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INSTITUTE OF SOCIAL  
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THE  
HEALTH  
OF THE  
COUNTY OF FIFE  
1939-1945

CUPAR-FIFE :  
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(C27178)





THE  
HEALTH  
OF THE  
COUNTY OF FIFE  
1939-1942

CURRY & CO.  
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(PRINTED)

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## STAFF.

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### County Medical Officer of Health.

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.

### Deputy County Medical Officers.

#### Health Services—

G. M. MACGILLIVRAY, M.C., M.B., Ch.B., D.P.H.

J. COMRIE, M.B., Ch.B., F.R.C.S.(Ed.), D.P.H.  
(Interim.)

#### Welfare Service—

R. A. KRAUSE, M.D., D.Sc., D.P.H.

#### Tuberculosis Service—

B. W. ANDERSON, M.A., M.D., D.P.H. Tuberculosis  
Officer and Medical Superintendent, Glen-  
lomond Sanatorium.

I. S. McCORMICK, M.B., Ch.B. Asst. Tuberculosis  
Officer.

R. PETTIGREW, M.B., Ch.B. Asst. M. O., Glen-  
lomond Sanatorium.

### Area Medical Officers.

G. A. H. GUMLEY, M.B., Ch.B., D.P.H., M.R.C.P.E.

A. LUNDIE, B.Sc., M.B., Ch.B., D.P.H.

JANE W. MACDONALD, M.B., Ch.B., D.P.H.

A. SHEILA MACLEOD, M.B., Ch.B., D.P.H.

ELSIE J. D. SCOTT, L.R.C.P., L.R.C.S (Ed.), L.R.F.P.S.

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

JANET WILSON, M.B., Ch.B.

### Area Dentists.

MISS ANDERSON, L.D.S.

MISS BRECHIN, L.D.S.

MISS KING, L.D.S.

MISS LINDSAY, L.D.S.

MISS LOCHHEAD, L.D.S.

MISS MACARTHUR, L.D.S.

### Health Visitors.

MISS BEDDIE.

MISS BISSET.

MRS BLACK.

MISS CONWAY.

MISS CRICHTON.

MISS DEMPSTER.

MRS DOUGALL.



### **Health Visitors—Continued.**

MISS EDNIE.  
MISS GEMMELL.  
MISS HAWICK.  
MISS KENNEDY.  
MISS KINNEAR.  
MISS MELDRUM.  
MISS MACLEAN.  
MISS MCPHERSON.  
MISS PATERSON.  
MISS SIME.  
MISS SIMPSON.  
MISS SLATER.  
MISS STUART.  
MISS TAYLOR.  
MISS WILSON.

### **Orthopaedic Staff.**

MISS BOOTH, Orthopaedic Nurse-in-Charge.  
MR A. MOIG, Physiotherapist.  
MRS ILLES, Physiotherapist.  
MRS HALL, Physiotherapist (part-time).

### **Orthoptist.**

MISS HALLIDAY.

### **Mental Health Service.**

#### **County Psychiatrist—**

W. BOYD, M.B., Ch.B., D.P.H., D.P.M., Medical  
Superintendent, Fife District Asylum.

#### **Psychologist—**

MISS I. C. McLEAN, M.A., B.Ed.

#### **Psychiatric Social Worker—**

MISS L. PRATT YULE, M.A.

### **County Sanitary Inspectors.**

C. A. ALEXANDER.  
WILLIAM FALCONER.  
IAN L. GOODFELLOW.  
ALEX. M. GOUGH.  
ROBERT JUST.  
GEORGE MARK.  
JOHN S. E. RIDDLE.  
A. M. THOMSON.

### **Milk Officers.**

MRS COBB.  
MISS LAMBIE.

## Specialists (Part-time).

### Ear, Nose and Throat—

I. FARQUHARSON, M.B., Ch.B., F.R.C.S.(Ed.),  
Edinburgh.

### Eye—

East Fife—A. M. MacGILLIVRAY, M.B., Ch.B., M.D.,  
D.O.M.S., F.R.S.(Ed.), Dundee.

West Fife—D. C. LEEDS, M.D., Ch.B., F.R.C.S.(Ed.),  
D.O.M.S.

### Orthopaedic—

R. STIRLING, M.B., Ch.B., F.R.C.S.(Ed.).

### Tuberculosis—

#### Glenlomond Sanatorium—

BRUCE DICK, M.B., Ch.B., F.R.C.S.(Ed.),  
East Kilbride—Thoracic Surgeon.

R. STIRLING, M.B., Ch.B., F.R.C.S.(Ed.),  
Edinburgh—Orthopaedic Surgeon.

### Radiologist—

A. CAMPBELL, M.B., Ch.B., D.R., Edinburgh.



## PREFACE.

The Report for 1939-1945 surveys the health of the population of Fife during the years of the second world war and indicates the limited influence which the unparalleled national emergency had on the general health of the community. Reference is also made to some of the adaptations and extensions of the County Public Health Services which were effected to meet the needs of the times.

The general death-rate rose in 1940-1941 but the increase was due mainly to an increased mortality from respiratory diseases resulting, not from war conditions, but from bad weather and influenzal outbreaks. Otherwise, the annual death-rates were more or less level. The average rate for the period was 12·80 per 1,000 of population as compared with 12·04 for the seven previous years, the difference being accounted for by a steady rise in deaths from circulatory diseases, which was in keeping with expected tendencies and independent of the war.

The infant mortality rate, always a sensitive index of the social and environmental conditions under which people work and live, fell steadily, reaching in 1945 the lowest rate ever recorded in Fife of 48·7 per 1,000 births. The maternal mortality rate also fell steadily from 5·1 per 1,000 live births in 1939 to 2·7 in 1945.

The incidence of infectious diseases was less in the concluding years of the war than it was at the beginning. The fact that the County was not visited by major epidemic outbreaks was one of the remarkable features of the war years. The death rate from principal epidemic diseases declined from 0·25 per 1,000 of population in 1939 to 0·11 in 1945. In contrast, perusal of the section of the Report dealing with tuberculosis, will show that an increase occurred in the incidence of tuberculosis. The factors leading to this increase are discussed in detail and serve to indicate that, considering all the circumstances, the position was much better than might have been expected.

The general state of health of the community can readily be assessed by study of the records of school medical inspection. The school medical officers are unanimous in their opinion that children in Fife did not suffer in nutrition and in general well-being as a result of the war. They incline to the view that, on the whole, the school children looked better in physique in 1945 than they did in pre-war years. The nutrition of poorer children improved as a result of school meals, school milk, more money at home and less opportunity of purchasing unsuitable foods. There was some evidence, too, that the state of their teeth had improved. There were no signs of the war having had any appreciable effect on the nervous system of children although the emotional development of some was affected mainly through the loosening of family discipline brought about by the father's absence on service and the mother's underlying sense of insecurity. On the other hand, an increased number of children suffered from scabies and impetigo. There was, however, no general decrease in cleanliness although one Medical



Officer reports "that comparative affluence in hitherto poorer families was not reflected in an improvement in clothing or cleanliness of the children. This was partly accounted for by the fact that, in many cases, the family income was increased at the expense of the mother's absence from home: also, there was more money to spend on entertainments and travelling about."

As regards the adult population, the two sections on which the war bore most heavily were the housewives and the elderly. Rationing, scarcity of domestic help and many other war-time restrictions created great difficulties in many homes and the brunt fell on the housewife who, of all people, deserves more credit than any for the manner in which she faced and overcame innumerable problems. Elderly people were faced with the necessity of continuing at work at a time when normally retirement would have been contemplated and the work they undertook was rendered doubly heavy by the absence of the younger generation on national service.

Whatever, therefore, may be the outcome of the continuous strains and anxieties to which the people were subjected throughout the seven years under review, morbidity and mortality rates provide no evidence that the war had any markedly demonstrable influence on the public health. Increased employment and an even distribution of food were two of the principal features contributing towards this satisfactory state of affairs. Another factor was an all-round simplification in ways of living, despite the complexities of form filling! In many respects it is to be regretted that the years of peace are liable to remove many of the safeguards, adopted as war-time necessities, which conduce towards wholesome living. The war, despite its horror, afforded many useful illustrations of a practical application of the principles of preventive medicine. It will be wrong if the lessons learned are cast aside and forgotten.

The opportunity is taken of directing attention to a long-standing administrative defect which the war brought into relief. The separation in Kirkcaldy of some of the senior officers of the Public Health Department from County headquarters led to unnecessary correspondence, inadequate co-operation and to an unequal distribution of responsibilities. From the points of view of economy and efficiency, it is now necessary that all sectional heads in the Public Health Department have their headquarters in Cupar.

To the preparation of this Report, many members of the Staff have contributed, each within his own sphere. Ready acknowledgment is made of the assistance rendered by all the contributors.

Finally, I wish to record my gratitude for the encouragement and help I have received from members of the various Committees concerned with the work of the Public Health Department and for the unfailing loyalty and support of my colleagues, medical, nursing, technical and clerical, in the County and Burgh Public Health Service.

G. MATTHEW FYFE,

*Medical Officer of Health.*





## The Health of the County of Fife, 1939-1945.

### VITAL STATISTICS.

#### Population.

According to the estimate of the Registrar General the population of the County, excluding the large Burghs of Dunfermline and Kirkcaldy, was 201,282 in 1939, an increase of 3,846 on the census population of 1931. For the remainder of the war years, allowance was made for persons in the armed forces and estimates were as follows :—

1939	...	...	...	...	201,282
1940	...	...	...	...	196,754
1941	...	...	...	...	192,700
1942	...	...	...	...	189,200
1943	...	...	...	...	186,040
1944	...	...	...	...	187,230
1945	...	...	...	...	189,596

The return of men and women from war-time occupations will increase the population to its normal level of over 200,000. For rationing purposes, the Ministry of Food in 1945 gave a figure of 200,500.

#### Births.

An increase in the number of births occurred during the war years. The following Table shows the number of live births (corrected for transfer) and the rate per 1,000 of population. There was no significant excess of male over female births although an excess of female births in 1939 was converted into a sustained although slight excess of male births during the remainder of the period.

		No. of Live Births.	Male.	Female.	Rate.
1939	...	3,297	1,643	1,654	16.4
1940	...	3,351	1,697	1,654	16.4
1941	...	3,567	1,835	1,732	17.5
1942	...	3,720	1,879	1,841	18.3
1943	...	3,846	1,990	1,856	18.9
1944	...	4,092	2,125	1,967	19.9
1945	...	3,737	1,895	1,842	18.2



There was a tendency towards a decrease in the number of still-births :—

		No. of Still-births.	Rate per 1,000 Total Births.
1939	...	154	45
1940	...	130	37
1941	...	126	34
1942	...	165	42
1943	...	144	36
1944	...	145	34
1945	...	136	35

The illegitimate birth-rate increased from 5.2 per 100 births in 1939 to 7.7 in 1945, a usual experience during wars.

### Marriage.

The marriage rate was well sustained during the first four years of the war, fell away during 1943 and 1944 when the call on man power was at its height, and rose considerably during the final year.

		No. of Marriages.	Rate per 1,000 of Population.
1939	...	1,495	7.4
1940	...	1,794	8.8
1941	...	1,746	8.6
1942	...	1,697	8.3
1943	...	1,360	6.7
1944	...	1,359	6.6
1945	...	1,846	9.0

### Deaths.

The number of deaths showed little variation throughout the seven years and the death-rate remained considerably lower than the birth-rate.

		No. of Deaths.	Rate per 1,000 of Population.
1939	...	2,386	11.9
1940	...	2,598	13.2
1941	...	2,559	13.3
1942	...	2,404	12.7
1943	...	2,532	13.6
1944	...	2,421	12.9
1945	...	2,341	12.2

Table I. of the Appendix shows the causes of deaths classified according to age groups. The principal causes of death were diseases of the heart and arteries, cancer and diseases of the respiratory system. Infectious diseases took fourth place among the causes of death. This sequence was the same as for peace time.

The number of violent deaths among children was distressingly high considering the restrictions in road traffic. One hundred and twenty-two children under fifteen years of age were killed and of these 83 or 68 per cent. were under five years of age.

### Infant Mortality.

In view of the importance of the infant mortality rates as a broad index of economic and environmental conditions, a comprehensive



report on infant deaths in the County during the period 1915-1943 was submitted to the County Public Health Committee in 1944. The following Tables bring up to date part of the information then submitted.

### BIRTHS AND INFANT DEATHS.

Year.	Births.		Neonatal Deaths.		Deaths 1-12 Months.		Total Deaths under 1 Year.	
	No.	Average	No.	Average	No.	Average	No.	Average
1915	2695	2445.8	112	94.6	188	136.6	300	231.2
1916	2420		95		107		202	
1917	2255		81		128		209	
1918	2401		102		131		233	
1919	2458		83		129		212	
1920	3138	2764.8	106	113.8	147	118.2	253	232.0
1921	2962		124		118		242	
1922	2552		121		129		250	
1923	2564		106		90		196	
1924	2608		112		107		219	
1925	2402	2223.4	72	84.2	112	89.2	184	173.4
1926	2474		96		81		177	
1927	2127		83		101		184	
1928	2124		89		85		174	
1929	1990		81		67		148	
1930	2090	2090	81	81	51	51	132	132
*1931	3608	3504.2	127	150.2	135	127.6	262	277.8
1932	3523		143		139		282	
1933	3448		125		117		242	
1934	3435		138		107		245	
1935	3507		137		89		226	
1936	3556	3398	119	131	125	90.8	244	221.8
1937	3368		140		85		225	
1938	3418		116		70		186	
1939	3297		143		82		225	
1940	3351		137		92		229	
1941	3567	3792.4	131	124.6	106	94	237	218.6
1942	3720		141		109		250	
1943	3846		126		98		224	
1944	4092		121		79		200	
1945	3737		104		78		182	

NOTE.—Neonatal deaths are those among infants under one month of age.

\* From 1931 onwards, Small Burghs included.



INFANT MORTALITY AND NEONATAL MORTALITY RATES.  
(PER 1000 BIRTHS).

Year	Infant Mortality Rate	Quin- quennial Average	Neonatal Mortality Rate	Quin- quennial Average	Mortality Rate. 1- 12 months	Quin- quennial Average
1915	111.3		41.5		69.8	
1916	83.4	87.9	39.2	37	44.2	50.9
1917	92.6		35.9		56.7	
1918	97		42.4		54.6	
1919	86.2		33.8		52.4	
1920	80.6		33.8		46.8	
1921	81.7	83.3	41.9	40.7	39.8	42.6
1922	97.9		47.4		50.5	
1923	76.4		41.3		35.1	
1924	83.9		42.9		41	
1925	76.6		30		46.6	
1926	71.5	75.4	38.8	39.8	32.7	35.6
1927	86.5		39		47.5	
1928	81.9		41.8		40.1	
1929	74.3		40.7		33.6	
1930	63.1		38.7		24.4	
*1931	72.6	71.7	35.2	38.2	37.4	33.5
1932	80		40.5		39.5	
1933	70.2		36.2		33.8	
1934	71.3		40.1		31.2	
1935	64.4		39		25.4	
1936	68.6	65.2	33.5	38.6	35.1	26.6
1937	66.8		41.5		25.3	
1938	54.4		33.9		20.5	
1939	68.2		43.4		24.8	
1940	68.3		40.8		27.5	
1941	66.4	57.8	36.7	32.9	29.7	24.9
1942	67.2		37.9		29.3	
1943	58.2		32.8		25.4	
1944	48.8		29.5		19.3	
1945	48.7		27.8		20.9	

NOTE.—The *Infant Mortality Rate* is the number of registered deaths of infants under the age of twelve months during any year per 1,000 live births registered during the same year.

The *Neonatal Mortality Rate* is the number of registered deaths under one month of age per 1,000 live births registered during the same year.

\* From 1931 onwards, Small Burghs included.

Thirty years has seen a steady decline in the infant mortality rate culminating in the lowest recorded rate of 48.7 per 1,000 births in 1945, an achievement rendered all the more remarkable by the



rigours of the war years. There is room and reason for further reduction, however. Deaths among infants of 1-12 months are largely due to environmental diseases arising, in the main, from unsatisfactory housing conditions: closure of insanitary houses and remedy of overcrowding together with the provision of secure basic family incomes will result in a greater saving of infant lives. Deaths among infants under one month of age are, for the most part, due to prematurity and congenital malformations. Prospects of reducing deaths from these causes are less favourable but such recent discoveries as the value of transfusion with Rh. negative blood encourage the belief that advances in medical knowledge will have a beneficial influence. Furthermore, since the factors at play concern the mother as well as the infant, exercise of greater ante-natal care and improvement in the economic conditions of the expectant mother will assist towards a decline in the neonatal mortality.

The following Table affords a means of comparing infant mortality rates according to causes of death in groups of five years from 1931 onwards.

**Causes of Death.**

CAUSE OF DEATH	AVERAGE 1931-1935 Landward and Small Burghs		AVERAGE 1936-1940 Landward and Small Burghs		AVERAGE 1941-1945 Landward and Small Burghs	
	No. of Deaths	Rate per 1000 Births	No. of Deaths	Rate per 1000 Births	No. of Deaths	Rate per 1000 Births
Meningitis ...	13	·7	3	·1	18	·9
Whooping-cough	57	3·2	29	1·7	27	1·4
Diphtheria ...	3	·1	1	·05	—	—
Tuberculous Dis- eases ...	13	·7	7	·4	18	·9
Measles ...	13	·7	3	·1	4	·2
Other Infectious Diseases ...	45	2·5	24	1·4	17	·9
Respiratory Dis- eases ...	216	12·3	225	13·2	191	10·1
Diarrhoea ...	66	3·7	54	3·1	78	4·1
Other Digestive Diseases ...	16	·8	11	·6	17	·9
Congenital De- bility Prem. Birth: Mal- formations ...	670	38·2	655	38·5	623	32·8

It will be seen that during the years when the war exerted its greatest pressure on civilian life, an increase occurred in deaths from meningitis, tuberculosis, diarrhoea, and other digestive



diseases. On the other hand, a fall occurred in deaths from whooping-cough and other infectious diseases. Deaths from respiratory diseases—bronchitis, pneumonia—were also reduced in number and a more marked decline took place in deaths from prematurity and congenital malformations.

The next Table gives the infant mortality rates for the landward part of the County and for the small Burghs.

**Infant Mortality Rates—Landward and Small Burghs.**

					Average	
					1931-1945	
			1931-1935	1936-1940	1941-1945	1931-1945
Landward Area	...	...	78.8	67.4	59.7	68.6
Auchtermuchty Burgh	...	...	65.7	47.6	70.1	61.1
Buckhaven Burgh	...	...	75.4	74.9	74.4	74.9
Burntisland Burgh	...	...	56.3	31.6	54.5	47.4
Cowdenbeath Burgh	...	...	73	81.5	62.3	72.2
Crail Burgh	...	...	60	15.6	24.9	33.5
Culross Burgh	...	...	38.4	71.4	65.2	58.3
Cupar Burgh	...	...	45.4	34.5	44.5	41.4
Elie Burgh	...	...	29.4	32.2	22.9	28.1
Falkland Burgh	...	...	84.7	49.1	91.7	75.1
Inverkeithing Burgh	...	...	80.9	97.5	47	75.1
Kilrenny and Anstruther Burgh			39.4	44.7	46.6	43.5
Kinghorn Burgh	...	...	61.6	65.7	72.1	66.4
Ladybank Burgh	...	...	28.1	29.4	11.7	23.1
Leslie Burgh	...	...	59.7	69.8	34.1	54.5
Leven Burgh	...	...	55.3	71	51.4	59.2
Lochgelly Burgh	...	...	66.5	62.9	50.8	60
Markinch Burgh	...	...	59.1	42.1	61.1	54.1
Newburgh Burgh	...	...	56.5	38	24.2	39.5
Newport Burgh	...	...	24.6	42.5	50.7	39.2
Pittenweem Burgh	...	...	49.5	41.6	43.9	45
St Andrews Burgh	...	...	33.6	58	46.9	46.1
Tayport Burgh	...	...	84.6	41.3	39.9	55.2
St Monance Burgh (from 1933)			18.1	49	54.9	40.6

The rates are grouped in five-year periods from 1931 onwards. In view of the small size of the population of many of the Burghs, caution must be exercised in drawing comparisons. Nevertheless, there are adequate grounds for stating that the infant mortality rate has not fallen as it should in the more populous Burghs. Poverty and bad housing conditions are responsible in considerable measure but they do not account for all the difference. In some Burghs, the services offered have not been taken advantage of to the full: in others, there has not been sufficient staff to provide an adequate service.

#### **Maternal Mortality.**

Deaths from child-birth are becoming less frequent. For the three five-year periods since 1931, the average maternal mortality rates for the County were 6.2, 4.8 and 4.1 respectively. Sulphonamide medication, the Maternity Services Scheme and an increased tendency towards confinements taking place in hospital, have all



conducted towards the improvement. The war years did not exert an adverse influence although it is possible that the decrease might otherwise have been more pronounced. The following Table gives the relative figures for the landward and burghal areas and for the County as a whole.

**Maternal Mortality, 1930-45.**

Year.	Landward.			Small Burghs.			County Area.			Quin- quennial Average.
	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.	Births.	Deaths.	Rate.	
1930	2090	19	9.1	1713	9	5.2	3803	28	7.4	
1931	1935	15	7.7	1673	8	4.8	3608	23	6.4	6.2
1932	1981	12	6.1	1542	5	3.2	3523	17	4.9	
1933	1959	11	5.6	1489	8	5.4	3448	19	5.5	
1934	1847	15	8.1	1588	8	5.0	3435	23	6.7	
1935	1966	12	6.1	1541	14	9.0	3507	26	7.4	
1936	1958	8	4.1	1598	14	8.8	3556	22	6.2	4.8
1937	1777	10	5.6	1591	5	3.1	3368	15	4.4	
1938	1821	3	1.7	1597	10	6.3	3418	13	3.8	
1939	1807	11	6.1	1490	6	4	3297	17	5.1	
1940	1821	4	2.2	1530	12	7.8	3351	16	4.7	
1941	1894	11	5.8	1673	12	7.1	3567	23	6.4	4.1
1942	1933	9	4.6	1787	6	3.4	3720	15	4	
1943	1963	12	6.1	1883	4	2.1	3846	16	4.1	
1944	2121	7	3.3	1971	7	3.6	4092	14	3.4	
1945	1955	5	2.5	1782	5	2.8	3737	10	2.7	



## MATERNITY AND CHILD WELFARE SERVICE.

### Maternity Services Scheme.

The County Maternity Services Scheme came into operation in September, 1939. Under the Scheme, any expectant mother who makes application is entitled to the services of a doctor, a midwife and, if necessary, of an obstetrician. The Scheme is a domiciliary one and does not include admission to hospital, which is provided for under the Maternity Service and Child Welfare Scheme. The following numerical statement indicates the extent to which the services were utilised.

Year.	Number of Live Births in County.	Number under the Scheme.	Confined by Doctor.	Confined by Midwife.	Removed to Hospital.
1939 ...	3297	211	100	105	6
1940 ...	3351	1562	924	572	66
1941 ...	3567	2000	932	976	92
1942 ...	3720	2139	960	1067	112
1943 ...	3846	2233	1015	1119	99
1944 ...	4092	2363	1021	1194	148
1945 ...	3737	2017	890	997	130

As the years passed, an increasing number of expectant mothers took advantage of the Scheme. In 1945, 54 per cent. of the total live births took place under the arrangement. There is little doubt but the fact that a doctor and a midwife and specialist advice is available to every woman who make application has had an important influence in reducing the maternal death-rate. In 1943, for example, the mortality among women participating in the County Scheme was 3.15 per 1,000 births, whereas the mortality among women not participating in the County Scheme was 9.41 per 1,000 births.

The Scheme had also an influence in saving infant life since the condition of the mother is reflected in the physical condition of the new born child. From 1939, there has been a fall in the neo-natal death-rate (*i.e.*, deaths among infants under one month of age) from 43.4 to 27.8 per 1,000 live births.

The cost of the Scheme was as follows :—

1939-40	...	...	...	...	...	£3,136	4	6½
1940-41	...	...	...	...	...	6,256	10	2
1941-42	...	...	...	...	...	5,868	5	6
1942-43	...	...	...	...	...	5,754	4	11
1943-44	...	...	...	...	...	7,703	7	11
1944-45	...	...	...	...	...	10,163	11	4½

The increased expenditure incurred during the last two years was due to the increased fees payable to doctors and midwives.



