	471
Confectioners' Shops	...	...	...	...	211
Restaurants, Cafes and Tea-Rooms	...	...	...	...	264
Fruit Shops	...	...	...	...	140
Tripe Shops	...	...	...	...	58
Oyster Stalls	...	...	...	...	25
Fish and Chip Shops	...	...	...	...	153

Slaughterhouses.—All animals intended for human consumption are slaughtered at the Public Abattoirs and all carcasses are inspected by the Abattoirs Superintendent who is on the staff of the department. At the present time the Public Slaughterhouse is leased to the Ministry of Food and is used as a central slaughtering establishment for the surrounding district. There are no private slaughterhouses in the Borough.

Food and Drugs Act, 1938.—The following samples were taken during the year :

Informal		Nature of Samples	Formal	
Taken	Not Genuine		Taken	Not Genuine
—	—	Baking Powder	21	1
—	—	Barley	1	—
1	—	Bi-Carbonate of Soda	9	—
—	—	Boiled Mutton	1	—
1	1	Bread	1	—
—	—	Butter	20	—
—	—	Cake Mixture	1	1
—	—	Caraway Seeds	1	—
—	—	Cinnamon	2	—
1	1	Cocoa	5	—
—	—	Coffee	25	1
—	—	Compound	4	—
—	—	Cooking fat	10	—
1	—	Cooking Oil	1	—
—	—	Cream of Tartar	3	—
—	—	Curry Powder	2	—
1	—	Emulsion Fat	—	—
—	—	Fish Dressing	1	—
4	1	Fish Paste	7	—
1	—	Flavouring Essence	—	—
—	—	Frying Fat	5	—
1	—	Gelatine	6	—
—	—	Golden Raising Powder	7	—
—	—	Ground Ginger	4	—
1	—	Ice Cream	—	—
1	—	Herbs	—	—
—	—	Junket Powder	5	—
—	—	Lard	6	—
—	—	Margarine	19	—
—	—	Malted Milk	1	—
—	—	Meat Paste	3	—
3	—	Milk	147	10
—	—	Noodles	1	—
—	—	Parsley	1	—
—	—	Pepper	8	—
2	1	Piccallili Sauce	—	—
—	—	Pom... ..	1	—
—	—	Potted Meat	5	1
—	—	Potted Salmon	1	—
—	—	Potted Shrimps	1	—
1	1	Raspberry Mineral Water	—	—
—	—	Rice Flour	1	1
—	—	Sage... ..	1	—
—	—	Sausage	2	—
—	—	Spice	3	—
1	—	Sugar	4	—
1	—	Trifle	—	—
—	—	Tartaric Acid	1	—
—	—	Veal and Beef	2	—
—	—	Vinegar	25	—
1	—	Tea	—	—
22	5		375	15

The following action was taken as a result of certain samples taken during 1947:-

Milk. Formal Sample No. 38866. (Reported in previous quarter). Defendant fined £5 plus £2 8s. 9d. costs.

Milk. Formal Sample No. 38867. (Reported in previous quarter). Defendant fined £5 plus £2 8s. 9d. costs.

Milk. Formal Sample No. 376. (Reported in previous quarter). See 38866 and 38867.

Milk. Formal Sample No. 377. (Reported in previous quarter). See 38866 and 38867.

Milk. Formal Sample No. 401. (Reported in previous quarter). Reported to Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

Rice Flour. Formal Sample No. 5. Sample was found to be infested with mice. Remainder of stock was surrendered.

Coffee. Formal Sample No. 14. Sample contained 34% of chicory. Reported to Related Health Services Committee. Legal Proceedings instituted and defendant fined 10/- plus 18/3d. costs.

Milk. Formal Sample No. 57. Sample was deficient of 5% of its fat. Reported to the Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

Milk. Formal Sample No. 62. Sample was deficient of 6% of its fat. Reported to Related Health Services Committee and Town Clerk was instructed to write warning letter to vendor.

Milk. Formal Sample No. 63. Sample was deficient of 15% of its fat. Reported to Related Health Services Committee and Town Clerk was instructed to write warning letter to vendor.

Milk. Formal Sample No. 93. Sample contained 3% added water. Reported to Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

Milk. Formal Sample No. 95. Sample contained 1% added water. Reported to Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

MILK. Formal Sample No. 103. Sample contained 2% added water. Reported to Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

BREAD. Informal Sample No. 106. Sample found to be contaminated with rat excreta. Reported to Related Health Services Committee. Further investigation as to the source of the trouble being made.

CAKE MIXTURE. Formal Sample No. 141. Sample was found to be extensively infested with mice. Remainder of stock was surrendered.

MILK. Formal Sample No. 160. Sample was deficient of 7% of its fat. Reported to the Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

MILK. Formal Sample No. 164. Sample was deficient of 8% of its fat. Reported to Related Health Services Committee and Town Clerk was instructed to write warning letter to vendor.

MILK. Formal Sample No. 165. Sample was deficient of 4% of its fat. Reported to Related Health Services Committee and Town Clerk was instructed to write a warning letter to vendor.