In addition to the advantages offered by the County Maternity Services Scheme, expectant mothers receive the benefit of hospital treatment offered under the County Maternity and Child Welfare Scheme. Admission to hospital is arranged at very reasonable terms so far as the patient is concerned and, as the following figures show, the County Council is now assuming responsibility for attendance during pregnancy either at home or in hospital for the greater number of all the maternity cases in the County.

**Percentage of Births occurring under County Schemes.**

1939	...	...	...	...	...	27·9
1940	...	...	...	...	...	69·4
1941	...	...	...	...	...	80·9
1942	...	...	...	...	...	78·5
1943	...	...	...	...	...	76·0
1944	...	...	...	...	...	74·5
1945	...	...	...	...	...	74·9

As ancillaries to the measures taken by the County Council to safeguard the lives of mothers and infants, mention should be made of the development of a Home Help Scheme in Wemyss Area and to the issue of special outfits to assist in the domiciliary nursing of premature infants, there being a marked lack of hospital accommodation in the County for the reception of infants.

**Midwives (Scotland) Acts.**

At the beginning of the year 1939, the number of midwives practising in Fife and on the County Midwives' Roll was 47. There were 84 in 1940, 83 in 1941, 80 in 1942, 75 in 1943, 80 in 1944, and 84 in 1945. There was a big addition during the year 1939 due to the fact that many District Nurses were admitted to the Roll in compliance with the terms of the Maternity Services (Scotland) Act, 1937.

Year.	Total Births (Uncorrected).	Infant Deaths (Up to 14 days).	Births and Infant Deaths in Practice of Midwives.	
1939	3415	117	832	28
1940	3343	110	926	15
1941	3573	95	1219	26
1942	3763	90	1327	24
1943	3840	80	1475	16
1944	4044	85	2177	31
1945	3670	79	2016	33

There was a gradual increase in the annual number of births during the war years, and it will be noted that the increase for cases attended by midwives was proportionately greater. This increase, however, was more apparent than real. Under the Maternity Services Scheme, every expectant mother is entitled to the services of both a doctor and a midwife and midwives so attending are regarded as maternity nurses. The number of births shown to have occurred in the practice of midwives is, therefore, indicative of the increasing popularity of the Maternity Services Scheme rather than of an augmented demand for the services of the midwives alone.



For the year 1944 a form requesting more detailed statistical data relating to births, deaths, &c., under the Maternity Scheme was issued by the Department of Health for Scotland and the Central Midwives Board for Scotland. In this new form, figures for cases attended by midwives are divided into domiciliary cases under the Maternity Services Scheme, of which there were 2073; and other domiciliary cases attended by midwives (*i.e.*, where no doctor had been booked), of which there were 104. The total number of births registered during that year was 4044. Of these 85 died within 14 days of birth. Of these deaths, 30 were under the County Maternity Services Scheme and 1 other attended by midwife only.

In 1945, there was a reduction in the total births registered—3670 infants of whom 79 died in the first fortnight. Under the County Maternity Scheme, midwives attended 1934 confinements and a further 82 cases outwith the scheme.

The following conditions were specially reported on:—

	STILL-BIRTHS.		OPHTHALMIA NEONATORUM.		PUERPERAL FÉVER.		PUERPERAL PYREXIA.	
	Total Noti- fied.	In Practice of Mid- wives.	Total Noti- fied.	In Practice of Mid- wives.	Total Noti- fied.	In Practice of Mid- wives.	Total Noti- fied.	In Practice of Mid- wives.
1939	146	36	60	29	10	—	18	—
1940	123	23	96	26	9	—	18	2
1941	90	29	69	29	5	1	20	4
1942	156	48	65	29	11	3	27	2
1943	128	30	107	43	13	1	22	4
1944	136	56+1	110	60	12	5	13	8+1
1945	124	57+1	87	55+2	7	5	19	15+1

The figures following the plus sign are those occurring in practice of midwives where the case was not one coming under the County Maternity Services Scheme.

The midwives, as instructed under the Rules and Regulations of the Central Midwives Board, sent in the following number of Notices to the Public Health Department:—

	1939	1940	1941	1942	1943	1944	1945
(a) Deaths ... ..	4	1	—	2	1	2	—
(b) Still-Births ... ..	40	23	40	64	30	28	19
(c) Laying out of dead body	13	15	27	14	11	8	7
(d) Liability to be a source of infection ... ..	3	16	12	15	25	20	21
(e) Artificial Feeding ... ..	19	29	22	35	24	32	29
(f) Failure to follow advice	3	—	—	—	3	—	—
	82	84	101	130	94	90	76

*Medical Assistance.*—In addition, the midwives also forwarded forms indicating that they had sent for medical assistance. These forms are analysed in the following table as to the reason given for sending to the medical practitioner for assistance:—



	1939	1940	1941	1942	1943	1944	1945
Delayed Labour ... ..	25	40	30	50	59	42	43
Abnormal Labour ... ..	11	11	15	7	14	18	7
Torn Perineum ... ..	42	37	58	38	83	73	43
Maternal Haemorrhage—							
Ante Partum ... ..	7	5	3	6	4	10	4
Post Partum ... ..	2	4	3	4	5	3	8
Pain and Puffiness of Legs ...	3	1	1	2	—	1	—
Weakness—							
Mother ... ..	4	3	1	2	3	4	—
Baby ... ..	6	1	2	1	5	—	5
Premature Births ... ..	9	10	3	5	3	7	2
Still-Births ... ..	16	9	9	5	11	13	16
Inflamed and Discharging							
Eyes ... ..	13	23	16	15	37	37	28
Jaundice ... ..	2	—	—	—	—	—	—
Raised Temperature ... ..	6	2	6	7	8	6	6
Adherent and Retained Placenta ... ..	6	5	5	4	7	11	10
Albuminuria ... ..	—	2	8	1	1	2	3
Miscellaneous ... ..	36	16	15	8	12	19	18
Total ... ..	188	169	175	155	252	246	193

It will be seen that delayed labour and perineal tears are the commonest causes for calling medical help. Discharging eyes, abnormal labour and still-births are represented to a lesser extent.

The figures can be re-grouped under the headings :—Complications relating to (1) Pregnancy, (2) Labour, (3) Lying-in period and (4) the Infant. It is then found that, for the years 1943, 1944 and 1945, there were respectively 11, 18, and 13 complications of pregnancy. Under Complications of Labour there were 181 (1943), 166 (1944) and 118 (1945), the outstanding conditions being torn perineum and delayed labour. The numbers under complications of the lying-in period were 10 (1943), 8 (1944) and 9 (1945). Here Pyrexia contributed the largest number. Complications affecting the Infant accounted for 67 (1943), 62 (1944) and 58 (1945). Here ophthalmia neonatorum had the largest number ; then came still-births followed by prematurity and debility.

In 1939, a midwife was found to be inefficient in the use of the thermometer. She was shown how to give correct readings and eventually satisfactory results were obtained. Another nurse, who failed to keep records of temperature and pulse readings, was warned of the serious consequences if she continued to do so.

In 1940, there was a diminution in the number of cases of handy-women acting as midwives. In most of those cases, there was evidence that the woman had been called upon in an emergency. A number of midwives raised the question of the duty of a midwife when called upon to attend a case during an air raid. In a circular issued to Air Raid Wardens, it was indicated that " Whilst it is the duty of a Warden, and, of a midwife, to respond to the call of duty,



it is laid upon you to take what steps you can to preserve your life. When bombs or shrapnell are not actually falling in your vicinity, you ought to take the opportunity to move towards your case, taking shelter whenever definite danger threatens. If there is any other danger of which you are not aware, you can be sure that the A. R. P. Officials, Special Constables, and L. D. V. personnel will soon draw your attention to any such danger, which may require your betaking yourself to a place of safety and which may thus prevent your reaching your case. Apart from these possibilities, it must be understood—and I cannot imagine any midwife acting otherwise—that you will proceed to your case.” There is no record of any midwife being unable to attend any of her confinements because of an air raid.

During the year 1941, two midwives each sent in more than one medical assistance form for one case. It was pointed out to them that this was unnecessary and that when once a medical practitioner was called in he was responsible to complete the case. Even when the nurse had subsequently to send for him it was not necessary to use a second medical assistance form. Another nurse who attended a confinement did not notify the birth. She claimed to be acting only as a maternity nurse. It had to be pointed out to her that the doctor was not in attendance and she was actually present at the confinement. As she had acted in an emergency, she should have reported this and indicated that she had no intentions to resume the practice of midwife. Another midwife failed to notify a case of discharging eyes. It had to be explained to her that although she had called in a doctor and acted on his instructions, she was still obliged to notify the fact under the Rules of the Central Midwives Board to the Public Health Department.

There was nothing special to record in 1942 apart from the fact that, despite the County Maternity Services Scheme, there was still a tendency for an increase in the number of cases attended by midwives alone.

In 1943, one of the Supervisors of Midwives found it necessary to report on the very large number of cases undertaken by one of the midwives. As a result of representations made, she agreed to withdraw from two of the outlying areas. In view of the fact that this had occurred in previous years as well as in 1943 and further that this midwife was undertaking more cases than she was able to give sufficient care to, it was decided to limit any one midwife's cases to approximately 80 per annum. Another point raised by the Supervisor was the increase of clerical work entailed by the Maternity Services Scheme. This seemed to be proving rather a burden particularly to the older midwives. The increased number of inflamed and discharging eyes reported by the midwives can probably be attributed in the main to a stricter interpretation of the Midwives “ Rules.”



There was nothing of special note in 1944.

In 1945, it was found necessary to interview a midwife as she was paying an insufficient number of visits to one of her cases. She also failed to notify the Authority that the baby was suffering from ophthalmia neonatorum. As previous complaints had been received, she was warned that when attending a case under the Maternity Services Scheme, she was acting as a midwife and therefore had to carry out all Rules of the Central Midwives Board. She was also informed that she was undertaking more midwifery work than she could efficiently perform.

The number of claims received in terms of the Midwives Acts, 1915 and 1927, and the amounts paid (in brackets) were as follows :— 1939-137 (£217 5s), 1940-60 (£105 8s), 1941-47 (£88 14s 2d), 1942-49 (£108 10s), 1943-72 (£157 13s 6d), 1944-72 (£164 1s 6d), and 1945-102 (£318 13s 6d).

### Maternity Hospitals.

A study of the number of births which took place in Institutions shows that increases were recorded for the war years. The figures given for the following hospitals refer to the number of admissions and in brackets the number of women involved and infants requiring special attention.

*Kirkcaldy Maternity Hospital.*—The admissions to this hospital and the number of women and infants involved were as follows :— 1939-330 (328-2) ; 1940-320 (318-2) ; 1941-467 (462-5) ; 1942-453 (444-9) ; 1943-364 (358-6) ; 1944-359 (352-7) ; and 1945-387 (376-11). Maintenance and treatment charges were paid by the following numbers :—1939-300 (N. 16, P.N. 10) ; 1940-302 (N. 9, P.N. 5) ; 1941-450 (N. 9, P.N. 3) ; 1942-433 (N. 9, P.N. 7) ; 1943-357 (N. 2, P.N. —) ; 1944-347 (N. 3, P.N. —) ; and 1945-381 (N. 3, P.N. 1). It will be seen that the number of necessitous (N.) and partly necessitous (P.N.) women decreased during the war. The number of cases of outstanding fees which were referred to the appropriate Department was as follows :—4, 4, 5, 4, 5, 9 and 2 respectively.

*Dunfermline Maternity Hospital.*—The admissions and the number of women and infants involved were :—1939-384 (374-10) ; 1940-509 (501-8) ; 1941-510 (501-9) ; 1942-441 (429-12) ; 1943-426 (413-13) ; 1944-433 (421-12) ; 1945-489 (477-12). Maintenance and treatment charges were paid by the following numbers (necessitous and partly necessitous in brackets) :—1939-363 (N. 12, P.N. 6) ; 1940-485 (N. 7, P.N. 5) ; 1941-498 (N. 4, P.N. —) ; 1942-430 (N. 5, P.N. —) ; 1943-420 (N. 1, P.N. —) ; 1944-429 (N. 2, P.N. —) ; 1945-481 (N. 4, P.N. —). The number of cases where there was outstanding fees was for the successive years as follows :—3, 12, 8, 6, 5, 2 and 4. These were referred to the appropriate Department for collection.



*Thornton Home and Hospital.*—There were 10 admissions in 1939 to this hospital; of these 4 paid and 6 were considered necessitous.

*Dunfermline Combination Home and Hospital.*—At this hospital, the number of women admitted was:—1939-1 (1); 1943-6 (6); 1944-3 (3); 1945-4 (4). There were no infants requiring special attention. The maintenance and treatment paid and partly paid were:—1939-1; 1943-2 (2 N., 2 P.N.); 1944-0 (3 N.), and 1945-3. In that year there was one case where the fee was outstanding and this woman had to be referred to the appropriate Department.

The increasing demands for admission to Maternity Hospitals were such that in 1941 it was necessary to make an agreement with the Edinburgh Royal Infirmary for the admission of women to the Simpson Memorial Maternity Pavilion. The following were the admissions:—1941-2, 1942-1, 1943-11 and 1945-6. The number who paid or were necessitous were—1941-0 (2 N.); 1942-0 (1 N.); 1943-8, 1945-5. In 1943 and 1945 there were 3 and 1 cases respectively which had to be referred to the County Treasurer's Department for outstanding payment.

In 1943, arrangements were made for the admission of mothers to Airthrey Castle Emergency Maternity Hospital, Bridge of Allan, and Meikleour Maternity Hospital, Perth. The agreement for admission to the former hospital expired on 1st April, 1946.

*Airthrey Castle Emergency Maternity Hospital.*—Number of admissions, 1943-1, 1944-19, and 1945-15. The number of women who paid or were considered partly necessitous were—1944-12, 1945-13 (1 P.N.). The only case in 1943 had to be referred to the County Treasurer's Department. In 1944, there were 7 and in 1945 only 1.

*Meikleour House Hospital.*—The numbers admitted were 1944-21 and 1945-23. In the former year, 18 mothers paid. One was considered necessitous and in the next year 15 paid. One was partly necessitous and 1 necessitous. The number referred for outstanding payment was 2 and 6 respectively. One patient was transferred from this hospital to the Perth Royal Infirmary.

At the end of 1945, the Local Authority had under consideration the organisation of a temporary Maternity Hospital (15 beds) at Netherlea, Newport.

### **Additional Nourishment.**

Grants of additional nourishment in the form of milk were given in 1939 to 26 expectant mothers, 14 nursing mothers and 40 pre-school children, a total of 80. In 1940, the total was 160, and consisted of 35 expectant mothers, 37 nursing mothers, and 88 pre-school children.

In 1940, the National Milk Scheme came into operation under the auspices of the Ministry of Food and in the following year it was



augmented by the issue of cod liver oil and fruit juices. Additional nourishment grants were therefore not required to be given under the County Maternity and Child Welfare Scheme. In 1941, only one expectant mother and four infants were given additional nourishment and in 1943 it was given to two infants.

### Conditions of "Home" on First Visit.

The Health Visitor, after receiving notification of a birth, pays a first visit to the mother and baby and, among other matters, records the condition of the home as found at that visit. Despite the war years, there was no marked deterioration in general domestic cleanliness as noted by the nurses. The percentage of clean homes varied between 91·1 and 93·1 per cent. and only in 1944 did it fall to 90·6 per cent. A final analysis of the figures is given in the following table :—

		Clean.	Indifferent.	Dirty.	Total.
1939	...	3137	200	32	3369
1940	...	3053	205	44	3302
1941	...	3206	261	47	3514
1942	...	3396	275	36	3707
1943	...	3499	251	45	3795
1944	...	3623	313	59	3995
1945	...	3297	265	55	3617

### Breast Feeding.

The Health Visitor at the "first" visit notes whether an infant is being breast-fed, bottle-fed, or both breast and bottle fed. From the reports submitted, it was found that the percentage numbers for breast-fed babies fell gradually :—In 1939—78·1 ; 1940—77·1 ; 1941—75·7 ; 1942—72·0 ; 1943—71·0 ; 1944—71·5 ; and 1945—69·1. The following are the actual figures :—

		Breast-feeding.	Bottle-feeding.	Mixed-feeding.
1939	...	2504	620	82
1940	...	2451	631	92
1941	...	2603	689	144
1942	...	2565	884	111
1943	...	2603	953	107
1944	...	2769	965	136
1945	...	2423	971	109

### Home Visitations.

The number of home visits made by the Health Visitors under the Maternity and Child Welfare Scheme were in 1939—48,721 ; 1940—48,463 ; 1941—45,412 ; 1942—43,973 ; 1943—47,536 ; 1944—46,336 and 1945—48,030. Visits were also paid to evacuee mothers and infants :—In 1939—1,272 ; 1940—337 and in 1941—39. These were additional visits. The numbers of nursing mothers and infants and pre-school children (in brackets) seen at these visits were :—1939—30,304 (23,096) ; 1940—28,816 (24,989) ; 1941—25,674 (24,977) ; 1942—25,817 (21,354) ; 1943—26,953 (26,610) ; 1944—27,604 (27,825) ; 1945—26,973 (29,543). For



evacuees the numbers were :—1939—436 (1,053) ; 1940—145 (275) and in 1941—56 (100).

At these visits advice was given to expectant mothers and the number of mothers seen and re-visited were :—1939—4,213 (118) ; 1940—4,072 (31) ; 1941—3,844 (26) ; 1,942—3,777 (26) ; 1943—4,099 ; 1944—4,279 and 1945—4,152. The figures in brackets were for evacuee expectant mothers.

The Health Visitors, as assistant inspectors of midwives, also paid the following number of visits of inspection :—1939—85 ; 1940—30 ; 1941—20 ; 1942—12 ; 1943—9 ; 1944—4 ; and 1945—6. The reduction in numbers was due to the fact that three of the Area Medical Officers were made responsible for this work in the following areas :—West Fife (Dr Gumley), Lochgelly-Auchterderran (Dr Wilson), and Buckhaven-Wemyss (Dr Scott).

Under the Tuberculosis Scheme, the Health Visitors act as " Tuberculosis Nurses " and in the performance of this duty they paid the following numbers of visits to cases on the register :—1939—6,440 (M. 2,757, F. 3,683) ; 1940—5,800 (M. 2,325, F. 3,485) ; 1941—4,688 (M. 1,915, F. 2,773) ; 1942—4,301 (M. 1,773, F. 2,528) ; 1943—4,722 (M. 2,140, F. 2,582) ; 1944—3,977 (M. 1,964, F. 2,013) ; and 1945—4,379 (M. 2,250, F. 2,129).

It will thus be seen that the Health Visitors as Welfare Nurses paid the total following number of visits :—1939—55,246 (+1,272) ; 1940—54,303 (+337) ; 1941—50,100 (+139) ; 1942—48,286 ; 1943—52,267 ; 1944—50,317 ; 1945—52,415. In view of the various difficulties and extra duties that confronted the nurses during the war years, *e.g.*, overcrowded 'buses making it difficult to travel from place to place, fitting of baby gas masks, helping with mass vaccinations against Smallpox in 1942, and diphtheria immunisation, it stands to their credit that they were able to accomplish so many home visits. There is little doubt but that their work had an important influence in maintaining the health of the juvenile population throughout the war years.

### Infant Protection.

The number of infants on the Infant Protection Register were 1939—46 (17) ; 1940—42 (7) ; 1941—38 (9) ; 1942—28 (12) ; 1943—27 (10) ; 1944—14 (15) ; and 1945—19 (19). The numbers of infants added during the year are given in brackets. In 1942 and 1943, one child was boarded-out under the Poor Law Acts and the numbers returned to their relatives were :—1940—2 ; 1941—6 ; 1942—4 ; 1943—2 ; 1944—2 ; and 1945—6. The numbers which were removed from the district were :—1941—3 ; 1942—2 ; 1943—8 ; 1944—2, and 1945—2. The following were the number of children who reached the age of nine years :—1939—6 ; 1940—4 ; 1941—5 ; 1942—4 ; 1943—6 ; 1944—2 ; and 1945—2. The number adopted by their guardians was in 1939—2 ; 1940—5



1941—1 ; 1942—2 ; 1943—4 ; 1944—3 ; and 1945—4. No other legal adoptions were effected. In 1941, four infants died ; in 1943 two and in 1944 one.

The Health Visitors who act as Infant Protection Visitors paid the following numbers of home visits and saw the numbers of children indicated in brackets :—1939—182 (195) ; 1940—142 (150) ; 1941—121 (128) ; 1942—94 (105) ; 1943—74 (80) ; 1944—84 (87) ; and in 1945—82 (89). In the cases where first time reports were made, it was found that the following numbers of guardians had no fireguards :—1939—9 ; 1940—4 ; 1941—7 ; 1942—5 ; 1943—6 ; 1944—6 ; and 1945—3. In all these cases, the guardians were warned and their responsibility in the event of any fire accident was stressed.

There were very few cases requiring a special report and only one in 1944 where further enquiries required to be made and the help invoked of the Inspector of the Royal Scottish Society for the Prevention of Cruelty to Children. Here the cleanliness of the child was apt to be indifferent and the guardian, it was stated, was often out at night. The child seemed happy and there were no signs of malnutrition. The case was kept under close supervision and relatively satisfactory adjustments were made.

### Infant Anti-Gas Helmets.

During the winter of 1939-40, the work of the Welfare Nurses, already added to in certain areas by the evacuation of children into the County, was increased by their having to distribute anti-gas protection helmets for infants up to two years of age.

The number of helmets issued for distribution was :—

1. Burghs of Cowdenbeath, Inverkeithing, Burntisland, and Kinghorn ... ..	1015
2. Burghs of Lochgelly, Leven, Buckhaven, and North Queensferry ... ..	1197
3. From the Cupar Centre ... ..	3937
4. Demonstration, &c., Helmets ... ..	181
	<hr/>
	6330

Of this number, 800 were returned to the central depots leaving 5,530 which were distributed in the County.

The work entailed in distributing and transferring the helmets was considerable despite the great help which the nurses received from the A. R. P. Wardens in certain areas. The mothers who received baby helmets were given printed slips which they were told to complete whenever they changed their addresses in order that a check could be maintained on the number of helmets and that arrangements could be made, when infants reached the age of two years, for the return of the helmets to the clinic centres and the handing out of the young children's respirators (Mickey Mouse)



by the Wardens. Unfortunately, a number of mothers on leaving the district did not notify their change of address and in consequence, a large amount of unnecessary work was added to the Health Visitors' already overburdened time-table.

### Maternity and Child Welfare Centres.

In addition to the home visitation of newly born babies and to other domiciliary visits made under the Maternity and Child Welfare Schemes, other means are afforded by the Local Authority for the supervision of mothers and babies through Welfare Clinics in the various centres throughout the County where periodic weighing of babies is undertaken and where mothers attend for advice regarding the difficulties they encounter in the upbringing of their young children. The clinics in the various areas are as follows :—

*Dunfermline District*—Torryburn, Inverkeithing, Crossgates, Blairhall and Saline.

*Cowdenbeath and Lochgelly District*—Cowdenbeath, Kelty, Lochgelly, Crosshill and Auchterderran.

*Kirkcaldy District*—Burntisland, Kinghorn, Markinch, Thornton, East Wemyss, Methil and Leven.

*East Fife District*—Anstruther, St Andrews, Ladybank, Newburgh, Cupar and Tayport.

During the war, Torryburn Clinic was required for Civil Defence work and arrangements of a less satisfactory kind had to be made at the local Miners' Institute and at High Valleyfield School. A weighing clinic was begun in 1944 at the Steelend Miners' Institute. At Auchtermuchty, the clinic had to be closed and arrangements were made for the welfare clinic to be held periodically in the Burgh Town Hall. Markinch Clinic, however, had been completed and was in use during the whole period of the war.

The figures for the number of cases and attendances at the clinics increased as the war progressed and in 1945 figures approached those for 1938. There can be no doubt that as the anxieties and deprivations of war grew, mothers became all the more anxious to have advice regarding their young children, although to a limited extent, the availability of accessory foodstuffs at the centres accounted for some of the increased attendance. In the following table, figures are given for the number of children and the total attendances in the four districts of Fife, namely, Dunfermline, Cowdenbeath-Lochgelly, Kirkcaldy and East Fife.

	New Cases.	Attendances.
1939 Dunfermline	245 (9)*	560 (11)*
Cowdenbeath-Lochgelly	1423 (33)	12061 (72)
Kirkcaldy	459 (34)	3858 (57)
East	395 (39)	823 (53)
	<hr/> 2522 (115) <hr/>	<hr/> 17302 (193) <hr/>



		New Cases.	Attendances.
1940	Dunfermline	97 (2)	147 (2)
	Cowdenbeath-		
	Lochgelly	1648 (23)	12938 (98)
	Kirkcaldy	495 (18)	3938 (64)
	East	500 (17)	1263 (36)
		<u>2740 (60)</u>	<u>18286 (200)</u>
1941	Dunfermline	89 (2)	120 (8)
	Cowdenbeath-		
	Lochgelly	1576 (6)	13006 (58)
	Kirkcaldy	407 (11)	3387 (49)
	East	705 (5)	1288 (9)
		<u>2777 (24)</u>	<u>17801 (124)</u>
1942	Dunfermline	170	372
	Cowdenbeath-		
	Lochgelly	1751 (4)	15657 (38)
	Kirkcaldy	414 (6)	3695 (56)
	East	605 (1)	1498 (1)
		<u>2940 (11)</u>	<u>21222 (95)</u>
1943	Dunfermline	135	170
	Cowdenbeath-		
	Lochgelly	1946 (1)	16383 (5)
	Kirkcaldy	570 (2)	3965 (77)
	East	720 (1)	4437 (2)
		<u>3371 (4)</u>	<u>24955 (84)</u>
1944	Dunfermline	185	272
	Cowdenbeath-		
	Lochgelly	1972	17725
	Kirkcaldy	470 (7)	2997 (14)
	East	675	1289 (5)
		<u>3302 (7)</u>	<u>22283 (19)</u>
1945	Dunfermline	57	71
	Cowdenbeath-		
	Lochgelly	1843	16086
	Kirkcaldy	439	3814
	East	636	1689
		<u>2975</u>	<u>21660</u>

\* The figures in brackets represent evacuees.

### Ante-Natal Clinics.

To meet the needs of expectant mothers who wish advice\* on what to do before and up to the time of their confinements, clinics were set up in the Lochgelly, Auchterderran and Methil areas. The total number of cases and attendances (in brackets) were :—1939-59 (231) ; 1940-136 (581) ; 1941-151 (766) ; 1942-100 (719) ; 1943-178 (1098) ; 1944-159 (1063) ; and 1945-186 (1297). The figures for each of the clinics are given in the following table :—



	LOCHGELLY.		AUCHTERDERRAN.		METHIL.	
	Cases.	Attendances.	Cases.	Attendances.	Cases.	Attendances.
1939	8	24	15	71	36	136
1940	39	158	49	184	48	239
1941	36	151	71	310	44	305
1942	49	331	15	104	36	284
1943	71	416	67	382	40	300
1944	71	485	62	359	26	219
1945	64	460	65	521	57	316

A large number of these cases were booked for confinement at Forth Park Maternity Hospital, Kirkcaldy, and more recently at Airthrey Castle Emergency Maternity Hospital, Bridge of Allan, and Meikleour House Hospital, Perthshire.

The clinics were held fortnightly and the majority of the cases attending were young mothers (primiparae and multiparae). This can be considered as very satisfactory as these young mothers were given an opportunity of realising the need for their taking an interest in the care of their own health during the period before the birth of the baby.

The routine work at these clinics embraced the giving of advice regarding maintenance of health and care of the breasts so that the young mother is prepared for and anticipates breast-feeding as a matter of course. They are advised as to the purpose of their receiving extra rations, especially milk and why it should be consumed by her and not by other members of the family. Advice is also given concerning the accessory food-stuffs and mothers are told to take full advantage of the National Scheme under which such supplementary foods as orange juice, cod liver oil, &c., are available.

At each visit, routine examination of the urine is made, the blood pressure recorded and complaints are investigated. At the seventh month pelvic measurements are taken and general abdominal and pelvic examinations are carried out. A further examination is made nearer full term. Any cases showing any deviation from the normal are referred to the visiting obstetrician from Kirkcaldy Maternity Hospital or to the obstetrician at Dunfermline Maternity Hospital. On an average, two cases are referred at each visit of the obstetrician. If emergency arises between clinics, the patient is sent direct to hospital. Cases are also referred by the family doctor to the obstetricians and wherever possible, he tries to be present at the examination.

Advice concerning the care of the teeth is also given to expectant mothers and when treatment for caries or gingivitis is required, she is advised to see her own dentist, or, if she prefers it, the County Area Dentist at the clinic. At some of the clinics, multiparae come for advice and instruction on birth control. These patients are referred to the Maternity Hospitals at Kirkcaldy and Dunfermline. Cases of sterility also present themselves for treatment as do many women with domestic and family difficulties. The increasing



demand for hospital facilities for confinements perhaps needs no emphasis.

At Auchterderran, two of the midwives have begun to make use of the clinic for their ante-natal work and are finding the arrangement most helpful. At this clinic, more accommodation is required; an extra room would be a real convenience. Here also additional help is desirable since sometimes more than 20 mothers attend at the morning clinics. Similar facilities have been offered at Lochgelly but, so far, none of the midwives has availed themselves of the offer.

At the Welfare Clinic at Methil, several medical practitioners see their ante-natal cases and it is hoped to make similar arrangements at Leven. The large amount of work which fell on private doctors during the war years has prevented them from availing themselves to the full of the facilities afforded at County Clinics.

There can be no doubt that, as Dr Wilson, Area Medical Officer, points out "ante-natal clinics fulfil a very useful part in preventive medicine, and should be encouraged. Without making a bogey out of what is a physiological event, mothers can be made to realise that many ante-natal discomforts can be mitigated and abnormalities and difficulties anticipated, and provided for, thereby ensuring the least possible post-natal morbidity. The mother gets used to the idea of being cared for even where there are no abnormalities or complications and this has a repercussion in Child Welfare work because there is a growing tendency for the mothers with perfectly healthy babies to seek advice in their anxiety to maintain good health by proper feeding and general training."

### Ultra-Violet Radiation.

Artificial sunlight radiation was available to children and nursing and expectant mothers at the clinics at Cowdenbeath, Lochgelly and Methil. The lamps used at the first two clinics are of the mercury vapour type, whilst those at the Methil Clinic are of the carbon arc type. The conditions treated were mainly general debility and anaemia, rickets, bronchitis, &c. In addition, arrangements were made when suitable for the treatment of a few adult cases who were referred for this purpose by local doctors. The numbers of new cases and total attendances (in brackets) were:— 1939-217 (3,974); 1940-225 (4,398); 1941-201 (5,000); 1942-212 (4,587); 1943-395 (5,708); 1944-301 (6,140); and 1945-309 (5,061).

The figures for the three clinics are detailed in the following table:—

	COWDENBEATH.		LOCHGELLY.		METHIL.	
	Cases.	Attendances.	Cases.	Attendances.	Cases.	Attendances.
1939	38	731	68	1201	111	2042
1940	27	544	80	1188	118	2666
1941	30	939	110	1673	61	2388
1942	27	774	102	1584	83	2229
1943	71	925	122	1823	202	2960
1944	76	1297	106	2285	179	2558
1945	92	755	119	2549	98	1757



### Radiological Scheme.

In April, 1938, Dr Angus Campbell, Radiologist, was appointed as consultant specialist for radiographic work in Fife. His investigations were mainly concerned with the taking of X-Ray photographs of cases referred under the Orthopaedic Scheme. During the years 1939 and 1940, 50 such cases were dealt with. A small number of dental cases (4 children and 1 adult) were also referred by the Area Dentists. The cost to the County was £45 3s 3d.

In the following years, the numbers of orthopaedic and dental cases (in brackets) radiographed gradually increased :—1941-36 (1) ; 1942-43 (1) ; 1943-50 (1) ; 1944-76 (5) ; and 1945-87 (7). In 1941, a case under the Maternity Scheme was X-rayed and the Ear, Nose and Throat Specialist asked that some children in whom sinus trouble was suspected be radiographed. The number of such cases referred was in 1943-1 ; 1944-2 ; and 1945-6. The costs accruing were :—1941—£26 13s 6d ; 1942—£39 1s 9d ; 1943—£43 6s 9d ; 1944—£64 17s 6d ; and 1945—£64 10s 3d.

In 1945, five children at the Minor Ailments Clinics were found to have ringworm of the scalp and special arrangements were made for them to receive therapeutic doses of X-rays. The cost of treatment was £7 10s.



## SCHOOL MEDICAL SERVICES.

### Organisation and Administration.

The organisation and administration of the School Medical Service was not altered. Seven Area Medical Officers were responsible for medical inspection and treatment of the school children. In the two Large Burghs, Kirkcaldy and Dunfermline, the medical staffs of the Town Councils were responsible for this work.

The County medical staff underwent a number of changes. In March, 1940, Dr Somerville, Area Medical Officer for the Lochgelly-Auchterderran Area, left on military service. A new Medical Officer was appointed in June, 1940, but resigned in October of that year. In December, 1940, Dr Janet Wilson was appointed. In July, 1942, Dr Barclay (Wemyss-Buckhaven-Leven) joined the Forces and in his place Dr Elsie Scott took over duties in September, 1942. In October, 1943, Dr John Comrie was transferred to Cupar to act as *Interim* Deputy Medical Officer. His place as Area Medical Officer was taken by Dr A. Lundie.

There were twenty-two Welfare Nurses who inspected and treated the school children at local clinics. In the less densely populated districts arrangements were made with the County Nursing Association for the inspection and treatment of school children. Some of the children were treated at school clinics, others were treated, either at the home of the nurse or at their own homes.

Among the Welfare Nurses a considerable number of changes took place. Four nurses retired after giving many years of faithful and efficient service (Nurses I. Brown, M. Petrie, K. Robertson and J. Wright). Twelve nurses resigned to take up duties elsewhere and one (Nurse Kellock) had unfortunately to resign because of health reasons—her services had been much appreciated. In all, eighteen new nurses were appointed during the war years.

### General Statistics.

No. of Children on Register (Total Roll).			No. of Children on Register (Average Roll for Year).		
Sept. 1939	...	43,779	1939-40	...	44,924.5
Sept. 1940	...	43,235	1940-41	...	44,021.5
Sept. 1941	...	44,369	1941-42	...	43,989.5
Sept. 1942	...	43,766	1942-43	...	43,608.8
Oct. 1943	...	43,654	1943-44	...	43,325.5
Sept. 1944	...	43,905	1944-45	...	43,442.3
Sept. 1945	...	42,337	1945-46	...	42,484.6

The evacuees are included in the above figures. They account for the increase in the average roll figures for the years in 1939-40 and 1940-41.



### Sanitary Conditions in Schools.

Just prior to the outbreak of war sanitary improvements had been made at the following schools :—

- (a) *Wash-hand Basins*.—Wormit, Leuchars, Aberhill, Leven J. S., Coaltown of Wemyss, East Wemyss, Sinclairtown Infant School, Kirkcaldy West, St Marie's R. C., Kirkcaldy North, Auchterderran South, Oakfield J. S., Lochgelly South, Lochgelly R. C., Glenraig, Cowdenbeath R. C. Primary, Lochgelly J. S., Inverkeithing.
- (b) *Modernising of Water Closets and Latrines*.—Kilmany, Crail, Coaltown of Wemyss, Kirkcaldy North (East—Infant Staff-room), Star, Auchterderran R. C., Kinglassie, Glenraig, Beath R. C. Primary, Pittencreeff, St Leonard's (Senior).

Shortage of labour and material prevented further material sanitary improvements being carried out during the war.

The supply position is likely to handicap works of improvement for some time to come but it should be known that there are quite a few schools in the County whose standards of design and hygiene leave much to be desired.

### School Buildings.

The building of new schools, the provision of additional new accommodation and the reconstruction of school premises was seriously interrupted by the war, but since the last School Medical Report (1938) the following work was completed :—

1. *Dunfermline High School*.—The new High School was finished and provides accommodation for 24 classes and 23 practical rooms or laboratories. There is a large assembly hall with annexes ; a kitchen and two dining halls which are each large enough to seat 100 pupils. There are four cloakrooms (two for boys and two for girls) with attached lavatory and W. C. facilities. In addition, there is one set of latrines separated from the main school building. A much needed "rest room" and a medical inspection room have been provided.

For physical education two full-sized gymnasia were built and equipped with apparatus supplied by Messrs Niels Larsen, Leeds. Adjacent to the dressing rooms are spray-baths—twelve for boys and twelve for girls. This number of spray-baths will enable fuller use to be made of them in connection with the gymnastic lesson. In other words the spray-baths will be, as they should, complimentary to the physical education lesson, so heightening the physiological and development value of gymnastic training. In the past, too much emphasis has been placed on the cleansing function of sprays and too little on their stimulating effect on the chemical and physical changes in the body. Adequate play-fields are available, but unfortunately it has not been possible to build the sports pavilion.



2. *Viewforth Post-Primary School, Kirkcaldy*.—As a result of a portion of the building having been destroyed by fire, a scheme of reconstruction was necessary, and along with this the construction of a separate gymnasium was agreed to. Two wings of four classrooms were built against the old building as well as a new gymnasium along with ten spray-baths. The new outlying buildings consist of (a) a boys' centre with four rooms for practical work; (b) a girls' centre consisting of six practical rooms with cloak room accommodation—attached to the latter are also lavatory and W. C. facilities, and (c) a housewifery centre, consisting of four rooms, a scullery, and bathroom.

3. *Tayport Public School*.—Here a new portion was built—on the ground floor, four classrooms and two cloakrooms; on the upper floor, five classrooms. In addition, alterations were made in the classrooms in the old building. This allowed for the provision of a hall for use as a gymnasium. Unfortunately, spray-baths were not provided.

4. *Leslie Public School*.—At this school additional accommodation was planned to provide six new classrooms. The stone work was completed but lack of wood prevented the completion of the interior. Towards the end of the war the ground floor was converted into a wartime nursery which was not used owing to the cessation of hostilities.

5. *Newburgh Public School*.—Reconstruction scheme planned for this school was not completed. Alterations were made to the existing infant department—three classrooms of standard size, and cloakroom with lavatory fittings were completed. Apart from extension of the manual instruction room, alterations in the senior school were held over.

### Medical Inspections.

#### Routine or Systematic Examinations.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Entrants ...	2388	2421	2364	3494	2404	2154
Second Group (8-9 years) ...	1213	439	675	1137	1538	993
Third Group (12-13 years) ...	3034	706	757	1256	1227	1480
Fourth Group (15-16 years) ...	174	111	20	—	171	—
Special Class Children ...	—	—	—	21	—	—
Special Group for Vision Testing ...	611	205	169	113	345	65
Special Cases ...	1754	2783	2929	3353	2613	2693
Re-inspections ...	119	1122	1369	1845	1628	2045
Students in Pre- liminary Training	31	32	26	27	33	35
<b>TOTAL</b> ...	<b>9324</b>	<b>7819</b>	<b>8309</b>	<b>11246</b>	<b>9959</b>	<b>9465</b>

In 1939-40 1184 additional children were examined under the overseas evacuation scheme.



The number of individual children inspected at routine examinations, who were notified to their parents as requiring treatment (excluding uncleanliness and dental cases), were :—

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Entrants ...	643	506	583	1357	1126	938
Second Group ...	331	51	211	344	295	238
Third Group ...	349	138	98	435	415	393
Fourth Group ...	11	2	3	—	12	—
Other Systematic Groups ...	—	14	—	14	—	—
	1334	711	895	2150	1848	1569

### Nurses' Inspections.

#### (a) County—

Arrangements for periodic school visitations by the Welfare Nurses and for following up children showing defects requiring treatment was continued during the war years. There were, of course, various interruptions affecting this work, such as special examinations of evacuees, distribution of helmets to babies and school children, special arrangements for County-wide immunisation of children against diphtheria and against smallpox.

In the year 1939-40 the school nurses paid 2,793 visits to the schools; of these, 819 were required in connection with inspection of evacuees. The total number of inspections and re-inspections was 48,455. This figure includes 10,422 for evacuees which was mainly responsible for the increase in the total inspection figures as compared with those for the previous year. There were 5,373 children with defects (of these 1,369 were evacuees). The outstanding defects were as follows (evacuees in brackets):—Head vermin 1,345 (610); cuts and bruises 542 (56); impetigo 477 (171); septic conditions 303 (73); external eye diseases 183 (33); nose and throat conditions 127 (28); scabies 149 (78), other skin conditions 128 (70).

The number of children inspected and re-inspected during the following years are given below :—

	No. Inspected.	No. Re-inspected.
1940-41 ...	19,292 (665)	28,269 (1441)
1941-42 ...	22,586 (389)	29,876 (307)
1942-43 ...	21,712	28,071
1943-44 ...	24,060	33,890
1944-45 ...	20,366	36,693

Arising out of these inspections the number of children found with defects were :—1940-41—3528 (37); 1941-42—3118 (44); 1942-43—2951; 1943-44—3142; 1944-45—3579. The outstanding conditions requiring further attention and reference for treatment were :—Head vermin—1209 (15); 929 (22); 944, 942, 1473; scabies—206 (1); 474 (15); 423; 443; 355; uncleanliness or



neglect—143; 114 (1); 96; 232; 119: impetigo—366 (8); 344 (1); 284; 324; 283: otorrhoea—88 (12); 60; 53; 49; 62; 3: external eye disease—162 (5); 112; 114; 139; 149: cuts and bruises—426 (1); 381; 404; 296; 194: septic conditions—106 (1); 194 (1); 137; 147; 188: nose and throat cases—34 (1); 59 (1); 64; 112; 265: and other conditions—397 (2); 36; 213; 234; 318.

The figures for the District Nurses are included in those given above. The District Nurses paid the following number of visits to the schools:—1939-40—898; 1940-41—1113; 1941-42—745; 1942-43—674; 1943-44—748; and 1944-45—646. The increase in school visits in 1940-41 was due to extra visits (247) required because of inspections of evacuees. Home visits for the same season also showed an increase in the first two years of the War. The figures for home visits were:—1055, 1324, 740, 954, 867, and 69.

*Large Burghs—(Dunfermline and Kirkcaldy)—*

The number of the children inspected and re-inspected as well as the number of school visits are given in the following table.

		Children Inspected.	Children Re-inspected.	No. of School Visits.
1939-40	(D) ...	4,024	1,088	71
	(K) ...	3,358	5,586	—
1940-41	(D) ...	2,992	9,283	83
	(K) ...	3,587	4,750	—
1941-42	(D) ...	4,863	6,647	99
1942-43	(D) ...	5,197	8,914	111
1943-44	(D) ...	1,390	10,685	70
1944-45	(D) ...	3,647	10,224	78

### **Children's Overseas Reception Scheme.**

In the summer of 1940, intimation was received that offers had been made by certain Dominions, and by private organisations in the United States of America, to care for and educate children in the European War Zone residing in Great Britain. Under the Children's Overseas Reception Scheme parents of school children aged 5 years and under 16 years were invited to apply if they wished their children to benefit under the Scheme. It was indicated that preference would be given to children whose homes were in evacuation areas. In addition to an application from the parent and a school report on the child's suitability for evacuation under the Scheme, there was also required a report by the School Medical Officer on the child's health. In making out this report the medical officers were asked to have regard to the standards required by the overseas government concerning which particulars were furnished. In the following table the number of children examined by the Medical Officers of the County and of the two large Burghs is given.



	Number Examined.	Number considered satisfactory.
Inverkeithing and Rosyth (and a few from West Fife) ... ..	90	69
Burntisland-Kinghorn ... ..	98	73
Lochgelly, &c. ... ..	108	73
Beath and Kelty ... ..	72	51
Markinch, Wemyss, Buckhaven, Leven } ... ..	183	96
East Fife ... ..	129	95
Kirkcaldy Burgh ... ..	242	165
Dunfermline Burgh ... ..	262	232
	1184	854

Thus 330 children were considered to be unsuitable for evacuation and the chief conditions for which they were turned down, or recommended for treatment were as follows:—Dental condition 125; head and skin conditions 89; enuresis and problem cases 44; eye conditions 16; chest (asthma, bronchitis, cardiac) condition 18; mental backwardness 16; ear and post-nasal conditions 7 and odd cases of fits, anaemia, deformities and paralysis.

### Mentally and Physically Defective Children.

#### (a) Special Classes—No. on Roll in September.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Castlehill (Cupar) ...	18	13	15	15	21	22
Buckhaven Primary	44	31	22	25	25	28
Eastbank (Kirkcaldy)	50	44	28	24	37	42
Lochgelly East ...	—	21	27	25	26	26
McLean (Dunfermline)	34	27	32	32	30	27
Sight-Saving Class, Kirkcaldy ...	10	7	7	8	—	—
	156	143	131	129	139	145

In 1938, the Education Committee, on the advice of the Director of Education, decided that children admitted to Special Classes as mentally defective should be limited in the main to those with a "Intelligence Quotient" of 60 and less. The result was of course reduction in the numbers transferred from the ordinary schools to the centralised Special Classes. The effect of this change of policy was to eliminate the more promising higher grade children with whom the teachers could expect results, and to increase the number of lower grade or borderline uneducable cases. The Classes gradually contained more and more of the trainable and less educable type of child—the type more suited for "occupation centres."

It had been pointed out that to use the intelligence quotient as the only measure for transfer was erroneous and did not take into consideration unstable temperamental qualities and lack of practical abilities. It was later agreed that children showing such disabilities and also outstanding poor scholastic progress should be



considered even when "quotients" were above 60. This decision brought about a gradual increase in the number of children attending the Special Classes.

The lowering of the grade of child for admission to Special Classes and the consequent increase in the low-grade cases had the effect of causing loss of a number of specially trained teachers. The poor and negligible scholastic results obtained with low-grade cases engendered a loss of interest in the work among the teachers accustomed to train and educate children with more scholastic abilities.

It must be emphasised that Special Classes are for the purpose of providing special facilities for mentally handicapped children so that they can make scholastic progress suitable to their mental abilities; but more important than educational progress is the effect of the Classes on their emotional development which is apt to be far more affected than is generally realised. Unfortunately in a large number of these children results do not manifest themselves until adolescence or even later.

(b) **Institutions.**

The number of children in the various Institutions for special education, training and care at the beginning of September in each year is given in the following table:—

	1940-41	1941-42	1942-43	1943-44	1944-45
Baldovan (M.D.) ... ..	—	—	—	1	1
Garbert (M.D.) ... ..	—	1	2	4	5
St Joseph's Rosewell (M.D., R.C.)	3	3	5	5	5
Vaverley Park Home (M.D.)	—	—	—	1	4
Royal Blind Asylum, Edinburgh	7	8	10	12	10
Donaldson's Hospital (Deaf), Edinburgh ... ..	13	14	18	20	17
Institution for Deaf, Dundee ...	2	2	2	2	3
East Park Home for Infirm Children ... ..	1	1	1	1	1
St Vincent's (Deaf) School, Glasgow ... ..	1	1	1	1	1
Colony for Epileptics, Bridge of Weir ... ..	—	—	—	—	1
Cubislaw-Ruthrieston Special School, Aberdeen ... ..	—	—	—	—	1
Lennox Castle, Lennoxtown, Glasgow ... ..	—	—	—	—	1
Wotsraig School, Murrayfield, Edinburgh ... ..	—	—	—	—	1
	27	30	39	47	51

In 1944-45 other Institutions were approached with a view to admission of suitable cases.

One of these was the Residential School established by a Conjoint Committee of County Councils for the admission of definitely educable physical defectives (crippled children), known as the Trefoil Residential School in Polkemmet House, near Whitburn. One case was admitted before the end of the year.



Another special case—a young problem child, was admitted to the Rudolph Steiner School, Camphill, Milltimber, Aberdeenshire.

A third case was admitted to the St Charles Certified Institution for Mental Defectives at Carstairs.

In addition a number of trainees, certified as Blind Persons under the Blind Persons Act, 1920, received special training in the Edinburgh Royal Blind Asylum. The Education Committee are responsible for their training. The numbers under training in September of the respective years 1940-45 were :—4, 4, 5, 6, and 3.

### Medical Treatment.

#### MINOR AILMENTS.

Treatment of minor ailments, such as cuts, bruises, skin, eye and ear diseases, &c., is carried out in the following school clinics :—

*North-East Fife*.—(1) St Andrews, (2) Tayport, (3) Newburgh, (4) Auchtermuchty, (5) Ladybank, and (6) Welfare Clinic, Anstruther.

*Kirkcaldy Landward District*.—(1) Parkhill, Leven, (2) Welfare Clinic, Methil, (3) Buckhaven, (4) East Wemyss, (5) Methilhill, (6) Welfare Clinic, Markinch, and (7) Burntisland.