MILK. Formal Sample 205. Sample was deficient of 10% of its fat. Reported to Related Health Services Committee and Town Clerk was instructed to write warning letter to vendor.

BAKING POWDER. Formal Sample No. 210. Sample was deficient of 10% of its available Carbon Dioxide. Reported to Related Health Services Committee. Remainder of stock was withdrawn from sale.

FISH PASTE. Informal Sample No. 241. Sample was in an advanced state of decomposition. Reported to Related Health Services Committee. Remainder of the stock was surrendered for destruction.

POTTED MEAT. Formal Sample No. 259. Sample was deficient of 5% of its meat solids. Reported to Related Health Services Committee. No further action was taken as this sample was in an advanced state of decomposition.

COCOA. Informal Sample No. 298. Sample contained 50% of cocoa shell. Reported to Related Health Services Committee. Remainder of stock was surrendered and a report forwarded to the Ministry of Food for disposal instructions.

PICCALLILI SAUCE. Informal Sample No. 315. There was incipient decomposition in the sample. Reported to Related Health Services Committee. Remainder of stock was withdrawn from sale.

RASPBERRY MINERAL WATER. Informal Sample No. 398. Sample was infected with mould. Reported to Related Health Services Committee.

Prosecutions.—As a result of the contravention of certain Acts the following prosecutions were instituted by the Department during the year under review :

MONTH	ACT	DETAILS OF OFFENCE	RESULT
January	Food and Drugs Act, 1938, Section 3.	Milk—One sample deficient of 17% of its fat. One sample 4% added water.	Defendant fined £5 in each case with £4 17s. 6d. costs.
March	Food and Drugs Act, 1938, Section 3.	Coffee contained 66% coffee and 34% chicory.	Defendant fined 10/- and costs of 18/3d.
June	Defence (General) Regulations, 1939, 56A.	Work carried out without a building licence.	Defendant fined £50. Defendants fined £50 jointly.
July	Blackpool Improvement Act, 1925, Sec. 87.	Structures placed on land without permission of local authority.	Defendant fined £5 in each of two cases.
July	Blackpool Improvement Act, 1925, Sec. 87.	Structure placed on land.	Dismissed under probation of Offenders Act. Costs of 4/- ordered.
August	Defence (General) Regulations, 1939, 56A.	Work carried out without a building licence.	Defendant fined £250. Defendant fined £150.
October	Blackpool Improvement Act, 1925, Sec. 87.	Structures placed on land.	Defendant fined 10/- on each of 27 cases. Defendant fined 10/- on each of 2 cases. 22 Defendants fined 10/- each.

APPENDIX I

To the Chairman and Members of the Health Committee :

I have much pleasure in presenting for your careful perusal and consideration a further report on the manufacture and sale of ice cream, which has been prepared by the Chief Sanitary Inspector and the Senior Meat and Food Inspector.

You will note that since the last report, the Ice Cream (Heat Treatment, etc.) Regulations, 1947, have become operative.

On the whole the standard of Ice Cream in Blackpool shows improvement over previous years, especially when one considers the exceptionally hot summer experienced in 1947, although the new Methylene Blue Tests do not appear to substantiate this. I am of the opinion that our former standards by which the cleanliness of ice cream is judged, *i.e.*, by bacteriological count and the presence of B.Coli, especially when the latter are typified, were more reliable, but research will be continued, in conjunction with our Bacteriologist, in an endeavour to devise a satisfactory test.

It will be noted that there has been an improvement in the chemical quality of the ice cream sold, although it varies considerably.

The manufacture and sale of Ice Cream will be kept under constant supervision by the Department, and I commend to you the considerable and efficient work which the preparation of this report has entailed.

I beg to remain,

Your faithful servant,

GEORGE W. MURRAY,

Medical Officer of Health.

REPORT ON THE MANUFACTURE AND SALE OF ICE CREAM IN BLACKPOOL DURING THE YEAR 1947

1. Introduction.

Since our last special report submitted to you on the 12th November, 1946, a new method of testing for bacteriological analysis has been introduced and the Ice Cream (Heat Treatment, etc.) Regulations of 1947 have become operative. Consequently, it is difficult to compare with certainty the bacteriological results of 1946 and 1947, although in many instances tests for plate counts and B.Coli were made at the same time as the Methylene Blue test recommended by the Medical Research Council.

Prior to 1947, the standards used for bacteriological cleanliness were the number of bacteria per c.c. and the presence of B.Coli in the sample. This was changed last year owing to the laboratory investigations carried out by the Medical Research Council in conjunction with the Ministry of Health who issued a recommendation "that the Methylene Blue reduction test afforded a good index on the type of presumably excretal contamination" of ice cream. On the basis of their findings, it was suggested that the new test had the advantage of cheapness, simplicity and reproductability and should be given a trial.

Four grades were tentatively defined as follows :

Grade 1.	Time taken to reduce methylene blue :	4½ hours or more.
Grade 2.	" " "	2½ to 4 hours.
Grade 3.	" " "	½ to 2 hours.
Grade 4.	" " "	0 hours (<i>i.e.</i> , reduction at the end of the incubation period).