*Dunfermline Landward District*.—(1) Auchterderran, (2) Kinglassie, (3) Welfare Clinic, Lochgelly, (4) Crosshill, (5) St Columba's High, Cowdenbeath, (6) Kelty, (7) Crossgate, (8) Inverkeithing, (9) Torryburn, (10) Blairhall, and (11) Kincardine.

The facilities provided are satisfactory or reasonably so in most of the clinics, but are inadequate in St Andrews, East Wemyss, Blairhall, and Auchtermuchty.

The number of cases treated and the total attendances are shown in the Table on page 33. In addition treatment was given to evacuees during the three years 1939-42. The number of evacuees treated (in brackets) and the attendances made at the School Clinics were as follows :—

Clinic Treatment—Evacuees.						
		1939-40.	1940-41.		1941-42.	
Head Vermin	...	61 (8)	73 (2)		8 (4)	
Scabies	...	22 (9)	18 (6)		104 (23)	
Uncleanliness	...	—	—		—	
Impetigo Contagiosa	...	697 (104)	161 (21)		28 (5)	
Other Skin Conditions	...	179 (30)	4 (2)		—	
Otorrhoea	...	213 (5)	60 (1)		20 (2)	
Eye Diseases (Ext.)	...	244 (18)	25 (5)		5 (1)	
Ear Cases	...	67 (10)	16 (2)		2 (1)	
Nose and Throat Cases	...	31 (9)	—		—	
Cuts and Bruises	...	485 (112)	65 (20)		14 (5)	
Septic Conditions	...	731 (110)	146 (26)		22 (5)	
Other Cases	...	207 (26)	54 (2)		19 (3)	
Accidents	...	80 (18)	12 (3)		6 (6)	
Advisory Cases	...	11 (11)	8 (3)		—	
		3028 (470)	642 (93)		228 (55)	



In addition to the clinic treatments, treatments were also given to rural or semi-rural children in their homes or at the homes of the district nurses. The number of such treatments given by the Fife County Nursing Staff was as follows:—1939-40-894 (408); 1940-41-1134 (39); 1941-42-316 (26); 1942-43-281; 1943-44-298; 1944-45-396. The figures in brackets were treatments given to evacuees.

Figures in the main table show increases on pre-war figures:—Head vermin (particularly in 1943-4-5), ringworm of scalp (slight in 1940-41 and 1941-42), scabies (definite rise which increased to a maximum in 1941-42 and gradually decreased in the succeeding years), uncleanliness and neglect (sharp rise in 1940-41 and moderate increases continuing in 1943-44 and 1944-45), impetigo contagiosa (a rise in 1939-40 and 1942-43 but a diminution thereafter), cuts and bruises (these show a gradual and persisting increase during the war years), accidents (a moderate increase in 1939-40 and 1944-45).

The condition which showed the outstanding increase was scabies. The large number of children in the school returns reported as absent because of scabies gives some idea of the increase in this condition.

DISTRICT.	School Absentees—Scabies.					
	1940	1941	1942	1943	1944	1945
Barnock, Torryburn, Inverkeithing, Crossgates ... ..	99	213	315	271	240	132
Dunfermline ... ..	84	141	204	137	145	83
Leath ... ..	490	495	500	315	182	158
Kirkcaldy ... ..	53	164	181	133	109	60
Markinch and Burntisland ... ..	15	52	67	67	76	29
Wemyss—Leven ... ..	264	385	605	525	323	149
Struthers, St Andrews, Cupar	104	260	261	214	106	97
	1109	1710	2133	1662	1181	708

It was impossible to treat the children suffering from scabies in the school clinics and it was therefore decided to use certain First Aid Posts. After careful consideration scabies clinics were opened in the First Aid Posts at Buckhaven, Inverkeithing and Lochgelly, and later cases were also treated at Torryburn. In addition to school children, pre-school children and adults were treated and the number so treated with the attendances made are given in the following table.

	1942	1943	1944
Buckhaven ... ..	572 (1850)	855 (2425)	375 (830)
Inverkeithing ... ..	119 (475)	26 (95)	15 (55)
Lochgelly ... ..	201 (786)	280 (1246)	282 (1254)
Torryburn ... ..	—	28 (83)	45 (130)

The County Medical Staff wish to record their appreciation of the work done by the staffs of these First Aid Posts.



Scabies was also treated at Auchtermuchty Fever Hospital. When the evacuees came to the County it was found that some were affected with scabies. While some could be treated at local clinics others either placed in more remote places or more seriously affected were difficult to treat at clinics and it was decided to set aside Auchtermuchty Hospital for this purpose. Later as the number of evacuees decreased but the number of scabies cases increased in the Fife school population, the more seriously affected children were sent there where a more thorough course of treatment could be given for scabies and the accompanying impetigo and septic sores. In the following table the number of cases admitted to Auchtermuchty Hospital is given.

**Auchtermuchty Hospital—Scabies.**

Year.	Scabies.	Other Skin Conditions.	Total.
1939 ... ..	4	—	4
1940 ... ..	41	11	52
1941 ... ..	148	7	155
1942 ... ..	205	2	207
1943 ... ..	162	10	172
1944 ... ..	106	6	112
1945 ... ..	64	16	80
	<hr/>	<hr/>	<hr/>
	730	52	782



## Treatment (Minor Aliments).

	1939-40.		1940-41.		1941-42.		1942-43.		1943-44.		1944-45.	
	Cases.	Attends.	Cases.	Attends.	Cases.	Attends.	Cases.	Attends.	Cases.	Attends.	Cases.	Attends.
Head Vermin	89	152	104	286	73	189	95	551	303	1,262	521	2,852
Body Vermin	1	5	—	3	2	9	1	6	—	—	3	19
Ringworm (Scalp)	2	62	31	124	24	114	8	36	13	58	11	62
Scabies	291	2,205	430	2,583	979	4,913	482	2,811	397	1,840	386	1,303
Uncleanliness & Neglect	4	47	148	226	19	117	15	436	34	351	31	112
Impetigo Contagiosa	1,696	10,295	1,335	6,081	1,409	6,456	1,546	6,965	1,244	6,214	1,286	5,389
Other Skin Conditions	347	4,529	317	2,030	274	1,658	254	1,152	249	1,204	174	1,083
Otorrhoea	280	4,430	218	3,058	228	2,739	267	3,204	249	3,667	223	2,563
Eye Diseases (External)	406	4,032	326	2,908	349	3,021	385	3,777	385	4,135	456	3,502
Ear Cases	147	670	97	368	145	439	142	688	193	976	231	1,479
Nose and Throat Cases	103	526	51	258	69	289	79	301	59	222	178	385
Cuts and Bruises	3,338	12,001	3,606	8,639	3,955	9,138	4,170	10,228	4,258	13,164	4,486	13,282
Septic Conditions	3,045	14,517	2,680	8,345	3,413	10,473	3,362	10,887	3,637	12,140	3,284	10,499
Other Cases	1,174	6,503	1,217	3,878	1,447	4,511	1,244	3,780	1,258	4,161	1,065	3,802
Accidents	224	380	121	604	136	378	164	354	167	364	213	639
Advisory Cases	179	1,244	145	220	185	233	129	191	124	174	146	169
T. B. Inunctions	122	1,244	3	123	20	457	17	240	3	155	22	140
	11,448	62,842	10,829	39,734	12,727	45,134	12,360	45,607	12,573	50,087	12,716	47,280



### Major Accidents.

Major Accidents are those that required the attention of a medical practitioner and are reported to the Education Office. The total number remained at a relatively low level during the war:—1939-40—122; 1940-41—128; 1941-42—132; 1942-43—130; 1943-44—126; 1944-45—92. The average figure before the war was in the neighbourhood of 170 per annum. The schools where the largest number of major accidents tended to occur were:—

Bell-Baxter (1940-41—4; 1941-42—8; 1944-45—15).

Madras (1940-41—8; 1941-42—9; 1942-43—4).

Leven J. S. (1940-41—6; 1941-42—5).

Denbeath (1942-43—6; 1943-44—9).

Kirkcaldy High (1940-41—8; 1941-42—9; 1942-43—10; 1943-44—5; 1944-45—2).

Pathhead (1940-41—2; 1941-42—3; 1942-43—5; 1943-44—4).

Viewforth (1940-41—6; 1942-43—6).

Inverkeithing (1940-41—3; 1941-42—10; 1942-43—4; 1943-44—6; 1944-45—9).

Queen Anne (1940-41—6; 1941-42—4; 1942-43—4; 1943-44—4; 1944-45—6).

Other schools at which major accidents occurred, although to a less extent than those already indicated, were:—East Wemyss, Leslie, Thornton, Sinclairtown, Burntisland J. S., Dunfermline High and St Margaret's.

### Minor Accidents.

	In Classroom.	In Gymnasium.	In Playground.	Total.
1939-40 ...	2,572	1,054	6,233	9,859
1940-41 ...	3,116	874	6,880	10,870
1941-42 ...	3,319	1,020	6,371	10,710
1942-43 ...	3,710	1,343	7,074	12,127
1943-44 ...	3,831	1,074	6,961	11,866
1944-45 ...	3,120	1,082	6,918	11,120

These numbers can only be considered approximate, as there were a few schools where records were not properly kept. As, however, there have always been omissions from annual returns the figures submitted can be used for comparison with previous years. A comparison on this basis shows an increase in accidents (cuts and bruises) in classrooms and a decrease in gymnasia and playgrounds.

In classrooms, the commonest accidents were cuts and bruises; these amounted to:—1134, 1508, 1417, 1551, 1866, and 1464. The number of cases of sickness was:—928, 778, 1095, 1188, 1093 and 911, and they were increases on the previous years. The school with the largest number of cases of sickness was Kirkcaldy High School (varying between 146 and 244).

In gymnasia, the outstanding cause of accidents was wood splinters from the floors. The numbers were:—831, 601, 600, 939, 689 and 785. These figures are definitely below those recorded



before the war period when figures as high as 2422 were recorded (1937). The schools with outstanding numbers of splinter accidents were Ballingry, Pittenweem, Townhill, Aberhill, Methilhill and Queen Anne.

Accidents outside the classrooms and gymnasia—mostly in playgrounds—resulted chiefly in cuts and bruises. These numbered :—5571, 6002, 5503, 6006, 6051 and 6030. The schools recording high figures for cuts and bruises were :—Strathmiglo, Pathhead, Sinclairtown, Dysart, Viewforth, Auchterderran South, Lochgelly West, St Andrews, St Margaret's and Burntisland J. S., and less frequently, Gauldry, Denbeath, Culross, Pittenweem, Abbotshall and St Leonard's.

### Dental Scheme.

The County Dental Scheme provides in the main for the dental treatment of school children but also includes to a limited extent, arrangements for the treatment of pre-school children, expectant mothers and nursing mothers, public assistance cases, and the police staff. To facilitate execution of the work, clinics have been established at a number of places. These, in order of adequacy are those at Methil, Lochgelly, Cowdenbeath, Markinch, Auchterderran, Burntisland, Kelty, Cupar, Leven, Crosshill, Crossgates, Buckhaven, Inverkeithing, Methilhill, Tayport, Torryburn, Anstruther, East Wemyss, St Andrews, Newburgh, Ladybank, Blairhall, Auchtermuchty, Leslie, Kincardine and Kinglassie. In most of these clinics more adequate dental furnishings are required, such as dental chairs, engines and water spittoons, and in several cases the present furnishings require to be replaced by more up-to-date equipment. New clinic premises are required at Cowdenbeath, Kelty, St Andrews, Auchtermuchty, Blairhall and East Wemyss.

During the war years, it was difficult to have faulty apparatus or broken furnishings repaired or overhauled. Torryburn Clinic was taken over for Civil Defence purposes and arrangements had to be made for the use of a room attached to the Library of the Local Social Centre. For a number of years there were difficulties regarding clinic arrangements at Auchtermuchty but eventually a room was secured for the purpose in the Town Hall. On the other hand, the new clinic at Markinch provided an up-to-date Dental Clinic which has been of great advantage to the children in this area. At Leven, transference of the Dental Clinic from Parkhill School to the Welfare Clinic has provided a bright and more spacious dental room with very much improved working conditions for the dentist. At Cupar, the Dental Clinic, along with the general clinic, was transferred from the school to a house adjacent to the school. With modern dental equipment, when supplied, this clinic will form an up-to-date dental clinic and so provide a necessary centre for this important area.



Under the County School Dental Scheme, it is the aim to introduce more and more preventive and conservative treatment and so reduce the number of cases requiring extraction treatment. For this purpose an annual inspection of all school children should be made. Unfortunately, owing to insufficient staff this cannot be done, but as many children as possible are inspected in the various primary schools. In the larger schools this inspection was confined mainly to the earlier age groups. In the following table the number of children inspected at the different ages are given. The number of children in the post-primary age groups is small.

Age	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
5 ...	2,799	2,883	2,474	2,335	2,116	2,301
6 ...	2,629	2,959	2,628	2,240	2,028	1,960
7 ...	2,343	2,956	2,396	2,381	1,874	2,077
8 ...	2,444	2,840	2,054	2,199	1,957	2,286
9 ...	2,022	2,536	2,096	2,083	1,823	2,011
10 ...	1,620	2,369	1,849	2,039	1,862	2,102
11 ...	1,447	1,903	1,762	1,763	1,805	2,069
12 ...	743	1,389	1,319	850	1,237	1,460
13 ...	300	868	1,210	813	1,101	1,136
14 ...	82	316	217	315	363	369
15 ...	9	73	62	123	67	43
	16,438	21,092	18,067	17,141	16,233	17,814

Among the children inspected in each year the following number were reported to their parents to be in need of dental treatment :—1939-40—13,641 (82·9) ; 1940-41—16,899 (80·1) ; 1941-42—13,264 (73·4) ; 1942-43—12,411 (72·1) ; 1943-44—11,340 (69·4) ; 1944-45 12,070 (67·6). The figures in brackets represent the percentage of the total cases requiring dental treatment. Succeeding years show a marked diminution in the number of children referred to their parents. In other words the number of children with “ sound ” teeth has increased as is seen in the following figures :—1939-40—2797 ; 1940-41—4193 ; 1941-42—4713 ; 1942-43—4773 ; 1943-44—4969 ; and 1944-45—5780. The percentage of sound teeth has increased from 17 per cent. in 1939-40 to 33 per cent. in 1944-45. It is difficult to give a scientifically satisfactory explanation for this satisfactory state of affairs. There can be no doubt, however, that it must be related to the change in diet which occurred during the war years. Part of the improvement may have been due to the dental treatment and attention given during previous years under the Dental Scheme. The change during the war years was, however, so marked that some other explanation is necessary and the outstanding factor in the daily life of the children was undoubtedly their altered diet. To what extent the reduction in dental disease was due to rationing of sweets and curtailment of starchy foods may be ascertained at some later date when an analysis is made of certain information collected in the course of dental surveys in different areas of the County.



Of the number of children referred for dental treatment, the following accepted treatment under the County Scheme (the percentage acceptance figures are given in brackets) :—1939-40—6289 (46.1) ; 1940-41—8421 (49.8) ; 1941-42—6218 (46.8) ; 1942-43—5463 (44.1) ; 1943-44—4854 (42.8) and 1944-45—5634 (46.6). The number of children indicating that they wished “ own-dentist ” during these years were :—6993, 8358, 6522, 5656, 5593, and 5999. Unfortunately, many of these children did not attend their own dentists and a number of parents whose children required urgent dental treatment had to be warned that they were guilty of technical neglect. The number of children whose parents refused to have dental treatment for their children was as follows :—1939-40—359 ; 1940-41—120 ; 1941-42—524 ; 1942-43—507 ; 1943-44—491 ; 1944-45—427. A number of these parents, after they had been written to, changed their attitude and dental treatment was provided.

The number of children treated in County clinics and schools was as follows :—1939-40—7441 (1201) ; 1940-41—8421 (1214) ; 1941-42—5363 (1105) ; 1942-43—5408 (1066) ; 1943-44—4919 (1411) ; 1944-45—5761 (1335). The figures in brackets represent the number of emergency or casual cases. The others were all appointment cases where parents had agreed to dental treatment being given. The emergency cases were those brought forward by parents or teachers for extraction treatment only. In these cases it was pain that brought the children to the clinic and nothing could be done to save their teeth. They were all really cases of neglect and served to illustrate the need for educating parents to bring their children for periodic inspection and so prevent dental disease developing to such a hopeless extent. The total number of attendances made by all the children treated at the clinics was :—1939-40—11,251 ; 1940-41—12,648 ; 1941-42—11,594 ; 1942-43—14,337 ; 1943-44—12,355 ; 1944-45—11,460.

The total number of dental operations for the different years was :—1939-40—36,421 ; 1940-41—36,992 ; 1941-42—30,190 ; 1942-43—35,003 ; 1943-44—30,043 ; 1944-45—26,688. These figures are lower than the pre-war figures as a result of war conditions and continued changes in dental staff, which applied particularly to the last few years. The absence of a scale of salary for the dentists is the probable explanation for this state of affairs. The war-time shortage of dentists increased the competition for their services and there was a prevalence of better paid appointments.

The dental treatment given can be divided broadly into extractions and conservative work. The following number of extractions were made—the first set of figures represent the number of temporary teeth removed and the second the permanent teeth :—1939-40—12,473 : 2044 ; 1940-41—14,286 : 2458 ; 1941-42—11,672 : 2007 ; 1942-43—12,836 : 2097 ; 1943-44—8752 : 1348 ;



1944-45—8217 : 1721 ; the most of the extractions were carried out under local anaesthesia. A limited number of children were, however, treated under general anaesthesia, as follows (the number of temporary and permanent teeth extracted are given in brackets):— 59 (581 : 82) ; 61 (647 : 67) ; 69 (742 : 52) ; 46 (461 : 46) ; 36 (278 : 57) ; and 62 (449 : 57).

Conservative or preservative work consists in scaling and treating teeth with silver nitrate, as well as inserting temporary dressings or fillings and also permanent fillings. In the following table the number of such treatments is given :—

#### Conservative Treatment.

TEMPORARY TEETH.			PERMANENT TEETH.	
	Dressings and other Treatments.	Fillings.	Dressings and other Treatments.	Fillings.
1939-40 ...	12,330	1,261	4,608	3,705
1940-41 ...	9,888	924	4,525	4,911
1941-42 ...	7,557	1,014	4,611	3,231
1942-43 ...	10,032	1,583	4,533	3,669
1943-44 ...	10,259	1,776	3,618	3,663
1944-45 ...	7,798	1,664	2,595	4,112

It is satisfactory to record that while the number of extraction treatments has decreased the relative number of conservative treatments has increased. More parents are, therefore, beginning to appreciate this important part of the dental service.

In addition to the number of treatments indicated above, it is necessary to add that more attention is also being given to correcting irregularities (this treatment is called orthodontia) of the teeth. In 1941-42 98 children were given orthodontic treatment and the number has increased yearly since—253, 627 and 571. It is hoped that more and more time will be devoted to this important part of dental work which very often calls for prolonged treatment extending over a number of years and entails long, patient and repeated attendance at the dental clinics.

The treatment of expectant and nursing mothers, of public assistance cases, and of policemen under the County Dental Scheme was continued but the total number of such cases was reduced as compared to the number during the pre-war years.

The number of expectant and nursing mothers treated (number of attendances in brackets) were :—1939—56 (100) ; 1940—38 (156) ; 1941—35 (149) ; 1942—32 (140) ; 1943—37 (103) ; 1944—23 (81) ; and 1945—23 (116). A limited amount of conservative treatment was given the number of fillings inserted being 1940—12 ; 1943—31 ; 1944—12 ; and 1945—15. The main treatment afforded was extraction of teeth and insertion of dentures. Extractions under local anaesthesia and general anaesthesia (in brackets were) :— 1939—241 (27) ; 1940—265 (164) ; 1941—218 (137) ; 1942—203 (21) ; 1943—177 (58) ; 1944—113 (35) ; 1945—161 (14). The number of dentures inserted was 1939—12 upper and 11 lower ;



1940—15 upper and 13 lower ; 1941—19 upper and 16 lower ; 1942—19 upper and 15 lower ; 1943—21 upper and 15 lower ; 1944—9 upper and 8 lower ; and 1945—14 upper and 11 lower. Partial dentures were also made, two in 1941 ; two in 1942 ; twelve in 1943 ; four in 1945. A small number of repairs were also necessary, one each in 1941, 1942, and 1943, and three in 1944. It was found necessary to remake a few of the previously supplied dentures following on changes in the jaw—1941 one remake ; in 1944 two remakes, and again one in 1945.

The number of persons referred to the dental clinics by the Public Assistance Department was :—1939—175 (595) ; 1940—67 (266) ; 1941—54 (248) ; 1942—46 (184) ; 1943—47 (102) ; 1944—26 (98) ; and 1945—31 (117). The figures in brackets represent the number of visits made to the clinics. Here again the main treatment given was for the extraction of teeth, viz. :—1939—542 (136) ; 1940—458 (67) ; 1941—307 (99) ; 1942—293 (96) ; 1943—182 (48) ; 1944—87 (17) ; and in 1945—128 (9). Dentures supplied numbered 19 upper, 18 lower and 4 partial in 1940 ; 27 upper, 24 lower and 3 partial in 1941 ; 22 upper, 22 lower in 1942 ; 21 upper, 22 lower and 2 partial in 1943 ; 14 upper, 10 lower and 3 partial in 1944 ; 14 upper, 12 lower and 3 partial in 1945 ; 56 upper and 53 lower in 1939. The number of remakes varied between 2 and 4 during these years and remakes of old dentures were as follows :—three in 1940, two in 1941 and two in 1945. Conservative treatment was also given, and the number of fillings inserted was :—1939—6 ; 1940—16 ; 1941—11 ; 1942—5 ; 1943—14 ; 1944—22 ; 1945—19.

Any member of the County Police Staff can obtain on application dental treatment in one of the County Dental Clinics. During the war arrangements were made whereby any police officer can call at a local dental clinic to have his teeth examined and a report of the dentist's findings and recommendations provided for the County Police Headquarters. If approved, the case is then referred to the appropriate County Dental Officer for necessary treatment. During the war years the following number of officers applied for such treatment :—19 in 1939 ; 7 in 1940 ; 3 in 1941 ; 4 in 1942 ; 16 in 1943 ; 13 in 1944 ; and 11 in 1945. The number of visits paid to the clinics were respectively, 76, 26, 15, 26, 61, 54 and 71. The number of fillings inserted were 1 in 1941 ; 27 in 1943 ; 10 in 1944 ; and 18 in 1945. The number of extractions under local anaesthesia (number under general anaesthesia in brackets) was :—1939—22 ; 1940—17 (16) ; 1941—21 ; 1942—14 (18) ; 1943—41 ; 1944—56 (27) ; 1945—22. The number of dentures—upper, lower and partial inserted was :—1939—10 upper, 9 lower ; 1940—1 upper, 2 lower ; 1941—2 upper, 1 partial ; 1942—2 upper, 2 lower ; 1943—8 upper, 6 lower, 5 partial ; 1944—4 upper, 2 lower, 4 partial ; 1945—5 upper, 5 lower, 5 partial. In addition



"remakes" were also necessary, one in 1940; two in 1942; two in 1944; and four in 1945.

### Talks and Demonstrations on Dental Hygiene.

In the summer of 1939, the Education Committee were able to arrange through the courtesy of the Dental Board of the United Kingdom for a series of demonstrations to be given to the senior pupils in various schools throughout the County of Fife.

The following is a list of the schools at which the dental demonstrations were given. The number of children present at the talks is given in brackets.

Cowdenbeath Secondary (300).	Bell-Baxter (500).
Moss-side School.	Aberhill (235).
Broad Street (90).	Newburgh (108).
Foulford (66).	Auchtermuchty (80).
Cowdenbeath R. C. High (180).	Ladybank.
Oakfield H. G., Kelty (253).	Waid (200).
Kelty Public (120).	Thornton.
Burntisland H. G. (260).	Markinch.
Inverkeithing (160).	Leslie.
Lochgelly H. G. (240).	E. Wemyss (130).
Lochgelly R. C. (65).	Denbeath (200).
Ballingry (240).	Methil R. C. (70).
Kinglassie (50).	Madras College (380).
Auchterderran H. G. (160).	Buckhaven High.
	Leven (250).

Two lady lecturers gave talks on Dental Hygiene, and demonstrated on a number of models illustrating the growth of teeth, their irregularities and their decay. Opportunities were given to the pupils to ask questions and in most schools the questions put showed that the children had not only understood the talks but were also definitely interested in the subject. From the reports of the Head Teachers, it was obvious that the demonstrations were much appreciated and although some indicated doubt in assessing their real and lasting value there was no doubt as to the general interest aroused. The discussions which took place helped to bring home to the children the importance of dental hygiene. At one school the question was asked, "How many of you girls go regularly to the dentist for inspection or treatment of your teeth?" Three girls held up their hands. When, however, the question was put, "How many girls regularly attend a hair specialist?" nine girls put up their hands. Here it was easy to show that the care of the teeth was just as important as the care of the hair and, that, in fact, from a purely health point of view, the care of the teeth was undoubtedly of greater value; further that, if regularly attended to, care of the teeth would not cost more than care of the hair.

Special emphasis was put upon the importance of preventive treatment, such as fillings, &c. The need for this was demonstrated in one group of 84 children who all had experienced at least one extraction, whereas only 13 of them had a filling inserted. The



importance of conserving the teeth as much as possible and preventing their decay is a fact which is only slowly being recognised by the general public. It is only by repeated talks and demonstrations as well as a good dental service that we can hope to bring about a more general realisation of this simple health truth.

Whilst the Head Teachers praised the method of approach of the lay lecturers to the pupils, they also pointed out the value—as a visual aid—of the models that were exhibited; and a considerable number of them expressed a desire that the talks should be repeated.

### Eye Clinics.

#### COUNTY.

In the following Schools or Welfare Clinics detailed examination of the eyes of school and pre-school children is undertaken:—Torryburn J. S., Dunfermline (Canmore P. S.), Cowdenbeath (St Columba's High), Kelty P. S., Lochgelly J. S., Auchterderran J. S., Burntisland J. S., Markinch (Welfare Clinic), Methil (Welfare Clinic, Barrie Street), Anstruther (Welfare Clinic), St Andrews (Burgh P. S.), Cupar (Castlehill Clinic), Tayport J. S., Newburgh J. S., and Ladybank J. S. At these clinics the number of children seen and the number of clinics (in brackets) held were:—1939-40—554 (164); 1940-41—484 (106); 1941-42—633 (140); 1942-43—688 (127); 1943-44—747 (152); and 1944-45—943 (157).

The reduction in number of cases seen during the first years of the war was due to other duties largely connected with Civil Defence and with immunisation work. Two of the Area Medical Officers joined the Forces (one in 1940 and the other in 1942) and the officers appointed in their places were new to this part of welfare work.

#### LARGE BURGHS.

In the two Large Burghs the number of eye clinics in the various years were Kirkcaldy—20, 6, 5, 7, 7; and for Dunfermline—21, 18, 25, 30, 30. At these clinics the following number of children was seen:—1939-40—31 (K.), 225 (D.); 1940-41—113 (K.), 216 (D.); 1941-42—131 (K.), (D.); 1942-43 (K.), 195 (D.); 1943-44—142 (K.), 215 (D.); 1944-45—(K.), 180 (D.).

An analysis of the cases seen at the Burgh Eye Clinics is given in the following Table. In the years 1939-40-41-42 the figures are for both Large Burghs, for the remaining three years only Dunfermline Burgh cases are given. The number of re-examinations is not stated.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Hypermetropia ...	61	74	70	54	63	56
Myopia ...	35	52	39	25	16	13
Hypermetropic Astigmatism	79	119	106	62	86	66
Myopic Astigmatism...	23	53	58	12	9	9
Mixed Astigmatism ...	14	17	15	5	16	10
Anisometropia ...	3	24	4	—	—	—
Emmetropia ...	—	—	—	15	19	17
Squints ...	33	41	24	—	3	—
Other Conditions ...	18	26	34	22	3	2
	266	406	350	195	215	173



## SPECIALIST EYE CLINICS.

All the more difficult eye cases requiring more expert opinion and advice were referred to the County Eye Specialists, Dr Allister M. MacGillivray and Dr Robert Sampson. The latter, early in the war, offered his services to the Royal Air Force and his place was taken by Dr C. R. D. Leeds. The combined number of cases seen by these Specialists was :—1939-40—499 (130) ; 1940-41—732 (216) ; 1941-42—386 (428) ; 1942-43—597 (302) ; 1943-44—388 (416) ; 1944-45—419 (409). The figures in brackets represent re-examinations. The number of Specialist's Clinics held for the respective years were :—37, 36, 31, 42, 31, and 30.

An analysis of the refractive conditions seen by the Eye Specialists is given in the following table.

		1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Hypermetropia	...	43	117	91	153	118	116
Myopia	...	25	24	17	15	9	14
Hypermetropic							
Astigmatism	...	103	190	94	153	83	77
Myopic Astigmatism		83	74	28	39	23	25
Mixed Astigmatism	...	22	27	21	17	12	11
Anisometropia	...	36	23	11	17	12	9
Emmetropia	...	9	2	—	—	—	—
Squints	...	118	211	85	139	80	104
Other Conditions	...	60	64	39	64	51	63
		499	732	386	597	388	419

In his report on the Eye work Dr Allister M. MacGillivray comments as follows :—“ There is very little that I can say about the treatment of eye cases examined in my area during these years, apart from the generalization that children requiring ocular treatment, and the provision of glasses, are adequately catered for. I have endeavoured to examine each child twice a year. This enables the oculist to ascertain if the glasses are being worn regularly, and to note any alterations necessary either in the lenses or the sizes of the frames. All the clinics except St Andrews are now well-equipped and comfortable to work in. The St Andrews clinic, is, I am sorry to say, far from comfortable, and much too small. A new clinic is urgently required for this centre. The work in the Buckhaven area has been excessive ; and the numbers at each clinic, until recently, when I limited them to fifteen, have been too much for any one person to cope with at one session. I think I mentioned before that, in my opinion, the amount of work at the Methil clinic is enough to keep one Ophthalmic Surgeon employed.

“ An orthoptic clinic is urgently required for the East of Fife, and I sincerely trust that the authorities concerned will see their way to having this clinic established at an early date. Squinting children in the East of Fife area have to go to Methil or Lochgelly for orthoptic treatment. The distance, and the expense, make it



impossible for the majority of parents to make use of these orthoptic facilities. The consequence of this is that most of the squinting eyes become amblyopic, and remain so for life."

Dr Leeds in his report states:—"The clinic figures seem to confirm my clinical findings that there are relatively few cases of myopia, and extremely few cases requiring special (educational) arrangements. It would seem that a very large proportion are hypermetropes with or without astigmatism, and with which little trouble is expected, and that the main class requiring attention is the squinting class."

The numbers of glasses prescribed at the Specialist Clinics for the years 1941-42 to 1944-45 were:—303, 446, 330 and 327. The following numbers of children were referred to the minor ailments' clinics for treatment there:—16, 41, 26 and 30. As regards special educational arrangements the numbers kept under supervision were:—9, 17, 12 and 20, whilst the following numbers were recommended for educational treatment at Blind Institutions:—4, 1, 0 and 3.

In addition to these clinics the Eye Specialists also attended specialist clinics for orthoptic cases. The orthoptist was in attendance and was thus able to give her findings about the cases and also to indicate special difficulties she had some across and concerning which she required more expert guidance and diagnosis.

The number of school and pre-school (in brackets) children seen at these clinics were:—1942-43—84 (8); 1943-44—52 (16); and 1944-45—82 (25). The total number of examinations and re-examinations for the respective years were:—180, 102, 167. Of those examined the following had glasses prescribed:—24, 26 (10), and 46 (15).

The following number of children were supplied with spectacles by Messrs Lizars under the County Special Spectacle Scheme:—

1939-40	...	...	531	School.	29	Pre-School.
1940-41	...	...	594	"	52	"
1941-42	...	...	557	"	44	"
1942-43	...	...	591	"	56	"
1943-44	...	...	490	"	34	"
1944-45	...	...	427	"	25	"

It must also be recorded that the Eye Specialists examined a number of pre-school children, referred under the Child Welfare Scheme, and adults sent by the Social Welfare Officers. The number of such cases was:—1939-40—80 (73); 1940-41—114 (67); 1941-42—71 (10); 1942-43—100 (15); 1943-44—90 (10); 1944-45—99 (20). They prescribed glasses for the following number of patients:—38 (70); 71 (64); 36 (9); 52 (11); 44 (5); 50 (22). The figures in brackets represent Public Assistance Cases.

#### **Orthoptic (Correct Sight) Scheme for "Squinters."**

In previous annual reports attention was repeatedly drawn by Mr Sampson to the problem of "squinting" children and to the



need for something being done to treat them. In 1938 the Public Health Committee agreed to the employment of a part-time orthoptic trainer and early in 1939 Miss L. W. Rose, B.Sc., was appointed.

In view of the fact that the scheme was a new approach to the investigation of children with squints, it was decided to begin with preliminary examination of all the cases in order to obtain information as to the types of cases which might be considered suitable for special training and treatment.

The following number of children were examined in detail by Miss Rose, and where necessary also by Dr Sampson :—

Lochgelly ... ..	171
Cowdenbeath ... ..	61
West Fife ... ..	40
Burntisland ... ..	20
Methil ... ..	98
	<hr/>
	390

From these examinations, it was found that 48 cases showed no clinical or other signs of strabismus. This left 342 in which there were more or less evidence of squint. These cases were carefully examined for visual acuity, for reactions with the "Synoptophore," "Rod," "Wing," and other tests and as a result it was decided that 151 children were unsuitable for orthoptic training, 12 doubtful and 179 as suitable. On a further analysis, it was found that in children above 8 years, 65 per cent. were unsuitable for training and only about 33 per cent. suitable. Against this, however, among children under 8 years of age, 81 per cent. were found suitable for training and about 19 per cent. unsuitable or doubtful.

It was therefore seen from this inquiry, as far as it went, that the earlier a case of squinting is given orthoptic training, the more likely is satisfactory results to be expected; and that cases over 8 years of age are not likely to respond so well as those below that age. It is obvious, therefore, that treatment must be given early, and continued without interruption until results are obtained—probably three to nine months, depending upon the age and co-operation of the child.

In view of the difficulties which arose as a result of the war emergency, it was found necessary to limit the investigations to the areas already covered. There were some 82 cases in the Markinch Auchtermuchty Areas as well as other cases in the North-East of Fife which had to be held over.

The greater number of the cases examined belonged to the West of Fife. It therefore fell to Dr Sampson to advise regarding the development of an orthoptic scheme.

In considering the necessary conditions for the efficient functioning of such a scheme the following points were specially noted.



1. *Facilities for Operative Treatment are Imperative.*—In about half the cases suitable for orthoptic training, operative treatment was likely to be required. The scheme must therefore include arrangements at one or more hospitals for operative treatment.

2. *The Clinics must be Properly Equipped.*—It was estimated that the cost for special equipment would be about £50 for each clinic. The number of orthoptic clinics would have to be limited whereby the treatment of "squint" cases would have to be centralised.

3. *Sufficient Treatment Time must be given to each Case.*—The time required for each case would of course vary but it would be necessary that each case attend the clinic three times weekly. In some cases such attendance at the clinic would give satisfactory results in three months, but in others, a very much longer period would be necessary. It would depend upon the age of the child, and partly on its intelligence whether the shorter or longer period would be necessary. Children too young do not give satisfactory results as, owing to their lack of intelligence or understanding, they cannot co-operate to the extent required for the apparatus used. Apart from this limiting factor, whatever treatment was considered necessary, should be given early, and continued without interruption until the desired result was obtained—probably in three to nine months.

4. *Adequate Travelling Facilities may have to be Considered.*—The centralising of the work at special clinics would necessitate travelling to and from the clinic on the part of some of the cases.

The importance and significance of this new method of training and treatment of children with squinting eyes will be obvious. The eventual good needs no stressing since it involves the retention of normal sight.

During 1939, while the investigation and examination of cases was being carried out, a limited beginning was made with treatment. Twenty-seven children in Lochgelly and Cowdenbeath were brought to the Eye Clinic at Lochgelly and received complete orthoptic treatment. In addition, a further number of sixty-three cases received partial treatment (occlusion) and nine cases were kept under supervision.

In 1940 treatment was continued mainly in the Lochgelly and Methil clinics. At Lochgelly 149 cases made 1509 attendances, while at Methil 41 cases made 563 attendances for treatment. The total number of children treated by the orthoptist was 190. Of these 74 received full treatment (orthoptic exercises) and in 116 occlusion with some form of occluder was practised.

In the case of those receiving full orthoptic treatment 36 had single binocular vision and were discharged. A further 27 cases showing improvement were also discharged. In these, fusion was



still weak and full binocular vision was not obtained. These latter cases are not likely to show further improvement and nothing more can be done. Eleven cases were continued on treatment. The average number of treatments worked out at 25 per case.

In the 116 cases treated by occlusion, 77 had alternation of vision, 28 showed improvement, and with 11 there was no improvement.

In the case of those (77) with alternation of vision, eleven were ready for orthoptic exercises; twenty of the children who were under six years of age will have to wait until they are older and can co-operate more fully for treatment prescribed, and forty-six cases required operative treatment. Where operation could not be carried out, they were to be kept under supervision to ensure the continuance of alternation of vision.

In the twenty-eight showing improvement there was not, however, full alternation of vision and in twenty of these operative treatment will eventually be necessary.

There were also 121 new cases in addition to those under treatment. Of those cases 101 were below eight years and 20 over that age. Of these new cases, when examined with the special apparatus at the orthoptic clinics 49 of those under eight were found suitable for orthoptic treatment; 16 were unsuitable, and in 36 no strabismus could be determined. In the case of those over eight years of age 7 were suitable for treatment, and eleven unsuitable. In two children no actual strabismus was found.

In addition there were 41 children whose attendance at the clinics was very poor and who were considered as definitely unsatisfactory. They are not included in the foregoing analyses.

In 1941 the part-time orthoptist (Miss Rose) joined the Forces and a whole-time orthoptist was appointed. It was merely possible to add another clinic for West Fife cases at Dunfermline.

In the period up to the end of 1945, 716 children were examined and treated at the Orthoptic clinics. These included 524 new cases. At the first examination it was found that 67 had no signs of squint or were unsuitable for treatment. The remainder (649) were very carefully examined with the synotoscope and the analysis of the findings is as follows:—

Right Concomitant Convergent Strabismus	...	...	254
Left Concomitant Convergent Strabismus	...	...	238
Alternating Concomitant Convergent Strabismus	...	...	128
Different types of Divergent Strabismus	...	...	29
			<hr/>
			649
			<hr/>

The treatment of these cases which was carried out at the four centres—Dunfermline, Cowdenbeath, Lochgelly, and Methil—included, in addition to the preliminary examinations, detailed



treatment with the various orthoptic pieces of apparatus, as well as continued observation and re-examination. Occlusion treatment also played an important part requiring repeated injunctions to the parents to persevere and to make sure that the occlusion was maintained. Unfortunately too often parents were influenced by their young children who naturally did not understand or enjoy the occlusion of one eye.

The total number of attendances made by the 649 cases at the clinics during this period amounted to 9832. The detailed figures for the four clinics is given in the following table :—

	Dun-fermline.	Cowden-beath.	Lochgelly.	Methil.	Total.
Examinations ...	63	70	126	316	575
Orthoptic Treatments ...	2178	1354	1663	1108	6303
Occlusions ...	138	276	343	338	1095
Observations, &c. ...	396	249	744	470	1859
	2775	1949	2876	2232	9832

The results of the treatment of the 649 cases can be briefly summed up—155 were discharged as unsuitable for further orthoptic treatment and 150 cured or definitely improved. The remainder are still receiving treatment or are being kept under observation.

The reasons for considering cases unsuitable were various. In about two-thirds there was lack of co-operation and bad attendance, or refusal to wear occluders or to wear the prescribed glasses. In the other third a few were too old for satisfactory results, in two there were pathological conditions which made them unsuitable. A number of children, too, left the district.

In the children discharged as cured, over 80 per cent. attained to binocular vision (*i.e.*, vision with both eyes). Of the remainder a few had "straight" eyes after operative treatment but were left with false projection. In a few cases straight vision had been obtained but as the children left the district further progress could not be noted.

It will thus be seen that satisfactory results were obtained in nearly one-fourth of the cases treated. These results must be considered as highly satisfactory, especially as the work was undertaken during a period of national stress. The keenness of the orthoptist and her method of approach undoubtedly contributed to these good results.

Regarding the length of treatment for each case, it seems that the original estimates were too optimistic. The amount of mental co-operation required by the patients themselves was not sufficiently taken into account. An analysis of 111 completed cases shows the following duration of treatment :—



Less than one year	...	...	...	...	...	23
One to two years	...	...	...	...	...	30
Two to three years	...	...	...	...	...	30
Three to five years	...	...	...	...	...	28

There can be no doubt also that frequent repeat treatment would give quicker and more satisfactory results. Originally it was suggested that these treatments should be given thrice weekly, but with the available staff and in order to treat as many children as possible, the number of treatments had to be limited to one or two per week. Another contributing factor in prolonging the time required for treatment was frequent absence from treatment. This repeated non-attendance interrupted progress especially in young children. Many parents do not appreciate the importance of keeping up treatment by regular attendance at the clinics. Too frequently a child complains about attendance at the clinic and the wearing of occluders. While this is understandable especially in young children, it is to be deplored that parents so often give way and do not insist on the child going to the clinic. To counteract this apathy and lack of understanding on the part of parents and to explain what this form of treatment means in terms of "retained" vision, the orthoptist has given talks to Guilds and other public bodies. That these talks have been appreciated is shown by a tendency for more cases to be brought forward. They have also stimulated a better attendance, but unfortunately the proportion of mothers and fathers who seem quickly to lose interest or do not care, is still too high.

#### REPORT BY DR C. R. D. LEEDS ON STRABISMUS OPERATIONS.

During the period 1942-45, 40 operations for strabismus were performed on 36 cases. Three patients had divergent strabismus, the remainder had convergent strabismus. The series may be divided into two groups, (a) operations to achieve a cosmetic result only, and (b) operations as part of orthoptic treatment to establish binocular vision. All the cases had a preliminary period of orthoptic exercises and those found to be unsuitable for further prolonged treatment were selected for cosmetic operation.

#### GROUP (a).

*Number of Cases—13 (and 13 operations).*

Right convergent strabismus : 6

Left convergent strabismus : 3

Alternating convergent strabismus : 4

#### *Reasons for Operation.*

9 abnormal retinal correspondence not yielding to treatment.

1 persistent amblyopia (left convergent strabismus).

1 mentally backward (right convergent strabismus).

1 no binocular vision (alternating convergent strabismus).

1 weak lateral rectus (left convergent strabismus).



All cases had good cosmetic results and were straight or within 5 degrees.

GROUP (b).

*Number of Cases—23 (necessitating 27 operations).*

Right convergent strabismus : 15

Left convergent strabismus : 5

Alternating convergent strabismus : 3

*Results of Operation.*

Cured : 14 cases. 15 operations.

Improved : 6 cases. 9 operations.

One case left the district before treatment was finished. Two cases are unfinished and still under treatment.

The cases which were cured have binocular stereoscopic vision with or without glasses, depending on whether glasses are required to bring unaided vision to normal.

Of the cases which were improved, the two divergent cases did not develop binocular vision as hoped, but are within seven degrees of being straight and therefore have a good cosmetic result. (The third divergent case was cured. Divergent cases when hypermetropic are exceedingly difficult to "cure").

Two convergent cases have binocular vision at angle of squint—eight to twelve degrees, and these will require further operation.

One case did not develop full binocular vision, and one had very weak binocular vision, but both are straight.

It is interesting to note that all but one of the cosmetic cases have a low or moderate degree of hypermetropia, that is, less than 2D, whereas, ten cases of Class (b) had over 4D of hypermetropia, and nine obtained a "cure".

Of the "improved" cases, only one had over 4D of hypermetropia.

It would seem, therefore, that cases of squint with little or no refractive error are less likely to benefit from orthoptic treatment than those with a moderately high error, where the close association between accommodation and convergence is upset.

The results of this series are very satisfactory, particularly since there was no selection of cases, either for orthoptic treatment, or for operation.

### **Examination and Certification of Blind Persons.**

In 1939, excepting patients who were bed-ridden and had to be examined in their own homes, persons claiming benefit under the Blind Persons' Acts were examined at one or other of the two regional clinics—one in Edinburgh and the other in Dundee. After the outbreak of war it was considered that it would expose the patients to less risk if arrangements were made, as formerly, for



examinations to be carried out at various eye clinics in Fife. Consequently these clinics were held in Dunfermline, Lochegilly, Kirkcaldy, Buckhaven and St Andrews.

The total number of cases examined, inclusive of re-examinations (in brackets) during these war years was as follows:—1939—112 (25); 1940—79 (30); 1941—74 (18); 1942—96 (27); 1943—76 (19); 1944—70 (19); 1945—54 (9). In 1939 four cases were examined in the Dundee Regional Clinic, fifty-two in the Edinburgh Regional Clinic and twenty-nine in the County Clinics. The number examined in their own homes was twenty-seven. In the following years the numbers examined in the County Clinics and in their own homes (in brackets) were as follows:—1940—60 (19); 1941—45 (29); 1942—56 (40); 1943—50 (26); 1944—54 (16); and 1945—33 (21).

In the following table figures are given for cases in the County and in the two Large Burghs, with the results of the examinations:—

	COUNTY.		KIRKCALDY.		DUNFERMLINE.	
	Blind.	Not Blind.	Blind.	Not Blind.	Blind.	Not Blind.
1939	50	40	8	4	4	6
1940	35	25	6	2	6	5
1941	35	16	17	5	1	0
1942	48	21	13	7	4	3
1943	40	13	4	10	9	0
1944	28	14	12	9	3	4
1945	27	10	9	2	5	1

In addition to certification of blindness the Eye Specialists recommended treatment. In the next table the nature of the recommendations are briefly indicated.

#### Type of Treatment Recommended.

	MEDICAL.		SURGICAL.		OPTICAL.	
	Blind.	Not Blind.	Blind.	Not Blind.	Blind.	Not Blind.
1939	4	4	19	9	1	4
1940	4	1	0	6	0	5
1941	3	0	9	1	0	8
1942	4	3	7	3	0	10
1943	3	3	7	0	0	10
1944	2	3	8	3	0	8
1945	1	1	6	0	0	1

The number advised to stop smoking was 2 in 1942, 2 in 1943, and 1 in 1944. Some patients were referred for the Wassermann Test, in 1939—1 (negative); 1942—2 (1 positive); 1943—1 (negative); 1944—1 (negative).

In an analysis of the cases (561) examined during these years the following primary eye conditions were recorded by the Eye Specialists:—Primary cataract—143; senile cataract—66; myopia—65; glaucoma—42; optic atrophy—35; choroiditis—24; iritis and irido-cyclitis—24; retinitis—23 (5 diabetic); superficial retino-choroidal changes—22; and interstitial keratitis—18; injury—16; retinitis pigmentosa—14; corneal ulcer—9; dislocation of lens—6; detachment of retina—5; congenital cataract—5, and



other conditions—22. There were also 21 cases where nothing abnormal was found apart from squint, colour blindness, or minor refractive errors.

An interesting fact brought out by a study of the cases examined under the Blind Persons' Acts is the increasing number of persons examined whose age is above 70 years. During the four years 1937-40 out of a total of 372 persons examined there were 57 whose ages ranged from 70 to 79, and 31 persons aged eighty or above. During the five years 1941-1945 a total of 369 persons was examined and the number aged 70 to 79 years was 93, and there were 69 aged 80 years or above. It will thus be seen that of the total number of persons examined in the first period, 23·6 per cent. were 70 or more years of age, and this figure rose to 43·9 per cent. during the second period. In view of the more generous pension schemes for old-aged persons the question might be raised as to whether there is any special reason for continuing the examination of persons above the age of 65 years or certainly 70.

### **Blind Trainees.**

In previous reports, at various times, reference has been made regarding the need for adequate facilities for the training of Blind Persons.

The present scheme of training is so arranged that the training takes place in the Workshops of the Blind Institution. These workshops are run, of course, as a commercial proposition and they have to compete with other shops in the open market. It is, therefore, obviously in the interests of the Manager that any trainee accepted for training will give a reasonable return and be able to help in the workshops, not as a trainee but as a workman, as soon as possible, in order to help to maintain the work in the workshops at the maximum. There was one trainee who, because of his skill and quick adaptability, was put on practically a full workman's job within a month of his entry as a trainee.