In judging the bacteriological quality of ice cream, it was suggested that it would be unwise to pay too much attention to the results of any one sample and the practice of the Ministry of Health in respect to water might be followed with advantage. This was on the lines that throughout the year 50% of the samples should fall into Grade 1, 80% into Grades 1 and 2, not more than 20% in Grade 3, and none in Grade 4. It was realised that the suggested standard may require revision after further experience but that it could be adopted as a working basis for the present.

On May 1st, 1947, the Ice Cream (Heat Treatment, etc.) Regulations of 1947 became operative and in July, 1947, a special report was submitted to you summarising the requirements of this enactment. As the Ministry of Health have not yet issued a regulation fixing the appointed day for the provision of recording thermometers under Section 3(b) of the Regulations, our recommendation in respect of this particular aspect of recording apparatus has had to be deferred, although many of the larger manufacturers have already taken steps to anticipate these requirements. Regular sampling has been carried out during the year with the results shown in the tables to this report, the chemical analysis and the phosphatase tests being entrusted to your Public Analyst, Mr. T. R. Hodgson, M.A., F.I.C., and the bacteriological examinations carried out by the laboratory attached to the Victoria Hospital, Blackpool.

2. Registered Manufacturers and Purveyors

The undermentioned table shows the numbers of manufacturers and purveyors registered with the Local Authority under the provisions of Section 14 of the Food and Drugs Act, 1938, and Section 42 of the Blackpool Improvement Act, 1935.

	Mix.	1939	1946	1947
MANUFACTURERS	Pasteurised	5	9	6
	Boiled	67	76	86
	Cold	23	53	6
	Total	95	138	98
PURVEYORS	Pasteurised	134	233	194
	Boiled	85	104	123
	Cold	23	55	6
	Total	242	392	323

The attention of the Committee is directed to the remarkable reduction in the number of manufacturers and purveyors of ice cream manufactured by the cold mix method, due in a large measure to the introduction of the Ice Cream (Heat Treatment, etc.) Regulations, 1947.

3. Analysis of Results.

(a) CHEMICAL. For full details see Table I.

The following table again reveals the disparities in the samples both as regards fat and non-fatty solids, and it demonstrates the necessity of chemical standards being fixed, in spite of the continued difficulties suggested by the Ministry of Food.

Class of Mix	FATTY SOLIDS		NON-FATTY SOLIDS		TOTAL SOLIDS	
	Vary from	Average	Vary from	Average	Vary from	Average
Pasteurised	5.75% to 15.34%	8.50%	19.04% to 24.51%	21.42%	25.06% to 30.34%	29.79%
Boiled	1.23% to 9.47%	3.78%	15.64% to 30.19%	20.51%	16.29% to 31.42%	24.66%
Cold	1.12% to 9.10%	4.55%	14.89% to 22.09%	17.74%	16.01% to 31.19%	22.29%

Class of Mix	FATTY SOLIDS		NON-FATTY SOLIDS		Total Solids Average
	Vary from	Average	Vary from	Average	
Pasteurised	2.84% to 12.55%	6.31%	14.16% to 24.15%	25.00%
Boiled	0.84% to 6.27%	2.83%	19.39% to 28.36%	23.93%
Cold	0.25% to 4.00%	2.00%	11.21% to 28.30%	22.61%

The comparative results for 1946 were as follows :

It will be observed that during the past year there has been an improvement in the quality of ice cream made from pasteurised and boiled mixes as judged by chemical standards.

Classification, Fat Content %	Class of Mix			Whole Group
	Pasteurised	Boiled	Cold	
Below 1	—	—	—	—
Over 1 and below 2	—	3	1	4
Over 2 and below 3	—	7	—	7
Over 3 and below 4	—	3	1	4
Over 4 and below 5	—	5	—	5
Over 5 and below 6	1	1	—	2
Over 6 and below 7	2	2	—	4
Over 7 and below 8	1	—	—	1
Over 8 and below 9	1	—	—	1
Over 9 and below 10	1	1	1	3
Over 10	1	—	—	1
TOTAL	7	22	3	32

The continued increase in the fat content is most gratifying, as the 1947 results revealed about only 12½% of the samples contained less than 2% of fat, whereas the figures for 1945 and 1946 were 50% and 31% respectively.

The undermentioned table has been prepared to show the relative weight in grammes which the public would receive per pennyworth of ice cream purchased.

CLASS OF MIX	WEIGHT IN GRAMMES			TOTAL		
	Fat	Milk Solids-not-fat	Cane Sugar and other solids	1947	1946	1945
Pasteurised	1.60	0.87	3.47	5.49	5.11	3.73
Boiled	0.73	1.03	2.99	5.75	5.66	2.69
Cold	0.83	0.91	2.16	3.90	3.66	1.63

The latest figures show an improvement in the position as regards all classes of mixes.

(b) BACTERIOLOGICAL. For full details see Table II.