It is understandable that a Works Manager must keep his output at as high a level as possible in order to make his workshop pay. The potentialities of the various applicants for education and training must, however, be considered and here the commercial side is not the all-important one. Any normal person will, if properly brought up, wish to do something with his hands and even if the eventual result of training does not lead to a first-class workman, it does give an individual a feeling of self-sufficiency. Even if the work produced is of no great commercial value, it will very definitely give the man or woman some mental activity which will afford pleasure in life and prevent mental despondency resulting from inactivity. This applies particularly to people over 35 years of age. Blind persons over this age are generally not a good proposition when considered from the commercial standpoint. They would nevertheless benefit and gain mental happiness from training in



some handicrafts. *There is no doubt as to the need for some sort of occupational therapy for blind persons quite apart from vocational training.*

### Ear, Nose and Throat Clinics.

Dr Guthrie, who had been appointed as Ear, Nose and Throat Specialist for the County of Fife in the summer of 1939, was unable to take up his duties as, soon after the outbreak of hostilities, he was called up to the Forces. It was not until July, 1941, that Dr M. F. Gibson, Dundee, was appointed as Consultant in the East of Fife and clinics were held in Methil, Markinch, Cupar, St Andrews and Anstruther. Shortly after this another Consultant was appointed in a temporary capacity for the West of Fife—Dr I. M. Farquharson, Edinburgh. The clinics at which he saw cases were :—Dunfermline, Cowdenbeath, Lochgelly, and Burntisland. In 1944 Dr Gibson found it necessary to relinquish his appointment as Consultant on account of his health, and Dr Farquharson agreed to act as Ear, Nose and Throat Specialist for the whole of Fife County.

In the following Table the number of children seen at the Specialist Clinics is given as well as the number referred for operative or minor ailments clinic treatment.

No. of Cases—	1941-42	1942-43	1943-44	1944-45
Pre-school ... ..	35	121	139	140
School ... ..	383	640	671	523
Re-examinations ... ..	43	62	108	83
No. of Children referred for Operative Treatment. (Removal of Tonsils and Adenoids) ... ..	301	540	471	470
Other Operation Treatment ... ..	12	26	25	19
Referred to Minor Ailments Clinic—				
(a) Ear ... ..	64	88	61	45
(b) Speech Therapy ... ..	35	15	10	9

It will be seen in the above Table that a large number of children were recommended by the Specialists to have their tonsils or adenoids, or both removed. It was soon evident that the various Hospitals where these operations were done could not cope with such large numbers. This applied particularly to the Royal Infirmary, Edinburgh. It was therefore necessary to make other arrangements meet the demand. Eventually it was arranged that operative treatment for tonsils and adenoids should be carried out at the Emergency Hospital at Cameron Bridge. The number of children who had operative treatment at Cameron Hospital in 1942 was 199, and this figure increased to 377 in 1943. In 1944 the number of Tonsil and Adenoid operations was 315; but in the following year (1945) the figure rose to 503.

The cases referred to the minor ailment clinics were mainly those requiring to have their external ears syringed, or their middle ears inflated.



A number of children were referred to the Specialists for opinion and advice regarding the need for special educational arrangements where hearing was defective or to the Speech Therapists where speech defects required special treatment. The number of children for whom some special class provision was considered necessary was respectively 11, 0, 3 and 2. The number recommended for education in a Deaf Institution was 7, 1, 2 and 2, while some were kept under supervision—6, 1, 6 and 10.

### Audiometer Survey.

In 1942, primary and post-primary school children attending schools in Kirkcaldy were examined with the gramophone audiometer to determine the number with defective hearing. A further number of school children were tested in Dunfermline and in East Wemyss a few months later, and a limited number of children whose results placed them in the "more defective" grading were re-tested. A Kirkcaldy teacher, who had a special course of training in Edinburgh, was employed to carry through this survey.

The apparatus employed is a gramophone with an electromagnetic reproducer. Special records are used in which a person speaks two or three figure numbers, successive numbers diminishing in intensity in a scientific scale. By connecting a series of headphones (multiples of eight) with the gramophones, groups of children can be tested simultaneously. The number of children tested at one sitting in this survey was limited to twenty-four. The children, all being tested on the same ear, wrote down on a specially printed sheet of paper, the figures they heard.

On being introduced to this method of testing, children must receive very definite and explicit instructions from the person in charge of the examination. It is of importance that that person, whether a teacher or a nurse, should have knowledge of how to handle groups of children.

The results are given (with percentages in brackets) in the following table :—

School	Number of Children.	Grading of Hearing.		
		I.	II.	III.
Primary (Kirkcaldy)	1837	867 (47)	931 (50.6)	39 (2.1)
		956 (52)	853 (46.7)	28 (1.5)
Primary (Dunfermline and East Wemyss)	861	507 (59)	342 (39)	12 (1.39)
		535 (62)	322 (37)	4 (0.46)
Post-primary Pupils	408	225 (55.1)	176 (43.1)	7 (1.7)
		254 (62.2)	150 (36.7)	4 (0.9)
Secondary School Pupils	176	124 (70.4)	51 (28.9)	1 (0.56)
		129 (73.3)	46 (26.1)	1 (0.56)
Re-test ...	293	146 (49)	138 (47)	9 (3.0)
		160 (54)	124 (42)	9 (3.0)



The children in Kirkcaldy Primary, Kirkcaldy Post-Primary and Kirkcaldy Secondary Schools were tested in February and March when there was a good deal of windy weather. Those in Dunfermline and East Wemyss Primary Schools were examined in June in more settled weather. The figures relate to both ears, the right above and the left below  $\frac{\text{(right)}}{\text{(left)}}$ . Those with a threshold acuity of 6 or less units were considered to have normal hearing (Grade I.) ; those with 9 to 18 units of hearing loss fell into Grade II.; and those with 21 to 30 units of hearing loss were classified in Grade III.

Analysis of the Table shows certain variations in the results obtained. These differences were due to the factors of noise, mental level and of the type of record used. In certain schools, better results were obtained because there were less noisy conditions, brighter pupils and the records were those with three-figure numbers. At certain schools in Kirkcaldy records with two figure numbers were used and it was found that the percentage for Grade I. was as low as 32-42 per cent.—the average percentage being 47-52. Age (or higher mental level) also played a part in the better results obtained in the post-primary schools in Kirkcaldy when compared with the primary. This was particularly brought out by the figures for the Secondary School pupils. Here the percentages for Grade I. were 70 or above. The relatively better figures for the children tested in Dunfermline and East Wemyss were due to the fact that previous experience made it possible for the teacher to eliminate some of the factors affecting the examination. Every care was taken to reduce extraneous noises to a minimum and only records with three-figure numbers were used.

There still remained the varying mental level of the children. There is no doubt that hearing requires a good deal of concentration and children with poor mental endowment usually lack this to an outstanding degree. Very often it was possible to notice such children. Whenever the voice of the speaker diminished below a certain level, they would lose interest and begin to pay attention to their neighbours, or to outside noises. Noises, by distracting the attention of the pupil, brought about loss of concentration on the numbers in the test. Likewise, the use of gramophone records in which words are spoken with an English accent will affect the attention of the pupil. This last factor may account for the poorer results obtained in this as compared with the English survey.

The English figures, however, were based on a second testing of the children. It was, therefore, arranged to re-test some of the pupils. In seven schools, 293 pupils belonging to Grade II. and III. were re-tested. The results so obtained indicate that the children with good hearing approximate a percentage of 75 and about 0.35 per cent. belong to the hard-of-hearing category.



From this survey it is obvious that an experienced person, preferably with some psychological training, is necessary to carry out the examinations; explicit instructions are necessary for the pupils, since varying mental levels may affect the test; noises must be eliminated as much as possible as they distract attention; a three-figure record should be used and, if possible, the speaker for Scottish children should be one with a Scottish accent.

The help rendered by the Kirkcaldy teacher, Miss Hamilton, must be recorded. Whatever success attended this survey was due to her considering all the various difficulties that presented themselves. Appreciation must also be given to the assistance provided by the Headmasters and their staff in ensuring the smooth working of the examinations.

### **Orthopaedic Scheme.**

All children in Fife County, pre-school as well as school, who are found to be suffering from any crippling condition are referred to the Orthopaedic Clinics for advice and, where necessary, for treatment. The staff in 1939 consisted of one Orthopaedic Nurse and one Masseuse, assisted by two or three members of the gymnastic staff. The latter, who served only part-time, helped at the clinics at Lochgelly and Methil. Unfortunately, changes in the gymnastic time-tables affected this arrangement, thus handicapping the continuity of remedial work in the cases referred to the gymnastic teachers. The orthopaedic staff, in short, was altogether insufficient. To meet the increasing demand at the various orthopaedic clinics, an additional appointment was accordingly made possible through the help of the East of Scotland Nuffield Orthopaedic Fund. The appointment of a second orthopaedic nurse was made in August, 1939, and this permitted extension of the scheme to the less densely populated parts of East Fife. The staff were thereby able to deal with a larger number of domiciliary cases and four clinics were set up in St Andrews, Cupar, Anstruther and Tayport. Despite this extra help, however, it was not possible to cover the whole of Fife nor to give that amount of time to each case that is considered necessary to obtain best results. Unfortunately, in 1944, the senior orthopaedic nurse—Nurse Huxtable—resigned. During the years she acted as orthopaedic nurse, she, along with the help of the other members of the staff, brought the scheme to a high level of efficiency and by her own keenness enthused her colleagues to give of their best.

As Orthopaedic Specialist, the County Council had the valuable services of the late Mr W. A. Cochrane. It was his enthusiasm that helped to establish the Orthopaedic Scheme in Fife. Appointed in 1933 as Consultant, he acted as adviser and guide to the medical staff. It was impossible to be unaffected by his deep interest and knowledge of the subject, which he had made his life's work. It can be truly said that he laid down his life in the cause of Ortho-



paedics. He did not spare himself and with the increasing responsibilities of the war years the burden became too much and affected his health. Fife owes him a deep debt of gratitude.

In view of other commitments, Mr Cochrane was not always able to attend every County Specialist Clinic and, in his absence, his place was taken by Mr Stirling. Following the death of Mr Cochrane in November, 1944, Mr Stirling was appointed Consultant to the County and the staff very much appreciate his valuable help and advice.

The total number of cases on the registers of the various orthopaedic clinics was as follows:—1939—207; 1940—300; 1941—358; 1942—321; 1943—380; 1944—499, and 1945—571. Of these numbers, the following were pre-school children: 57; 93; 120; 130; 164; 206 and 248. At the specialist clinics, new cases were brought forward for examination and old cases were inspected to note progress and to assess the need for further treatment at clinic or hospital. The number of children seen by the Specialists was:—1939—533; 1940—491; 1941—615; 1942—1184; 1943—1437; 1944—1317; 1945—1835. In the following table the number of new cases seen each year is given, the number discharged with their condition improved or cured, the number that were kept under supervision and those considered as unsatisfactory.

	NEW CASES.		DISCHARGED.		SUPERVISED.		UNSATISFACTORY.	
	Pre-Sch.	Sch.	Pre-Sch.	Sch.	Pre-Sch.	Sch.	Pre-Sch.	Sch.
1939	145		71		56		35	
1940	130	127	103	96	34	35	30	22
1941	141	123	131	170	58	97	49	47
1942	159	176	125	151	26	50	61	66
1943	199	243	157	166	43	43	79	66
1944	257	288	215	255	55	85	101	100
1945	178	220	235	246	60	76	108	79

The number discharged as improved or cured must be considered as excellent especially in view of the fact that the staff was limited in size and not able to give the length and frequency of treatment that was desirable. The unsatisfactory cases were mainly due to lack of interest on the part of the parents with consequent very irregular attendances at the clinics. In the following table an analysis is given of the outstanding groups of conditions of the new cases brought before the Specialists.

	Congenital Deformities	Poliomyelitis	Other forms of Muscular Paralysis	Rickets	Tuberculosis	Arthritis and Rheumatism	Injuries	Other Conditions
1939 } 1940 }	58	16	20	31	3	8	26	162
1941	25	6	5	10	2	4	2	80
1942	27	7	9	16	5	3	11	114
1943	35	8	12	23	5	6	21	254
1944	31	11	11	16	9	6	17	281
1945	44	3	9	4	8	5	25	360
	220	51	66	100	32	32	102	1251



There was an increase in the "other conditions" group. In this group were included abnormalities of the feet (pes planus and pes cavus) which constitute about one-third of the cases. Another third of the group was made up of knock knees, bow legs and poor posture. Of the less frequent conditions, there were Perthe's Disease 5; Still's Disease 3; Osgood Schlatter's Disease 2; Little's Disease 1.

When seen by the Specialists, cases were grouped according to expectation of recovery or correction and their eventual probable social fitness. The percentage of those in the first group (a cure up to 75 per cent. of physical efficiency can be expected) worked out at about 65 per cent. and the figure for the last group (major cripples unable to earn their livelihood) was 4.7 per cent. The Special Report of 1936 gave a figure of 15 per cent. This marked fall in the incidence of major crippling indicates that children are being seen at an earlier stage when there is a greater opportunity for cure or correction.

#### Orthopaedic Treatment.

CLINIC	1939	1940	1941	1942	1943	1944	1945
Methil ...	4,553	3,815	3,052	2,503	3,619	4,798	2,540
Lochgelly ...	3,777	3,473	3,093	3,034	3,674	5,245	4,003
Dunfermline ...	750	640	600	497	511	840	673
Markinch ...	557	414	496	420	454	388	320
Burntisland ...	292	450	371	263	423	758	625
Crossgates ...	432	292	217	224	282	330	164
Cupar ...	50	329	462	677	939	1,002	830
Anstruther ...	19	318	352	461	799	760	886
St Andrews ...	76	404	488	477	609	788	574
Tayport ...	22	249	245	196	353	387	469
	10,528	10,384	9,376	8,752	11,663	15,296	11,084

The treatment given at these clinics was shared between pre-school and school children as follows:—3437-7091; 3511-6873; 3654-5722; 3606-5146; 4601-7062; 6385-8911 and 5074-6010. These figures show an increase in the number of treatments given to pre-school children and indicate the greater attention given to orthopaedic defects in younger children with a view to early treatment and possible cure. For the carrying-out of these clinic treatments, the following were the number of clinic meetings held:—1939—745; 1940—746; 1941—746; 1942—654; 1943—767; 1944—776 and in 1945—657. In addition to the clinic cases, visits were made to the homes of cases too far distant from clinics. These domiciliary visits were mainly supervisory, although some minor treatments were given, and in some cases "plaster-jackets" or supports were made. The number of domiciliary visits were:—1939—333; 1940—218; 1941—315; 1942—171; 1943—145; 1944—245; 1945—178.

War-time reduction in staff affected the work, particularly the visitation of domiciliary cases. There was, however, an increase in



the total number of treatments given at the clinics, as a result of treating, wherever possible, an increasing number of cases in groups. While this arrangement has given reasonably good results in the less defective conditions, the depleted staff could not give sufficiently frequent or prolonged treatment necessary to more marked cases. This was obvious in the case of certain clinics (Lochgelly, Methil, Burntisland) where two meetings per week had to be reduced to one. Less time was therefore available for individual cases and only by grouping of similar types of cases for remedial exercises was it possible to give treatment to a sufficient number of children.

The Public Health Committee are fully aware of the position and have indicated their willingness to employ as large an orthopaedic staff as is required. It is their desire that each child should receive adequate attention and that additional orthopaedic clinics should be opened to meet needs in Dunfermline and Cupar Areas. It is to be hoped that demobilisation will liberate a sufficiency of trained personnel.

### Speech Therapy.

There are four speech therapists who examine and treat school children with defective speech and who attend schools in the following areas:—(1) Kirkcaldy Burgh and Burntisland District, (2) Buckhaven, Leven and Wemyss, (3) Cowdenbeath, Kelty, Lochgelly, Glencraig and Crossgates, (4) St Andrews, Cupar, Newport, Newburgh, Anstruther, Falkland, Ladybank. More recently, when a car was made available, schools in Markinch and Auchterderran were visited. In the case of the Burgh of Dunfermline, treatment is undertaken by the staff of the Dunfermline Carnegie Trust whose work forms a separate section in this Report.

The war in its early stage had a varying effect on the work of the speech therapists. In Kirkcaldy the treatment of the cases continued reasonably well. In Cowdenbeath-Lochgelly area, the closing of some schools in November, 1939, and continuation of others on a half-day basis interfered with attendances. There were some evacuees in this area but they departed before results could be registered. In Buckhaven-Wemyss area where the schools in the Winter Term were on half-day shifts, work was not greatly affected. In the St Andrews area there was a marked influx of evacuees during September-December term, but by the following June the total number receiving treatment was 57 and in August 88. Curtailment of 'bus services interfered with attendances in this area.

It was decided to concentrate, in so far as possible, treatment in clinics rather than to continue visitation of schools, but this could be done only to a limited extent. In Cowdenbeath, the centre which had been set up in Foulford School, was transferred to the School Clinic (attached to St Columba's High School). In St Andrews, the centre was transferred to Madras College, the accom-



modation at the Burgh School having been found to be unsatisfactory owing to constant interruption from adjacent classes.

During the year 1939-40 the number of children treated was 475, of whom 171 were cases who stuttered or had hesitation in speech. Of the number of cases treated 78 were discharged as cured.

In the following year a car was made available for the speech therapist in the North-East of Fife. As a result she was able to undertake the treatment of cases in the Markinch-Auchterderran districts in addition to the districts she already served. This, obviously, is too big an area to be covered by one person and it is hoped when more speech therapists are available to reduce its size. A difficulty more noticeable in the North-East of Fife is the fluctuation in the school population which affects the time-tabling of the speech therapist very considerably from year to year.

In the following years the numbers examined or re-examined were 611 (1940-41), 471 (1941-42), 603 (1942-43), 560 (1943-44), and 50 (1944-45). Of these the following were referred for treatment or supervision (in brackets) :—133 (22), 274 (62), 153 (49), 316 (29). In the following table the cases treated are grouped into three categories, stutterers, defective articulation, and cleft palate.

	1940-41	1941-42	1942-43	1943-44	1944-45
No. of Stutterers ...	198	138	168	146	101
No. with Defective Articulation ...	295	271	373	341	295
No. with Cleft Palate	10	10	15	16	15
No. with other defects affecting speech	—	19	20	18	29

The conditions which affected speech in the last group were in the main varying degrees of mental defect and defective hearing.

The number of children showing improvement in their attempts at speech correction during these five years were 305, 302, 368, 201 and 275 respectively. The numbers discharged as cured or definitely improved were 104, 101, 83, 173 and 120. The remainder (2, 38, 85, 22 and 22) showed little, if any, improvement or had left the school.

The total number of treatments given were recorded for the past three years and the figures are 1942-43—12,540 ; 1943-44—13,607 ; and 1944-45—11,122.

### **Arrangements for the Physical Education and Personal Hygiene of Children.**

The early and unexpected death of Mr A. C. W. George in 1939 deprived the County Education Committee of the services of an official whose constant endeavour was to make the County Scheme an outstanding one. In his relatively short period as Supervisor of Physical Education, Mr George brought about radical changes in the organisation of the teaching of gymnastics and effected a fuller and more efficient use of the specialist or advisory teacher. He also



fostered to the fullest extent the interests of class teachers in physical education and his special courses of lectures and demonstrations were fully attended and very popular. In addition to improving the curriculum of physical education, he constantly strove to improve the condition of gymnasia, playgrounds, and playfields. This brief statement of Mr George's work in Fife would be incomplete if reference was not made to his interest and active participation in the Fife Holiday Camp Scheme for Necessitous Children. Here, his advice and organising capabilities made it possible for hundreds of necessitous children to enjoy a holiday in the country or at the seaside during the summer holidays.

In his last report he had indicated how gratifying it was that indoor accommodation for Physical Training had been provided for most of the schools. It was therefore a matter of regret that the building of gymnasia at such schools as Aberhill, Leven and Balcurvie had been delayed. He also pointed to the severe handicap in physical training which existed in such schools as the North Abbotshall and Dunnikier Schools, Kirkcaldy, where children had to exercise on stone floors, and he advocated the laying of linoleum.

He always pressed for the provision of more playfields but unfortunately little could be done during the war. Instruction in swimming received much of his attention in the summer months. The arrangements for swimming instruction in the Wemyss and Kirkcaldy areas were reorganised. This allowed for more methodical teaching and, in consequence, a larger number of children benefited from the instruction.

Mention should be made of an interesting experiment which was begun with his co-operation just before the outbreak of the war and which was continued intermittently during the war period. Changes in personnel repeatedly interrupted the continuity of the experiment and lack of staff prevented its extension. Actually it had even to be reduced in extent. For a short period children in Burntisland Junior Secondary School were included in the experiment but later it was continued only in Moss-side Junior Secondary School for girls and in the Junior Secondary School (Oakfield), Kelty.

The object was to introduce group remedial gymnastics for the benefit of children with deviations from normal as far as feet and postural conditions were concerned (conditions which were not defects requiring more individual treatment in Orthopaedic Clinics). The conditions chosen were those where the children could be taken in groups and given at least an extra gymnastic period concentrated on remedial gymnastics. In a limited survey in 1944 the following number of children were included in this group remedial work.

	Moss-side Junior Secondary School.	Oakfield Junior Secondary School
Foot conditions only ... ..	6	5
Foot and posture conditions ...	7	9
Postural conditions in which the head, shoulders, and back were affected	32	13



The results obtained at the end of six months showed that 22 of the children had definitely improved, 31 showed moderate or slight improvement, while 24 showed no apparent changes. These results indicate the need for extra remedial exercises. With at least two extra periods per week definitely better results can be expected. If and when more gymnastic staff can be appointed arrangements should be made for each member of the staff to undertake group remedial work among school children with slight defects of posture.

### Spray Baths.

During the school year 1938-39, there was an increase in the number of pupils (2556) taking spray baths and the total number of attendances was well over 22,000. These increases were in part due to the opening of the new Dunfermline High School and in part to the outstanding number of children taking sprays in Bell-Baxter School, Cupar.

After the outbreak of the war, various changes imposed by war conditions made it necessary to modify the giving of "sprays" in schools in Fife. In Dunfermline High School it was found impracticable to continue the sprays, so far as the girls were concerned, and in the case of the boys they were continued only to a modified degree. The sprays were, however, extensively used on Saturdays after the Rugby games. In Kirkcaldy High School on the other hand, an actual increase was recorded to begin with. In Buckhaven, the taking over of the gymnasium as a First-Aid Post prohibited the use of the sprays there, and in the Bell-Baxter School a modification was also found necessary. At Rosyth, the two schools with spray baths (King's Road and Park Road) were requisitioned by the Services and consequently were not available to the school children.

In the case of the Primary Schools with sprays, a similar modification was found necessary, but while numbers went down every effort was made to keep the scheme in operation wherever possible.

	No. of Schools using Sprays.	No. of Children.	No. of Baths taken.
40-41 ... ..	17	1378	19,267
41-42 ... ..	7	1505	17,707
42-43 ... ..	7	549	5,370
43-44 ... ..	6	674	3,371
44-45 ... ..	6	750	4,400

The figures in the above table show a marked decrease in the number of sprays taken by school children in the later war years. The various factors responsible were difficulties in staffing and in maintenance and the use of dressing room accommodation for storage purposes. In most of the Secondary Schools cold sprays only were available and most of the children therefore took sprays after games. With reduced supplies of coal a further contributing factor was the diversion of hot water to wash up the dishes used at school meals.



It was unfortunate that this adjunct to physical education had to be curtailed or abandoned because of the exigencies of war. It must be again emphasised that it is not cleansing of the skin which is the main purpose of these spray baths following upon physical exercises, it is the stimulating and invigorating effect they produce on the skin and through it on the whole body. This applies particularly to the young adolescent. The fact, however, that so many children used the spray baths, although in the main only cold water was available, indicates that there is a growing appreciation of the beneficial value of "sprays."

The post of Supervisor of Physical Education was not filled during the war, and the following report for the school years 1939-45 was drawn up by Dr D. M. McIntosh, Director of Education.

"There has been on the whole a decline in the standard of physical training throughout the County during the war years. For this decline there were several reasons: lack of staff, including the loss of the Supervisor of Physical Training, disorganisation of time tables, lack of equipment, loss of playground space, use of accommodation for A. R. P. purposes, and general loss of teaching time.

"Male teachers of physical training were in particularly heavy demand for work in the services with the result that seven of the eleven men on the physical training staff at the outbreak of war joined the forces. Although the Scottish Education Department suggested that an appeal might be made for the release of some of these men to assist with the Welfare of Youth scheme, only two returned to the service of the Committee at that time. The shortage of male teachers resulted in the use of women teachers for the instruction of boys in some of the Junior Secondary Schools. In some instances, too, it was even found possible to arrange for a limited amount of remedial work to be continued during the war years for the benefit of pupils requiring special corrective exercises. This work has been carried out most efficiently.

"To fill the serious gap caused by the loss of male staff it was necessary to engage uncertificated men teachers for physical training. One retired teacher and two married women also returned to duty in a temporary capacity. Due to quick replacement of teachers on military service the standard of physical education in the County did not suffer as much as might have been expected.

"The national need for fuel economy and the natural desire of teachers not to have their pupils stripped off for spray baths during air-raid alarms, no doubt caused a considerable diminution in the numbers of spray baths taken as compared with the large pre-war figure.

"Other serious difficulties were caused by loss of school accommodation which was requisitioned for war purposes; in some areas whole schools were taken over, while throughout the County surplus rooms were occupied for use as A. R. P. centres. In the Rosyth area where two of the three schools were requisitioned the remaining school was organised on a shift system. Here for a time the pupils received physical education in the form of games during the periods when other sections were receiving instruction within the building. Later arrangements were made for regular physical training lessons. In other areas where classrooms were requisitioned the school hall was utilised for classroom purposes with a consequent reduction in its use as a gymnasium. Many school playgrounds which were already sufficient



small had their playing space further cramped by the installation of air-raid shelters and trenches.

" Since all building programmes were shelved during the war years it was impossible to extend or improve existing accommodation. With regard to provision of playing fields, not only was further progress barred, but in certain cases ground was lost through the existing playing fields being ploughed up.

" As the war progressed it became increasingly difficult to provide new equipment or keep existing equipment in adequate repair. Gym shoes and gym clothing were in short supply, and parents hesitated to expend coupons on them. The decision of the Education Committee, however, to purchase such limited supplies of gym shoes as were available, not only ensured that the children could participate in gymnasium work, but thereby lessened the liability to splintering accidents so common when gym work is done bare-footed.

" There has been a growing demand for teachers of physical education in connection with the various Youth Clubs which have been organised in the County. In this field of work the Education Committee have granted the use of gymnasia and instructors free of charge to the Youth Organisations. Several of the male members of the staff also assisted with the Air Training Corps throughout the County. Naturally, as a result of these developments and of the war situation, the demand for Continuation Classes has been much smaller.

" Reference must be made to the death of Mr A. George, Supervisor of Physical Education in the County. Of outstanding ability and enthusiasm for his work, he raised the standard of physical education to a level which earned the respect of all interested in the physical well-being of children. He was admired and respected by everyone who came in contact with him.

" The Education Committee decided not to fill the post of Supervisor of Physical Education for the duration of the war as many of the most likely applicants would be on military service. In the meantime, Mr Cruickshank, H.M. Inspector of Physical Education, has spent considerable time in the County assisting with the supervisory work with the result that the high standard of physical education in the schools has been to a large extent maintained.

" It is hoped that in the near future there will be a return to pre-war standards of staffing, accommodation, and equipment. The staffing position is still difficult, particularly the supply of female teachers, but it is the intention of the Committee to proceed with the appointment of an Organiser of Physical Education. There is a renewed drive toward the provision of playing-field facilities, and within a reasonable period the position regarding accommodation, equipment and clothing should improve considerably."

### **Mothercraft.**

In 1931, at the request of the headmistress, experimental classes in mothercraft were held at a school in Cowdenbeath. The result was considered sufficiently encouraging to warrant continuation and extension to other advanced division centres. To commence with, the courses were conducted by two Health Visitors—one responsible for classes in Dunfermline and West Fife areas and the other for classes in the Kirkcaldy and Buckhaven areas. Later on as the scheme developed, the services of four other Health Visitors were enlisted, each being made responsible for teaching in post-



primary schools in their own area. There are now twelve schools in the County in which forty mothercraft classes are being held and a total of 589 girls are receiving instruction. Since the inception of the scheme, over 7,000 girls have had instruction in mothercraft.

The advantage of selecting a nurse who has special training and aptitude for this work soon becomes evident. It is not every nurse, however well she may be qualified as a nurse, who can handle young girls, and it is important, if the class is to be a success, that the nurse should be able to attract and hold the attention of her class. There is much advantage, too, in employing a suitable nurse to teach in her own area because she knows the homes of the girls she is addressing and can, therefore, specially emphasise points which she knows require attention locally. The method has a particular advantage in the instruction of dull and mentally backward girls.

The syllabus includes instruction on the hygiene of the child's environment as well as on the care and training of the infant and the toddler. In Fife, the teaching of mothercraft has been confined mainly to the duller and more backward pupils of the post-primary schools, as it has been felt that these girls specially require such training for the reason that it is from this section of the community that a fairly large proportion of social problem cases originate. In view of the mental backwardness of these pupils, it has been necessary to restrict theory to a minimum and to introduce as much practical work as possible. It has also been necessary to revise and repeat instruction and, accordingly, courses have been extended to two and three terms. The syllabus allows for about 44 lessons.

In Fife, it has been found that girls of twelve are generally less interested in the subject than are older girls. Interest and concentration develop slowly, and the extension of the school age should, therefore, entail even greater success in the teaching of this subject.

There is no doubt that mentally better endowed girls would also benefit from a course of mothercraft teaching. For these, more theory should be introduced. The syllabus drawn up by the National Association of Maternity and Child Welfare Centres is very satisfactory and its application in Fife is under consideration.

Nursery schools are of value in giving girls opportunities of handling young children. In Fife, before the war, older girls were sent, two at a time, to help the staff at one of the County nurseries. The girls enjoyed the experience under the guidance of the staff in charge of the toddlers.

Mothercraft classes have been tried in evening schools but response has never been great. More success might attend the arrangement if such classes were made part of a domestic course under the term "Domestic Craft" or "House Craft." The advisability of setting up a course in "Home Making" in it



relationship to citizenship as suggested by the National Association is also being considered. If the course comes into being, fathers will be specially asked to attend.

### **Treatment of School Children in Dunfermline Clinics.**

The treatment of school children in Dunfermline Burgh is carried out under a special arrangement with the Carnegie Dunfermline Trust. A full-time staff is employed under the administrative control of Dr Harry Emslie Smith.

*Introductory.*—The work of the Clinics was upset to a considerable extent as a result of the outbreak of war. Most of the Clinics, College and Baths Buildings were taken over by the Department of Health for Scotland to form Inglis Street Emergency Hospital. The Dental Clinic and Sunlight Clinic, however, were retained, and in the latter the work of the various departments of the General Clinics, Sunlight Clinic and Child Welfare Clinic was carried on.

At Rosyth the difficulties in carrying on the work of the Clinics were greater than in Dunfermline. In September, 1940, when King's Road School was taken over for Service purposes, the Dental and General Clinics were removed to Park Road School. Soon after this, Park Road School was also closed. Large numbers of Rosyth children were evacuated and those who remained attended the Roman Catholic School for only short periods during the day. As it was impossible to find accommodation in the Roman Catholic School, arrangements had to be made to open the General and Dental Clinics in the Carnegie Dunfermline Trust's Institute at Rosyth.

Treatment at the Remedial Clinics was previously carried out by the Senior Students of the College of Hygiene and Physical Training but the removal of the College to Aberdeen left the Remedial Clinic without trained workers capable of carrying on the work. To meet this difficulty the Trustees decided to appoint a fully-trained masseuse at first on a part-time basis, but owing to the increase in the amount of work, the appointment was made a full-time one from 1st May, 1940.

It is satisfactory to record that, in spite of war conditions, it was found possible to carry on the work of the Remedial Clinic and also that Mr W. A. Cochrane, the Consulting Orthopaedic Surgeon, was able to hold Orthopaedic Clinics each year. It is, however, with deep regret that his death has to be recorded. Appointed by the Trustees in 1935, Mr Cochrane, throughout the years which followed, gave most valuable and generous service in conducting the Orthopaedic Clinics.

The Clinic for Defective Speech had to be temporarily closed in 1939 as it was impossible for the Speech Therapist to attend. She was able, however, to resume her clinics at the beginning of the school year, 1940-41.



In April, 1941, the Carnegie Dunfermline Trustees were fortunate in obtaining the services of Miss B. Elizabeth Nesbitt, F.R.C.S., as consulting aural surgeon in place of Dr Douglas Guthrie, who, soon after the outbreak of the war, joined the Services.

In June, 1940, Mr Robert Weir found it necessary to resign his appointment as Dental Officer to the Trust. Mr Weir's resignation after so many years of good service, so generously given, was a source of great regret to all with whom he was associated in his work.

At the beginning of the war, evacuation of children and re-adjustments in school routine naturally resulted in a considerable falling-off in numbers, but as time went on, an increase of work took place.

*Attendance.*—The following figures show the number of children treated in Dunfermline and Rosyth :—

Year ending 31st July.	New Cases.	Treatments.
1940 ... ..	2195	12,823
1941 ... ..	3050	19,549
1942 ... ..	3705	24,033
1943 ... ..	4129	24,788
1944 ... ..	4269	22,676
1945 ... ..	3852	19,265

*Scabies.*—An outstanding feature of the General Clinic work during these years was an increase in the number of Scabies cases. The figures as compared with those of the year 1939 are as follows :—

Year.	New Cases of Scabies.
1939	74
1940	71
1941	164
1942	368
1943	370
1944	392
1945	202

War-time conditions no doubt encouraged the spread of Scabies in both adults and children ; a similar outbreak occurred during the War of 1914-18. During the last year under review there was a welcome decrease of 190 new cases, but the disease is still too prevalent, and is likely to continue so for some time. When Scabies is widely spread, many of the milder cases are unrecognised and remain a source of infection in households over long periods. All affected members of a family should be treated at one and the same time, for in this lies the best hope of getting rid of the disease.

*Minor Ailments (General Clinics).*—The following table gives the number of cases treated at Dunfermline and Rosyth. Any child returning after a month's unprescribed absence was considered to be a new case, as were children returning after an interval with different defect.



## No. of Cases treated at Dunfermline and Rosyth Clinics.

EAR—	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Middle Ear Sup- puration ...	24	40	48	67	63	52
Other Conditions	29	32	56	64	91	93
	53	72	104	131	154	145
Nose AND THROAT—						
Nasal Conditions	5	25	95	116	155	281
Sore Throat ...	6	3	9	5	5	8
Other Throat Con- ditions ...	31	41	110	146	193	277
	42	69	214	267	353	566
EYE—						
Blepharitis ...	14	23	21	17	23	10
Styes ...	18	40	30	26	43	25
Conjunctivitis ...	19	30	32	27	22	24
Corneal Inflammation and Ulceration	—	3	2	1	2	2
Injuries ...	10	9	10	3	7	9
Errors of Refraction	1	3	—	—	—	—
Other Conditions	4	4	17	8	14	8
	66	112	112	82	111	78
SKIN (Head)—						
Dirty ...	5	25	16	11	26	17
Ringworm ...	—	1	—	—	—	2
Impetigo ...	32	44	75	80	74	72
Other Conditions	10	11	7	13	8	15
	47	81	98	104	108	106
SKIN (Body)—						
Body Vermin ...	1	1	—	4	—	—
Impetigo ...	181	286	293	385	350	295
Scabies ...	71	164	368	370	392	202
Ringworm ...	2	6	6	3	2	6
Molluscum ...	—	2	2	1	1	—
Other Conditions	184	290	332	388	416	329
	439	749	1,001	1,151	1,161	832
GENERAL—						
Septic Sores ...	393	652	676	909	880	643
Injuries ...	359	483	489	400	428	533
Other Conditions	402	336	359	374	365	452
Sunlight ...	57	89	125	151	132	143
	1,211	1,560	1,649	1,834	1,805	1,771
	1,858	2,643	3,178	3,569	3,692	3,498
Cases treated at Rosyth	135	695	807	1,181	1,191	1,046
Cases treated at Dun- fermline ...	1,723	1,948	2,371	2,388	2,501	2,452
	1,858	2,643	3,178	3,569	3,692	3,498
Children below School Age	337	407	527	560	577	354
TOTAL CASES ...	2,195	3,050	3,705	4,129	4,269	3,852
Attendances at Rosyth	364	2,741	3,724	5,017	4,824	4,009
Attendances at Dun- fermline ...	10,983	14,723	17,294	16,890	15,360	13,778
Attendances made by Children below School Age ...	1,476	2,085	3,015	2,881	2,492	1,478
	12,823	19,549	24,033	24,788	22,676	19,265



In the year which ended on 31st July, 1945, the number of children treated at the Clinics in Dunfermline and Rosyth amounted to 3,852 new cases with 19,265 attendances.

As compared with the previous year these figures show a decrease of 417 new cases and 3,411 attendances. This was mainly due to a decrease of 331 new cases of skin affections and 237 cases of septic sores and serves to indicate an improvement in the general well-being of the children, as these affections are so commonly associated with poor health and debility.

There was an increase of 213 cases of nose and throat affections. Many of these were cases of enlarged tonsils.

The Consulting Aural Surgeon held regularly monthly Clinics during school terms.

Fifty-seven fewer cases of Impetigo were treated, which is satisfactory in view of the large number of these cases in recent years.

*Defective Speech Clinic.*—For the school year 1944-45 Miss Fleming reported that "the number of stammering children was the highest there has been so far, but many of the cases were slight ones, one school in particular sending in batches of boys, who obviously had caught the habit from one another. One found that, apart from the stammer, the reading of these children was on the whole very poor, unrhythmic, hurried, and with no breath management whatsoever. One might suggest that guidance at school in short phrasing with proper regulation of the breath when reading would do much to counteract the tendency to stammer at the very start."

The following table gives the number of cases dealt with during the school years from September, 1939, to July, 1945.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Stammerers ... ..	—	21	19	31	29	38
Backward Speech and Minor Speech De- fects ... ..	—	24	28	25	28	23
Backward Speech with Stammer ... ..	—	—	1	—	—	2
Backward Speech with Deafness ... ..	—	1	1	1	1	1
Cleft Palate ... ..	—	—	—	2	3	4
Nasal Speech ... ..	—	—	—	—	—	1
	—	46	49	59	61	69
Attendances made ... *	—	741	1166	1134	1140	1016

\* As it was impossible for the Speech Therapist to attend, the Defective Speech Clinic had to be temporarily closed during 1939-40.

*Deformities and Other Conditions Treated at the Remedial Clinic.*—Treatment by massage and medical gymnastics, radiant heat and Faradic electricity was given by the Clinic Masseuse. Most of the cases of local children on discharge from Fairmilehead Orthopaedic Hospital were sent to attend the Remedial Clinic for further treatment.



The Clinic was open daily during School Sessions, cases being eligible for admission only on the recommendation of their family doctors.

The number of cases treated and the number of attendances made are given in the following table:—

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
No. of Cases Admitted	46	79	82	110	122	161
No. of Attendances ...	1010	2131	2117	2020	2217	2247
Average No. of Treatments per case ...	21.9	27	26	18	18	14

Defects treated included cases of Postural Round Shoulders; Antero-Posterior Curvature of the Spine; Lateral Curvature of the Spine; Paralysis; Flat Foot; Club Foot; Sprains; Fractures and Injuries; Rickets and Debility; and other conditions.

*Orthopaedic Clinic.*—These clinics provide for the examination and treatment of children suffering from physical defects, who require orthopaedic care in addition to what can be done for them by massage and other methods at the Remedial Clinic.

Owing to the death of Mr Cochrane towards the end of 1944 it was possible to arrange for only two Orthopaedic Clinics to be held during the year 1944-45. These clinics were held by Mr W. A. T. McKendrick, Resident Surgical Officer, Princess Margaret Rose Hospital, Fairmilehead.

The following table gives the number of cases seen at the clinics and the numbers admitted to Hospital.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
No. of Clinics held ...	1	3	3	3	3	2
No. of New Cases ...	9	29	32	34	50	23
No. of Old Cases ...	15	25	30	31	34	14
No. admitted to Fairmilehead Hospital	4	7	5	7	3	1
No. admitted to Peel Hospital ...	—	—	—	2	2	1
No. admitted to Hospital who were recommended for admission in previous years	—	3	4	4	15	8

*Artificial Sunlight Clinic.*—This clinic remained open throughout the year, except during the summer months. The form of treatment given is mostly a weekly general exposure of the body to a long flame Carbon Arc lamp, but local applications from a Mercury Vapour lamp are given in suitable cases. The number of children treated and number of treatments given are recorded in the following table.

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
School Children ...	57	89	125	151	132	143
Infants and Children under School Age	35	51	50	59	62	51
No. of Children ...	92	140	175	210	194	194
<i>No. of Treatments given to:—</i>						
School Children ...	561	1015	1447	2302	2303	2220
Infants ...	256	523	438	552	788	631
No. of Treatments	817	1538	1885	2854	3091	2851



*Defective Teeth.*—The Dental Department was gravely disorganised by the advent of war. One of the difficulties was to get access to the children, who, because of lack of air raid shelters, were at school for only one half of the day. Other causes impeded the efficient working of the Central Dunfermline Clinic. As has already been explained, at Rosyth the King's Road and Park Road Schools were taken over by the Services and a large majority of the school population was evacuated. It was not until early in 1940 that those who remained were accommodated in the R. C. School in Rosyth. It was therefore impossible to carry out any complete systematic inspection. In 1940-41 the children in five of the Primary Schools in the Burgh were systematically inspected as well as those of the Primary School in Rosyth. The advanced division pupils of Rosyth were transferred to Inverkeithing School and this reduced the number of casuals treated at the Dental Clinic in Rosyth. In the following years, 1941-42, 1942-43, 1943-44, and 1944-45, all the children in the seven Primary Schools in the Burgh and the Primary School in Rosyth were systematically inspected and the figures are given in the following table. There is also submitted a table showing number of children with one or more decayed teeth.

#### Dunfermline and Rosyth Clinics—Dental Inspection.

Years of Age.	1940-41	1941-42	1942-43	1943-44	1944-45
5	289 (128)	448 (210)	416 (195)	337 (183)	372 (156)
6	341 (127)	520 (191)	737 (306)	677 (259)	546 (200)
7	315 (130)	441 (176)	584 (241)	609 (269)	616 (255)
8	343 (156)	451 (178)	477 (205)	650 (282)	590 (218)
9	372 (170)	469 (209)	462 (199)	529 (247)	599 (254)
10	373 (192)	504 (235)	490 (239)	455 (232)	510 (220)
11	292 (175)	416 (223)	444 (232)	466 (222)	448 (220)
12	47 (21)	101 (53)	82 (32)	73 (48)	100 (54)
13	9 (5)	35 (14)	32 (10)	48 (24)	55 (38)
	2381 (1104)	3385 (1489)	3724 (1659)	3844 (1766)	3836 (1615)

NOTE.—Figures in brackets are numbers of children with Sound Dentition.

#### Analysis of Number of Children with Number of Decayed Teeth.

No. of Decayed Teeth.	1940-41	1941-42	1942-43	1943-44	1944-45
0	1104	1489	1659	1766	1615
1	419	638	644	706	655
2	442	556	596	660	711
3	127	210	221	245	277
4	146	226	237	231	307
5	31	41	71	54	59
6	47	82	108	68	87
7	9	25	48	40	24
8	10	35	33	24	39
More than 8	46	83	107	50	62
	2381	3385	3724	3844	3836



From these tables it will be seen that of the numbers inspected in the various years, namely, 2381, 3385, 3724, 3844, and 3836, the following were found to have sound teeth, the percentage being indicated in brackets :—1104 (46·3), 1489 (43·9), 1659 (44·5), 1766 (45·9), and 1615 (42·1).

The number of children accepting dental treatment at the Clinics (given in brackets along with the figures of those requiring dental treatment) was as follows :—1940-41—1277 (1090) ; 1941-42—1896 (1716) ; 1942-43—2065 (1880) ; 1943-44—2078 (1832), and 1944-45—2221 (1986).

**Dental Treatment.**—The number of children who attended the Dental Clinics in the Burgh and in Rosyth were as follows (number of attendances given in brackets) :—1939-40—2592 (4181) ; 1940-41—2768 (2429) ; 1941-42—2833 (4316) ; 1942-43—2954 (4318) ; 1943-44—2200 (4378), and 1944-45—2635 (3849). The number of casuals is as follows :—1940-41—339 (751) ; 1941-42—296 (655) ; 1942-43—272 (641) ; 1943-44—263 (633), and 1944-45—282 (547). Of the casuals the number of pre-school children was 112 ; 103 ; 90 ; 91, and 66. A detailed analysis is given in the following table.

1939-40		1940-41		1941-42		1942-43		1943-44		1944-45	
T.T.	P.T.	T.T.	P.T.	T.T.	P.T.	T.T.	P.T.	T.T.	P.T.	T.T.	P.T.
<i>Extractions—</i>											
Without Local Anaesthetic	1567	745	8	861	3	1107	7	1195	3	897	4
With Local Anaesthetic		815	130	1081	127	1645	169	1509	113	1322	105
<i>Fillings—</i>											
Cement	2442	30	30	5	10	5	26	1	21	1	20
Amalgam		93	1574	336	1782	501	1494	482	1590	539	1172
Silicate		—	367	—	455	—	376	—	350	—	281
Root Fillings		—	43	—	45	—	65	—	58	—	76
Crowns	5	—	3	—	4	—	4	—	7	—	7
<i>Other Operations—</i>											
Silver Nitrate Treatment	2016	1280	117	1293	122	2397	81	2158	161	1794	81
Dressings inserted	575	694		494		396		298		375	
Scaling and Cleaning	1149	1470		1240		1104		1186		801	
Minor Regulation Visits	23	40		76		17		23		17	

NOTE—T.T.—Temporary Teeth ; P.T.—Permanent Teeth.



## INFECTIOUS DISEASES.

### Incidence.

No major incidence of infectious disease occurred during the war years. In 1938 there were 553 notifications in the eastern division of the County and 2072 in the western division, and it will be noted from Tables II. and III. of the Appendix that the total notifications in each of the seven war years in both eastern and western divisions were well below the 1938 figures.

More detailed scrutiny of the tables shows that, while the figures for each disease fluctuated from year to year, at no time was there any tendency towards epidemic incidence. It is particularly gratifying to note the steady fall in the number of cases of diphtheria notified from 1942 onwards. This fall is undoubtedly associated with the campaign for immunisation against the disease which was inaugurated in December, 1941, and vigorously prosecuted from then onwards. The total number of cases of scarlet fever remained remarkably low. Cerebro-spinal fever during 1940-41 was more prevalent than normal but fortunately in succeeding years a decrease occurred and at no time did it assume epidemic proportions. Cerebro-spinal fever is usually a disease of young children with a maximum incidence in pre-school years but the occurrence of outbreaks in older persons, especially in young adults, is favoured by the massing together of numbers of people in confined spaces like barracks and huts and in the sleeping quarters. The increased incidence of cerebro-spinal fever in 1940-41 caused some anxiety and emphasised the importance of control during war conditions.

**Para-Typhoid Fever.**—The incidence of both typhoid and para-typhoid fever was relatively low during the years 1939-45, but there was a sharp outbreak of para-typhoid fever in Cellardyke during 1945. The epidemic involved 15 cases, all women of ages varying between 19 and 63 years, except for the case of a boy aged 8 years. The illness in the first two cases commenced on 1/8/45 and there was a lull until 21/9/45 when 12 cases occurred in rapid succession until 9/10/45. The next and final case did not occur until 1/11/45. In a localised community it was inevitable that many of the cases would have food and milk suppliers in common but it was found that the most common factor was the consumption of ice-cream from one supplier. Ten of the 15 cases gave a history of consumption of this ice-cream within the incubation period limits. One case gave a doubtful similar history and four cases stated that they had not had ice-cream. The premises supplying the ice-cream—a small grocer's shop—were visited and found to be scrupulously clean. The ice-cream was usually made from dried "household milk" and only occasionally was liquid milk available for use in any quantity. The persons concerned in the running of the shop,



and who were in varying degrees concerned with the manufacture of the ice-cream, were two women and a man. All the ice-cream was sold directly from the shop, none being disposed of by sale in the street. Successive specimens from the man and one woman were negative for para-typhoid organisms. At the time of the first visit to the premises the other woman, Miss A., was found to have one on holiday on 29/9/45 and she did not return until 27/10/45. Specimens obtained on her return were positive. She had no history of para-typhoid fever but stated that during two or three days of the first week of her holiday she was confined to bed with what she took to be gastric influenza. No doctor was called in on her return from holiday as she had no symptoms of any kind. She was, however, admitted to hospital and it was not until three months later that three consecutive negative specimens were obtained and she was discharged. One of the cases, whose date of onset was 4/9/45, stayed at the ice-cream premises with Miss A. during the first three weeks of September but did not have anything to do with the preparation of the ice-cream.