A perusal of Table II shows that the four worst samples, judged by our previous bacteriological standards, were in the lowest grade according to the latest suggested standard, **but the phosphatase test is quite unreliable** owing to the ice cream mixture containing materials which interfere with the test.

On the other hand it is difficult to reconcile the fact, that although there has been a further improvement generally according to our previous bacteriological standards as one would expect from the increased use of better equipment and the fact that the mixtures are pasteurised or boiled, yet only 3 out of 17 manufacturers have complied with the new methylene blue standards where there has been more than one sample taken from the manufacturer. This uncertainty is accentuated

when one considers that a firm of national repute, whose samples in previous years have always shown excellent results, has had the samples this year classified in Grades II and III respectively. This sample, which is made from a pasteurised mix, is sold in wrapped paper and throughout the whole process is never touched by hand. All the samples had low plate counts and coli. was present in 1/10th c.c. in one sample only.

It is hoped that further research will be made in perfecting a test to ensure a proper bacteriological standard for ice cream, as the present uncertainty is causing discontent amongst reputable firms engaged in the ice cream industry.

NUMBER OF BACTERIA per c.c.	PASTEURISED		BOILED		COLD	
	3 days	2 days	3 days	2 days	3 days	2 days
	22°C.	37°C.	22°C.	37°C.	22°C.	37°C.
0 — 250	1	1	—	—	—	—
250 — 500	—	1	—	—	—	—
500 — 1,000	1	5	—	1	—	—
1,000 ... 25,000	4	—	4	12	—	1
25,000 — 100,000	—	—	10	4	1	1
100,000 — 500,000	1	—	1	3	1	—
500,000 — 1,000,000	—	—	3	1	—	1
1,000,000 — 3,000,000	—	—	3	1	1	—
Over 3,000,000... ..	—	—	1	—	—	—
	7	7	22	22	3	3

CLASS OF MIX	B. Coli. in 1/10th c.c.				B. Coli. in 1/100th c.c.			
	Tubes				Tubes			
	0	1	2	3	0	1	2	3
Pasteurised	3	2	2	—	6	1	—	—
Boiled	7	2	1	12	10	2	3	7
Cold	—	—	1	2	1	—	—	2

Comparative figures for the past three years are as follows :—

CLASS OF MIX	Less than 1,000,000 bacteria per c.c.			No. B. Coli in dilutions less than 0.1 per c.c.		
	1945	1946	1947	1945	1946	1947
Pasteurised	67%	85%	100%	33%	53%	83%
Boiled	0%	71%	95%	33%	57%	46%
Cold	30%	33%	100%	10%	50%	66%

The following is the result of the Methylene Blue Tests of the 32 samples, the subject of this report.

CLASS OF MIX	PROVISIONAL GRADE					TOTALS
	1	2	3	4	Not Tested	
Pasteurised	1	3	3	—	—	7
Boiled	—	1	7	6	8	22
Cold	—	1	—	2	—	3
						32

In addition, a further 37 samples were examined by the Methylene Blue Test and for the presence of B.Coli (See Table III), making a total of 69 in all. Atmospheric conditions prevented a satisfactory test being made in 8 instances and the combined results of the 61 samples are detailed below :

No.	Grades of Sample				Sat.	Not Sat.
	1	2	3	4		
1	3	—	—	—	Yes	—
2	—	3	—	—	Yes	—
3	—	2	2	—	—	Not
4	1	—	1	—	—	Not
5	1	—	2	—	—	Not
6	—	1	1	—	—	Not
7	—	1	1	1	—	Not
8	—	2	—	—	Yes	—
9	—	1	—	—	Yes	—
10	—	1	—	1	—	Not
11	—	—	1	1	—	Not
12	—	—	3	—	—	Not
13	—	—	1	1	—	Not
14	—	—	1	2	—	Not
15	—	—	1	1	—	Not
16	—	1	—	—	Yes	—
17	—	—	1	1	—	Not
18	—	—	1	1	—	Not
19	—	—	1	3	—	Not
20	—	—	1	—	—	Not
21	—	—	—	1	—	Not
22	—	—	—	1	—	Not
23	—	—	—	2	—	Not
24	—	—	—	1	—	Not
25	—	—	—	2	—	Not
26	—	—	—	2	—	Not
27	—	—	—	1	—	Not
28	—	—	—	1	—	Not
29	—	—	—	1	—	Not
30	—	—	—	1	—	Not
31	—	—	—	1	—	Not

Judged by the recommended standards of the Medical Research Council, only five out of these 31 manufacturers can be classified as satisfactory, a wrong conclusion which the Department is not prepared to accept in the light of personal visits, plate counts and B.coli results.

The following table shows the result of the phosphatase test on the 32 samples, the subject of this report, which has prompted us to state how unreliable it is as an index of adequate heat treatment.

CLASS OF MIX	LOVIBOND UNITS			Totals
	Below 2-3. Adequately Heat Treated	2-3 and above. Below 6-0. Inadequately Heat Treated.	6-0 and above. Grossly under- treated.	
	Group I	Group II	Group III	
Pasteurised	1	3	3	7
Boiled	4	16	2	22
Cold	—	1	2	3
				32

To safeguard consumers and manufacturers alike, the installation of adequate recording thermometers on manufacturing plants should be accelerated as quickly as the supply position permits.

CONCLUSIONS

1.—The variance in the results of the chemical examinations of Ice Cream once more prove the necessity of the Ministry of Food fixing a chemical standard for this product.

2.—There has been a continued improvement in the quality of Ice Cream sold in Blackpool in 1947, as compared with previous years.

3.—It is not advisable, until a more reliable test than the phosphatase one has been proved to incur further expense in routine sampling to ascertain whether a mix has been adequately heat treated.

4.—Personal inspections, supported by bacteriological tests according to plate counts and the presence of B.Coli suggest that the new methylene blue test cannot be accepted as a rigid standard for judging the quality of ice cream from the point of view of cleanliness.

5.—Your officers desire instructions on the sale of loose ice cream, in view of the varying interpretations throughout the country which are being placed on paragraph 5 of the Ice Cream (Heat Treatment, etc.) Regulations, 1947, which states :

“ Ice cream shall be protected from dirt, dust or other contamination at all times during its manufacture, storage and distribution and all apparatus and utensils brought into contact with ice cream during its manufacture, storage or distribution shall be thoroughly cleansed immediately after use and shall be kept clean at all times.”

HARRY PRIESTLEY,

Chief Sanitary Inspector.

HAROLD V. DIXON,

Chief Meat and Food Inspector.

TABLE I

Class of Mixture	Sample No.	Cost in pence	Vol. in c.c.s.	Wt. in gms.	FAT		LACTOSE		PROTEIN		CANE SUGAR & STABILISER		TOTAL SOLID MATTER	
					% 5	Wt. in gms. 6	% 7	Wt. in gms. 8	% 9	Wt. in gms. 10	% 11	Wt. in gms. 12	% 13	Wt. in gms. 14
HEAT TREATED— Pasteurised	1	2	3	4	8.27	6.70	3.84	3.11	2.73	2.21	17.94	14.53	32.78	26.55
	2	3	38	44	15.34	6.75	4.97	2.19	3.44	1.51	15.59	6.86	39.34	17.31
	3	3	172	189	5.75	10.87	4.30	8.13	2.91	5.50	12.10	22.87	25.06	47.36
	4	3	30	34	6.67	2.27	4.80	1.63	3.33	1.13	11.56	3.91	26.37	8.97
	5	4	15	17	7.40	1.26	5.08	.86	3.51	.60	12.92	2.20	28.91	4.91
	6	3	38	42	6.72	2.82	4.31	1.81	3.00	1.26	13.62	5.72	27.65	11.61
	7	3	45	50	9.37	4.69	3.04	1.52	2.11	1.06	13.89	6.95	28.41	14.20
HEAT TREATED— Boiled	8	3	90	95	2.83	2.67	3.38	3.21	2.34	2.22	7.74	7.35	16.29	15.48
	9	3	82	89	3.34	2.97	2.86	2.55	1.98	1.76	13.03	11.60	21.21	18.88
	10	3	78	85	2.26	1.92	4.10	3.49	2.84	2.41	18.15	15.43	27.33	23.23
	11	3	118	130	6.30	8.19	5.63	7.32	3.89	5.06	9.00	11.70	24.82	32.27
	12	3	90	98	4.92	4.82	3.47	3.40	2.40	2.35	10.79	10.57	21.58	21.15
	13	4½	55	60	6.00	3.60	3.19	1.91	2.21	1.33	10.24	6.14	21.64	12.98
	14	3	112	123	4.24	5.22	5.54	6.81	3.83	4.71	11.06	13.60	24.71	30.39
	15	6	45	50	4.73	2.37	8.78	4.39	6.07	3.04	8.26	4.13	27.84	13.92
	16	6	96	99	2.98	2.95	5.29	5.24	3.61	3.57	13.23	13.10	25.11	24.86
	17	6	78	88	1.23	1.08	12.07	10.62	8.34	7.34	9.78	8.61	31.42	27.65
	18	6	40	44	4.62	2.03	8.66	3.81	5.99	2.64	5.79	2.55	25.06	11.03
	19	6	112	122	2.45	2.99	4.42	5.39	3.06	3.73	11.46	13.98	21.39	26.10
Cold	20	6	80	89	2.97	2.64	4.87	4.33	3.37	2.99	16.08	14.31	27.29	24.29
	21	6	78	85	1.65	1.40	7.68	6.53	5.31	4.51	8.27	7.03	22.91	19.47
	22	6	122	134	3.58	4.80	5.01	6.71	3.47	4.65	13.75	18.43	25.81	34.59
	23	6	94	103	2.44	2.51	10.24	10.55	7.09	7.30	5.17	5.33	24.94	25.69
	24	6	85	94	4.34	4.08	3.00	2.82	2.08	1.96	15.26	14.34	24.68	23.20
	25	6	72	79	2.66	2.10	5.44	4.30	3.72	2.94	13.92	11.00	25.74	20.33
	26	6	78	87	9.47	8.23	3.22	2.80	2.23	1.94	12.52	10.89	27.44	23.87
	27	3	86	94	3.30	3.10	3.52	3.31	2.44	2.29	13.33	12.53	22.59	21.23
	28	6	69	76	5.45	4.14	4.30	3.27	2.98	2.26	11.55	8.78	24.38	18.53
	29	3	135	145	1.54	2.23	2.74	3.97	1.89	2.74	11.14	16.15	17.31	25.10
	30	6	80	85	1.12	.95	6.83	5.81	4.73	4.02	3.33	2.83	16.01	13.61
31	3	50	54	3.45	1.86	4.07	2.20	2.81	1.52	9.36	5.08	19.69	10.63	
32	4	74	84	9.10	7.64	4.60	3.86	3.16	2.65	14.33	12.04	31.19	26.20	

TABLE II

CLASS OF MIX	No. of sample	Micro-organisms per c.c. (approx.) in yeastral agar		Presence of Bacterium Coli.			Provisional Grade M.B. Test	Phosphatase Test			Source of Sample
		In 3 days at 22°C.	In 2 days at 37°C.	No. of tubes	Probable No. per c.c.	L.B. Units		Group	Remarks		
Heat Treated : Pasteurised	1	102,000	4,000	Nil	Nil	Nil	3	3.5	2	Inadequately Heat Treated	Wrapped block from refrigerator
"	2	620	310	Nil	Nil	0 to 3	2	3.2	2	" "	Partly wrapped from conservator
"	3	80	120	Nil	Nil	0 to 3	1	6.5	3	Grossly under treated	From refrigerator
"	4	14,900	4,600	2	Nil	4	3	9.0	3	" "	From refrigerator
"	5	7,500	16,000	2	Nil	9	2	12.0	3	" "	From refrigerator
"	6	18,000	5,900	1	1	7	3	Below	1	Adequately Heat Treated	From refrigerator
"	7	14,900	4,600	1	Nil	4	2	3.0	2	Inadequately Heat Treated	From refrigerator
Heat treated : Boiled	8	2,570,000	225,000	3	3	3	4	3.5	2	Inadequately Heat Treated	From conservator
"	9	590,000	4,200	1	2	2	3	2.5	2	" "	From freezer
"	10	47,000	24,000	Nil	Nil	Nil	3	4.0	2	" "	From refrigerator
"	11	520,000	330,000	3	3	3	4	6.0	2	" "	From freezer
"	12	7,200,000	2,300,000	3	2	2	4	Below 2.3	1	Adequately Heat Treated	From freezer

"	13	87,000	14,000	Nil	Nil	3	3	2.3	1	Inadequately Heat Treated	From refrigerator
"	14	65,000	22,000	3	3	3	3	3.0	2	"	From refrigerator
"	15	1,500	3,700	1	Nil	4	4	2.5	2	"	From refrigerator
"	16	71,000	34,000	3	3	4	4	3.5	2	"	From freezer
"	17	82,000	71,000	Nil	Nil	Not tested	Not tested	4.0	2	"	From conservator
"	18	5,400	14,000	Nil	Nil	"	"	Below	1	Adequately Heat Treated	From refrigerator
"	19	125,000	113,000	3	Nil	"	"	2.3	2	Inadequately Heat Treated	From freezer
"	20	2,410,000	8,000	2	Nil	"	"	7.5	3	"	From conservator
"	21	540,000	64,000	3	3	"	"	9.0	3	Grossly under treated	From conservator
"	22	2,100	750	Nil	Nil	"	"	3.8	2	Inadequately Heat Treated	From conservator
"	23	55,000	16,800	Nil	Nil	"	"	2.8	2	"	From conservator
"	24	43,000	41,000	Nil	Nil	"	"	4.5	2	"	From conservator
"	25	35,000	6,200	3	2	95	3	4.0	2	"	From conservator
"	26	44,000	21,000	3	1	45	3	3.0	2	"	From conservator
"	27	41,000	15,000	3	3	2,500	3	3.2	2	"	From conservator
"	28	14,000	4,600	3	1	45	2	Below	1	Adequately heat treated	From freezer
"	29	1,550,000	530,000	3	3	11,000	4	2.3	2	Inadequately Heat Treated	From conservator
Cold	30	1,900,000	650,000	3	3		4	2.6	3	Grossly under treated	From freezer
"	31	310,000	98,000	3	3	250	4	9.0	3	"	From conservator
"	32	38,000	1,300	2	Nil	0 to 3	2	9.5	3	"	From conservator
"								2.6	2	Inadequately Heat Treated	

NOTE:—Regarding samples 17, 18, 19, 20, 21, 22, 23 and 24 shown as not graded under the M.B. Test, this was due to the high prevailing temperature precluding the grading being carried out. " The M.B. test could not be carried out on 26th August and 3rd Sept., 1947, as it was impossible to control the temperature of specially constructed bath within narrow limits prescribed (20°C. plus or minus ½°C.) as temperature of mains water used in cooling coil rose to 23°C.

APPENDIX II

To the Chairman and Members of the Health Committee.

On the termination of the Government Evacuation Scheme on 31st March, 1947, after functioning for over eight years, the Chief Sanitary Inspector submitted a report on the Billeting organisation during that period, and I append an extract from that report for your perusal.

It will be remembered that the bulk of the work entailed in the billeting of evacuees devolved on the Sanitary Section of my Department, Mr. Priestley, the Sanitary Inspector being appointed Chief Billeting Officer.

This admirable report deals briefly with all aspects of the Billeting organisation commencing with the initial survey of the Borough in the early days of 1939, proceeds step by step through the various events during the years concerned until the final organised return of evacuees to their homes. Requisitioning of Property, Issue of Equipment and the Payment of Damage Claims are all adequately dealt with.

I beg to remain,

Your faithful servant,

GEORGE W. MURRAY,

Medical Officer of Health.

**EXTRACT FROM REPORT OF CHIEF BILLETING OFFICER
DATED 11th APRIL, 1947**

1. The Billeting organisation was formed in January, 1939, and it was closed down officially on the 31st March, 1947, after functioning for over eight years. During this period it has dealt with approximately 90,000 official evacuees in addition to the many thousands of others who sought sanctuary in Blackpool during the war years.

It is estimated that over £500,000 has been paid out in billeting allowances in Blackpool during this period, and there still remains here 297 members of the priority groups and 286 families of munition workers who were directed to this area as a result of the dispersal policy forced upon the Nation by the sudden collapse of France in 1940.

2. Early in 1939, a survey of suitable properties was carried out in order to ascertain the surplus accommodation in Blackpool on the basis of one person per room and this resulted in a figure of 109,000 being estimated and earmarked in the event of hostilities commencing. Owing to the exceptional character and situation of our town, it was decided to make this area the largest reception unit in this country and eventually it had to accommodate :

- (a) Members of the priority groups.
- (b) Civil Servants.
- (c) Members of the Armed Forces, and
- (d) Munition Workers.

factors which eventually taxed our resources to the full.

3. As there were no precedents for an organisation of this nature, and as numerous important decisions had to be made as circumstances arose, the Government, through the Ministry of Health, gave Local Authorities and their officers exceptional latitude in executing the work within the framework of the policy of the Central Government Department. The first organised evacuation began before full preparations had been made, but I am convinced that the majority of the evacuees who came to Blackpool have returned home with a good impression of a generous and hospitable people who comprise the bulk of our townsfolk.

4. The variety of the work which has had to be undertaken can be gauged from the undermentioned diary of events which illustrate the changing situations in the Nation's fortunes during the greatest crisis in its history :

- 1939. Survey of the town carried out.
- Original evacuation from Manchester and Salford areas, Widnes, Runcorn and part of Liverpool.
- Organisation of Maternity Homes comprising 900 beds.
- Establishment of crèches, cleansing station and skin hospital.
- Formation of Billeting tribunals.
- Arrival of Civil Servants.

1940. Sanitary administration associated with the billeting of the Armed Forces.
Further evacuation from South East England.
Requisitioning of houses for members of the priority groups commenced.
Organisation of Recreation and Welfare Centre.
Establishment of Hostels for children and homeless persons.
Billetees arrived from Coastal areas.
Emergency Feeding Centre started.
1941. Crash evacuation from Manchester and Salford.
Billeting of Munition Workers commenced.
Requisitioning of houses for munition workers commenced.
Establishment of post-natal hostels.
1942. Further billeting survey of the town.
Establishment of Hostels for complete school units.
Two soldiers' Hostels opened.
1943. Organisation of Ministry of Labour Hostel (30 beds) (for housing young female directed labour).
Organisation of M.A.P. Hostel (90 beds).
Enuresis Hostel commenced.
1944. Further extensive organised evacuation from London.
Heavy influx of evacuees from Coastal area.
Establishment of further Recreation and Welfare Centre.
Communal Wash House commenced.
Additional feeding centre established.
1945. Return of organised parties of evacuees to their homes.
Requisitioning of houses for Blackpool inadequately housed persons.

5. The weekly average of persons billeted and housed under the Government Evacuation Scheme is indicated in the undermentioned table, *i.e.*

MONTH	YEAR								
	1939	1940	1941	1942	1943	1944	1945	1946	1947
January ...	—	6535	7830	4150	2555	2220	3703	448	302
February ...	—	5243	7685	4096	2559	2036	3352	436	302
March ...	—	3801	7479	3667	2513	2180	3039	423	300
April ...	—	3306	7412	3463	2463	2164	2496	408	—
May ...	—	2921	7438	3355	2399	2169	1817	403	—
June ...	—	2698	7408	3305	2416	2095	1220	394	—
July ...	—	2797	6724	3193	2367	4445	799	376	—
August ...	—	2476	6087	3009	2327	7778	625	360	—
September ...	26500	2305	5378	2994	2457	7621	540	352	—
October ...	24250	4390	5099	2942	2448	5964	540	345	—
November ...	13000	6692	4830	2801	2371	4961	485	331	—
December ...	8579	6862	4496	2691	2308	4218	462	309	—

The heaviest influx was in the first three days of the war when 37,500 arrived in organised parties. Other large official contingents came here in the autumn of 1940, and in the early months of 1941 due to the enemy air attack on London and Manchester. There was then a comparative lull until the flying bomb attacks on London and South Eastern England when over 5,500 were sent here from those areas.

About 15,000 billets were used to accommodate the evacuees and munition workers so that if one takes into consideration the fact that another 5,000 houses were used to accommodate the Armed Forces and about 1,000 others to house Civil Servants, it is true to say that approximately 50% of the householders in Blackpool received official billetees during the war period. In only nine cases was it necessary to institute legal proceedings in connection with the billeting of members of the priority groups. In the early days of evacuation over 100 cases appealed to the Tribunals, but experience proved the wisdom of re-billeting where practicable in the interests of both parties. This entailed considerably more work for the billeting and welfare staff but in the end was found to be much more satisfactory.

6. Requisitioned Properties. The undermentioned table indicates the extensive nature of the work done in connection with requisitioning which had its origin when the Department found it necessary to house large families. This work was extended when the Government directed labour to special factories and it certainly eased the situation insofar as family life was concerned.

Requisitioned for	Requisitioned	De-requisitioned	In use
Evacuation	84	44	40
Munition Workers ...	349	105	244
Inadequately Housed 138/45 (Blackpool)	94	34	60
TOTALS ...	527	183	344

Since requisitioning commenced over £100,000 has been collected in rents by the Borough Treasurer and the arrears which have been considered irrecoverable up to the present time have amounted to less than £100 0s. 0d. These figures demonstrate the strictness with which the Finance Department and ourselves have worked to safeguard the interests of the tax payer in formulating and carrying out a policy of firmness as well as kindness. There still remains in these properties well over 1,350 people made up as follows :

- (a) EVACUEES. 68 families comprising 297 persons.
- (b) MUNITION WORKERS. 286 families comprising 1,057 persons. In addition there are nearly 100 people residing in these houses who have not yet received the permission of the Local Authority to remain therein.
- (c) INADEQUATELY HOUSED. 60 families.

This branch of our activities has certainly been an extremely unpleasant, though necessary task, and I hope that people who have been affected by this policy will appreciate the vital part requisitioning played during a most difficult period. Our actions have been prompted by a desire to fulfil the national interest and I hope that as an increasing number of new houses are erected, it will be possible to return the properties to their original owners.

7. **Equipment.** The equipping of the maternity homes, requisitioned houses, hostels, welfare centres and emergency communal wash-house, has been carried out from stocks issued from Government stores and articles, purchased locally, and the Department has endeavoured to keep a strict control over their whereabouts in order to ensure a minimum loss to the tax payer. The two major items involved in local purchases have been blankets and gas cookers, and the position with each of these is as follows :

(a) BLANKETS—

<i>Received</i>		<i>Disposed</i>	
Government issue ...	11859	Returned to store, sold, etc.	22337
Purchased	11936	In requisitioned houses according to inven- tories	488
		Not collected from house- holders and to be written off	970
	<hr/> <hr/>		<hr/> <hr/>
	23795		23795

During the time the Scheme has been in operation, 24,063 blankets have been collected from householders and, after being disinfested and washed, have been returned to the Government store or re-issued.

The furnishing of requisitioned houses for members of the priority groups was based on a schedule prepared by the Department having regard to the requirements of the house. The family and the individual and a simple hiring charge of 8d. per week for each £10 0s. 0d. worth of goods has been included in the monies collected for the use of the house and equipment. There has been no re-issue of any equipment for replenishing worn or lost articles as it was felt that the individuals should replace them as is customary in normal households.

The surplus slop sinks, service and waste pipes removed from the Emergency Maternity Homes as they become redundant, have been used to carry out repairs in requisitioned houses, and the Ministry of Works has been notified to remove the balance, at present in stock, to their own stores.

(b) GAS COOKERS. Since November, 1940, 142 gas stoves have been purchased at a price of £953 14s. 6d. and it is with pleasure that I record that the whole of the expenditure has been repaid and there is a surplus of £150 0s. 0d. accrued to date. Furthermore, 109 are still in use in requisitioned houses and most of them are still let on a simple hiring charge of £3 0s. 0d. or £2 0s. 0d. per year.

8. **Damage Claims.** It has been the custom of the Ministry of Health to make ex gratia payments to householders for damage to furniture by billetees and during the 7½ years the Scheme has been in operation 1,018 claims have been investigated by the Department. Of these 1,010 related to damage caused by members of the priority groups and 8 to munition workers.

The details of the allowance made to householders are as follows :

Damage to furniture, etc.	£1461	7	8
Damage to Bedding, etc.	£1359	19	3
TOTAL	<u>£2821</u>	<u>6</u>	<u>11</u>

In addition 185 blankets, 36 sheets and 10 pillowcases have been given to householders in lieu of a monetary consideration.

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