The bacteriological investigations in connection with this para-typhoid outbreak were undertaken by Professor Tulloch, Dundee, who arranged for the cultures to be "Phage" typed by Dr Felix of the Emergency Public Health Laboratory Service and all belonged to Type 11. Specimens from another isolated case, a boy in a town about 12 miles from the locality of the epidemic, who had no connection with the epidemic outbreak, were also "Phage" typed and found to belong to Type 1.

While there was a certain amount of obscurity regarding the origin of the outbreak of para-typhoid fever it was significant that, except for one case who gave no history of having consumed ice-cream, the epidemic came to an abrupt end when the possibility of further infection from ice-cream was eliminated. In this one case it was not possible to trace any other source of infection, although her "Phage" type was the same as that of other cases in the epidemic. The nature of Miss A's. illness soon after her departure on holiday was not substantiated and although she may herself have suffered from a mild attack of para-typhoid fever at that time, followed by a carrier state, it is perhaps significant that a similar short-lived outbreak of 11 cases occurred in the same locality in 1942. Five of these cases gave a history of having had ice-cream from the premises suspected in the 1945 outbreak but bacteriological investigations at the ice-cream premises were not then undertaken.

**Smallpox.**—In the autumn of 1942 an outbreak of smallpox occurred in Wemyss Area. Earlier in the same year an outbreak of smallpox had occurred in Glasgow commencing in the last week of May and continuing until 3rd August. The origin of the Fife outbreak was not traced to any previous known case but the infection may have come from Glasgow, as during July and



August, there had been a considerable influx of Glasgow visitors to the area involved. Exhaustive enquiries, however, and the tracing of many individuals and families, gave negative results. An alternative possibility was infection through the port of Methil as it was in this Burgh that the first case undetected, occurred on 17th August, but after careful investigation there was no evidence whatsoever of the patient ever having had any association with seamen or having attended any of the place where seamen forgather. A third and very significant possibility was infection from allied troops who had recently arrived in the locality direct from the Eastern Mediterranean.

On the afternoon of 6th October a mother and her four year old daughter (Cases 4 and 5) who had been admitted to one of the County Infectious Diseases Hospitals as cases of severe chickenpox because of inadequate facilities for home nursing, were found to be suffering from smallpox. By late evening it was established that there were 7 cases in the village of Methilhill (Cases 2, 3, 6, 7, 8, 9, 10) and one case in Methil (Case 1).

In all, there were 29 cases of smallpox in the County, 1 in Methil, 26 in Methilhill, 1 in Cowdenbeath, and 1 at Fosterton Farm Cottage Thornton. The route of infection was as follows:—On the 17th August Case 1 sickened with severe headache and malaise and the following day was confined to bed. There was no backache. On 21st August three or four spots appeared on the face and severe pain on the lower abdomen. The patient had been vaccinated in infancy and was re-vaccinated on 24th August but did not take. On 28th August, she resumed her household duties. Her husband and two children, none of whom had been vaccinated in infancy, were successfully vaccinated at home on 24th August and none showed any signs of illness. When the outbreak was discovered on 6th October this patient was quite well and showed no evidence of having had smallpox except for two round pink scars on her face. On four occasions between 22nd August and 2nd September she was visited by Case 2 who had not been vaccinated in infancy. On 1st September Case 2 fell ill with severe headache and backache and two days later noticed a pimply rash all over her body. She was confined to bed for over two weeks and when seen on 6th October exhibited smooth scars and encrusted pustules of profuse general distribution. Her husband (Case 6) who had been vaccinated in infancy had taken to bed on 29th September with influenza and now showed one small encrusted pustule on the face, two on the right arm, one on the left arm and two on the left dorso-lumbar area. Her daughter (Case 10) who had not been vaccinated in infancy, but who was successfully vaccinated on 19th September, had five round vesicles on her left arm and one on the instep of her left foot. She had complained of not feeling well on 2nd October. Another daughter had been successfully vaccinated for the first time on the



September and had not shown any signs of illness. Her son (Case 8), however, had sickened on 30th. September with a sore throat and later vomiting. He had had no headache or backache. At the time of visitation he was in bed obviously ill with a vesicular rash of centrifugal distribution, confluent on the face and very sparse on the abdomen. He also had been vaccinated on 19th September but did not take.

During the course of her illness, Case 2 was frequently visited by her downstairs neighbours (Cases 3 and 7), husband and wife. Both had been successfully vaccinated in infancy. On 28th September both fell ill with headache, backache and general malaise and both, on 6th October, displayed a discrete vesicular rash of centrifugal distribution. The three children of this family were all well at the time of inspection but two of them (Cases 21 and 27) were incubating the disease. All three children had been vaccinated in infancy and were again successfully vaccinated on 10th October. The youngest, aged 9 years, did not take the disease.

Other visitors to Case 2 were Cases 4 and 5, neither of whom had ever been vaccinated. They called on 17th September. On 29th September both became ill, the mother with headache and severe lumbar backache followed by a "measly" rash two days later, and the daughter with malaise and drowsiness followed by a "measly" rash one day later. On 6th October both showed a vesicular rash, most confluent on the face but otherwise generally distributed throughout the entire skin surface. The mother, who was five months pregnant, aborted in the morning and died in the evening of 7th October. The foetus showed no sign of infection. The daughter died on the 11th October.

The last (Case 9) of the original group of cases had an interesting story of infection. This child resided at a relative distance from the other cases and was not acquainted with any of them or their immediate contacts. On 17th September, however, she happened to be passing the house occupied by Cases 4 and 5 an hour or so after they had returned from their visit to Case 2 when there emerged the daughter of Case 18. The two children played together for some time. Did Case 9 thereby receive a doubly indirect infection from Case 2? No other route of infection could be found after exhaustive inquiries. The contra-indication is that, at the time, neither of the children had ever been vaccinated and yet of the two, only Case 9 definitely sickened with smallpox. On the other hand, the other child was said to have been in bed with headache and shivering. Had she had a modified infection concealed by the well marked scaride eruption from which she suffered? Case 9 fell ill on 1st October with a sore throat and anorexia. There was no headache, backache or vomiting. On 6th October she showed a confluent vesicular smallpox rash of classical distribution.



Such was the picture that presented itself on the evening of 6th October. On the following day through the local general medical practitioners and medical officers of the Public Health Department a wide search was made in homes and schools throughout the area for any other persons presenting signs or symptoms of the slightest suspicious nature, all without success. Except for Case 1 therefore the outbreak was localised in the village of Methilhill and in three streets all within less than a quarter of a mile radius.

Preventive measures were immediately undertaken. The population of the area concerned is approximately 30,000 and steps were taken to put them on their guard. The Press were asked to publish a suitably worded notice which advised wholesale vaccination. The naval, military and air force authorities were advised of the situation and advised to prohibit movement of personnel in the area. This they did within a radius of five miles of the centre of infection and took appropriate steps with regard to such matters as vaccination, arrival of men on leave, concerning which the advice of the Medical Officer of Health was frequently sought during the first 48 hours or so. The Ministry of Labour agreed to refrain from calling up persons for service until further notice and to cancel attendances at medical boards. Organisers of public meetings were asked to cancel them. No attempt was made to advise the closure of cinemas, dance halls, &c., in view of the possibility of claims for compensation, and, in particular, of the need for maintaining means of distraction should the population become unduly alarmed. All hospitals and institutions which normally drew patients from the area were cautioned to be on the look-out for cases and either to prohibit visitors or to restrict them entirely to those who had recently been vaccinated.

Five public vaccination centres were established in the area at First Aid Posts, Schools, and at one Child Welfare Centre. A special centre was set up within the Docks to which the port authorities and the sanitary inspectors were particularly helpful in directing dock workers and seamen. Here 1610 persons were vaccinated, 678 of them seamen. Measures for control at the docks were further amplified by the Department of Health which, on 20th October, declared the County of Fife to be an infected district within the meaning of Section 23 of the Port Sanitary Regulations (Scotland) 1933.

In less than a week the great majority of the people were vaccinated and radiating outwards, clinics were established in several other centres of population throughout the County. To prevent undue interference with working hours, Medical Officers of the Public Health Department undertook vaccinations at collieries and factories. Medical practitioners were offered 2/6 per successful vaccinated person, excluding panel patients, who are entitled to free vaccination under the National Health Insurance Scheme. Sta



the Local Authority hospitals and the greater number of the County Council employees and of the Police were vaccinated.

During the last six months of the year, public opinion in the matter of vaccination was influenced by three outbreaks—in Glasgow, in Methilhill, and in Edinburgh. Concurrently with the last, but unrelated thereto, a single case of smallpox (Case 29) occurred in Cowdenbeath on 11th November. The total numbers of people vaccinated in Fife County during the three outbreaks mentioned above were as follows :—

Glasgow Outbreak	...	...	...	...	...	2,357
Methilhill Outbreak	...	...	...	...	...	52,772
Edinburgh Outbreak (Cowdenbeath)	...	...	...	...	...	20,197
Total Number of Vaccinations	...	...	...	...	...	<u>76,326</u>

In all, 47,547 doses of lymph were issued.

It is noteworthy that, except for Cases 28 and 29, no other cases occurred than those among known contacts, all of whom were under constant observation daily. Factors which conduced towards the situation may have been the relatively small self-contained community—2559 persons—primarily affected in the village of Methilhill and the degree of supervision which was maintained over all potential cases. The expectation was not realised that cases having no traceable connection with the known cases would occur, the only possible exception being the primary case of the Edinburgh outbreak who sickened on 23rd October but concerning whom every endeavour was made, without success, to establish a connection.

The infection of one patient (Case 11) in the second group was traceable direct to Case 2. That of two others (Cases 21 and 27) was derived indirectly from Case 2 through Cases 3 and 7. Nine patients (Cases 12, 13, 14, 15, 16, 22, 23, 24 and 26) were infected by Case 9, who, as has been explained, was possibly indirectly infected by Case 2 through the fatal Cases 4 and 5 who also infected five other persons (Cases 17, 18, 19, 20 and 25). Viewed as a whole, therefore, there were two broad groups in the Fife outbreak—those who were infected by the Cases 2, 3 and 7 combination and those who were infected by the Cases 2, 4 and 5 combination. The first gave rise to six cases and the second to fifteen cases. Both groups presented a similar unsatisfactory picture as regards their vaccinal state but it is of interest to observe that while none of the first group died, not less than six of the second group died. It is significant that these six deaths were among a group of persons infected by a virus from a primary source which previously had synchronously invaded two hosts with fatal results whereas the same virus proceeding in another direction of equal potentiality caused no deaths? Was the occurrence merely an accident?

A special note is necessary with regard to Cases 28 and 29. Case 28 resided in an isolated rural cottage situated about 250 yards



from the curtilage of the County Smallpox Hospital. On 28th October he entered the wood surrounding the hospital to collect props. He saw some of the convalescent patients who were exercising and probably spoke to some of them. Was he thereby infected? As an alternative possibility, it is known that a hospital employee who resides in a building adjoining the hospital, was in the habit of calling at this patient's house for his newspaper. Did he convey the infection from the hospital to the house? Such is possible although the employee was well practised in precautionary measures.

Case 29 which occurred in Cowdenbeath on 11th November in a family of nine persons, all of whom were vaccinated in infancy except the patient and a brother, was nursed at home for five days before medical attention was sought, by which time the eruption was vesicular. The source of infection was not traced. There has been no association whatsoever with previous Fife or Edinburgh cases. None of the contacts developed the disease and the outbreak remained confined to the primary case. In the course of the vaccination campaign which followed, it was estimated that between 40% and 50% of the population had been previously vaccinated as compared with 20-30% of the population of Methilhill and neighbourhood. It is to be presumed that the relatively greater degree of communal protection established had an influence in aborting the outbreak.

In view of the fact that the first ten cases were at liberty over periods of time varying from seven weeks to six days it was not possible in all cases to define accurately the length of incubation period of the disease but in Cases 4, 5, 18, 19 and 24 it was established that the extent of exposure to infection had been for an hour or less. In these cases, the interval between exposure and sickening ranged from nine to twelve days.

The period of invasion elapsing between the date of sickening and the appearance of the eruption varied from one to four days. In seeking the source of infection it is sometimes the practice, as a first step, to count back from the day of appearance of the rash. The method is liable to considerable margin of error and the greatest accuracy is to be derived from calculating from the day of sickening.

The detection and supervision of contacts was probably the most difficult feature of the campaign. It was a matter of mere enquiry to name the family contacts and in many instances contacts among intimate friends, but to ensure that all contacts came under observation, necessitated local appeals and the help of the Press and radio and even then there were those who did not declare themselves until the onset of prodromal symptoms (Cases 19 and 24). Within a few days, however, everyone who was liable to sicken of the disease was under observation—to the number (excluding classes at school) of 209 in the Methilhill area and of 16 in Cowdenbeath—and as has already been stated, it was a noteworthy feature of the outbreak.



hat, with the exception of Cases 28 and 29, no case occurred which was unexpected or not traceable to one of the cases of the primary outbreak. In regard to contacts, who in the interval had left the County, notification was sent to the Medical Officers concerned.

The quarantine of contacts presented a problem as there is no reception house in the County of Fife and none of the Infectious Diseases Hospitals could be spared for this purpose. The situation was met by vaccinating the contacts and allowing them to remain at home. Workers were requested to leave their employment. No great difficulty was encountered in the matter for the reasons that public opinion did more than encourage the idea and the Local Authority made arrangements for the payment of a special allowance in lieu of loss of wages subject to the condition that the injunctions of the Medical Officer of Health were obeyed. It cannot be claimed that this method of domiciliary quarantine resulted immediately in complete isolation of contacts any more than does quarantine in reception houses which permits of contacts continuing to work. A few recalcitrants wandered afield but not for long, since threats of legal proceedings combined with the outspoken comments of neighbours drove them indoors as other contacts fell ill and eventually, before the secondary outbreak had reached its peak, all were complying with instructions to a reasonably satisfactory extent.

Contacts in households in which a case of smallpox had occurred were kept in isolation for 18 days; other contacts for 16 days. During this time they were visited daily by a Medical Officer who took their temperatures and made general enquiry as to their well-being. This procedure, while it did something to allay public alarm, was of the greatest value in directing attention to cases some time before the onset of diagnostic symptoms. All secondary cases were admitted to either the Smallpox Hospital or the Infectious Diseases Hospital which was used as a clearing house. One, on admission, had no skin lesions, two toxaemic rashes, and others showed only occasional scattered macules, in some patients evident on the trunk, the face being unblemished. It was adopted as a rule that any contact with a temperature of 99.4°F was to be regarded as infected. Allowance, however, had to be made for constitutional reactions to vaccination in the diagnosis of which the absence of the headache-backache-prostration syndrome so characteristic of the onset of smallpox was of much help. There were, however, three contacts who had all these symptoms even to the extent of manifesting a greyish, fatigued expression of the face. They developed no rash and were not removed to the Smallpox Hospital. They recovered fully in about 6 days. These cases had been successfully vaccinated in infancy and a diagnosis of variolæ sine eruptione was not discounted. They gave rise to no other cases.

**Diphtheria Immunisation.**—A national scheme for diphtheria immunisation was commenced in January, 1941. In that year, out



of a child population of approximately 50,000 in Fife County, no fewer than 36,345 (9,856 pre-school and 26,489 school) had received the necessary two inoculations and a further 3,028 received a single injection, *i.e.*, 72% of the children had been given the full inoculations. The response of parents to the campaign was very good and the results in the first year were gratifying. Since then the scheme has been carried on year after year as indicated in the following Table which shows the numbers given full protective inoculations in each year. There has been a falling off in the percentage of pre-school infants immunised, an unfortunate circumstance in view of the fact that this is the age group in which diphtheria takes its greatest toll.

Year.	Diphtheria Immunisation.	
	Pre-School.	School.
1941	9,856	26,489
1942	2,488	1,024
1943	1,684	210
1944	2,533	303
1945	2,752	364
Totals	19,313	28,390

During the five years from 1941 to 1945 no fewer than 46,703 children had received the two inoculations, *viz.*, 19,313 pre-school and 28,390 school, and it was estimated that by the end of 1945 80% of school children and 46% of pre-school children had been inoculated. Diphtheria, which was formerly regarded as a severe and treacherous disease with a very high death-rate, has, by means of immunisation, largely lost its terrors. It is a fact, however, that immunity is gradually lost over a period of years and children protected early in life are again liable to become infected unless further protection is afforded by giving them a maintenance dose when they enter school at 5 years of age. It is not infrequently stated that children who have been immunised develop diphtheria. This is so but the disease is then invariably less severe and death seldom results. It should also be remembered that immunity after full inoculation takes at least 12 weeks to be fully established so that it is possible for a child, if infected in the interval, to develop the disease in a degree inversely proportionate to the amount of immunity engendered.

In Fife County during the five years 1941-45 there have been 38 deaths from diphtheria and all but 3 of these were in children who had received no protection by inoculation. This is shown in the following table:—



**Diphtheria Deaths in Fife County.**

Year.	Deaths.	Immunised.	Non-Immunised.
1940	19	—	19
1941	13	—	13
1942	4	1	3
1943	9	2	7
1944	8	—	8
1945	8	—	8

If further proof of the value of immunisation is needed the following table shows the diphtheria deaths for Scotland as a whole for the years 1941-44. During these four years, out of a grand total of 1,221 deaths no fewer than 1,193 were in the non-immunised group and only 28 deaths occurred in those who had been immunised.

**Diphtheria Deaths—1941-44—in Scotland.**

Year	NON-IMMUNISED.				IMMUNISED.				Grand Total
	Pre-School	School	Over 15 Years	Total	Pre-School	School	Over 15 Years	Total	
1941	277	186	52	515	—	2	—	2	517
1942	153	89	37	279	4	7	—	11	290
1943	115	70	35	220	3	7	1	11	231
1944	108	51	20	179	2	2	—	4	183
Totals	653	396	144	1193	9	18	1	28	1221

It will be also noted from this table that by far the greater number of deaths occurred in children under school age. This was because of the large percentage of pre-school children who remained unprotected—an unsatisfactory feature which will continue until a much higher percentage of pre-school children is satisfactorily protected by immunisation.

**Whooping-Cough Immunisation.**—Immunisation of children against whooping-cough in Fife County was commenced in December, 1942. It has been the aim of the medical staff to have each infant's series of injections (four in all) completed between the ages of 6 and 9 months or, at latest, before one year. Those asking for immunisation after 1 year were not, however, refused.

Some difficulty has been experienced in getting parents to bring their children for the four injections at weekly intervals. Where this difficulty was encountered the procedure was altered to a double dose followed by another of the same strength at an interval of not less than 4 weeks.



Since the introduction of the scheme to the end of 1945 the following number of children received injections :—

Year	1st Dose	2nd Dose	3rd Dose	4th Dose
1942	93	49	—	—
1943	641	584	256	238
1944	622	567	169	157
1945	691	562	141	112
Totals	2047	1762	566	507

While it has not been established that inoculation against whooping-cough is as effective as that against diphtheria, results in Fife have been sufficiently encouraging to warrant continuation of the experiment. No deaths have occurred among inoculated children, so far as is known.

### **Tuberculosis.**

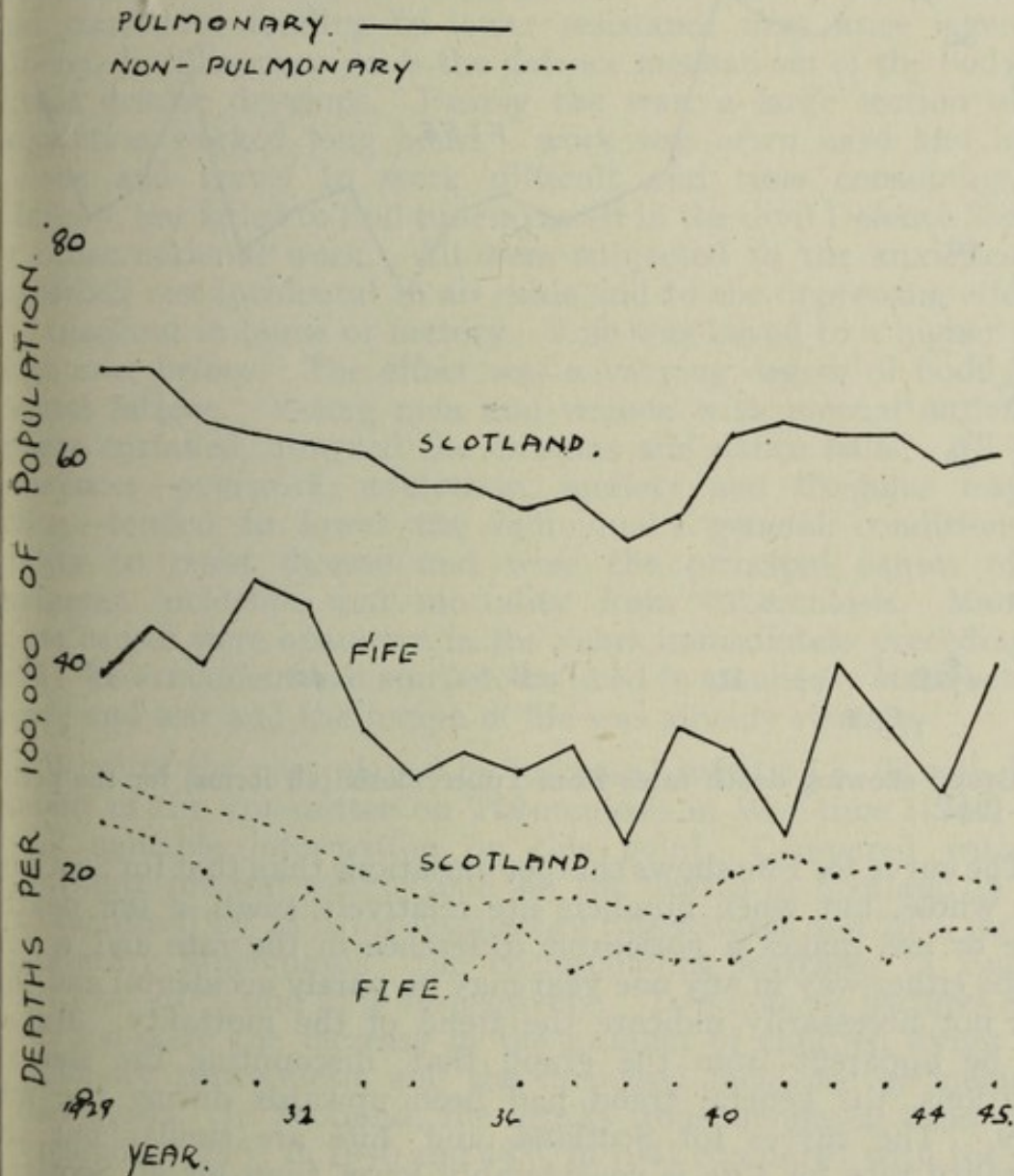
During the war a number of changes took place in the Tuberculosis Department. Dr A. Lundie, having reached retiring age, left in 1943. He had been Tuberculosis Officer for 12 years and had earned the respect and liking of both patients and medical colleagues. When Dr W. T. Munro resigned the Superintendentship of Glenlomond Sanatorium in November, 1944, on account of ill health, the County Council decided to unify the Tuberculosis Service and the Tuberculosis Officer became also Medical Superintendent of Glenlomond. This arrangement has the advantage that there is no sharp cleavage between the work in the sanatorium and that in the field and also gives a continuity that was previously lacking. Early in 1945, Dr Ian McCormick joined the staff as Assistant Tuberculosis Officer and he now carries out the bulk of the outside work. Dr James Fraser, Resident Medical Officer at Glenlomond, also assists in outdoor work. The new arrangement is working well.

### **TUBERCULOSIS AND THE WAR.**

It has been said, with a good deal of truth, that the tuberculosis mortality is an index of the national health, and changes which occur in the national health are reflected in the tuberculosis morbidity and mortality. For some 70 years prior to the first world war there had been a steady decline in the death rate from tuberculosis—a decline which was attributed to improvement in the economic and environmental conditions of the people. In 1914-18 not only was there a check in the downward trend but a slight rise occurred in the mortality and this was especially evident in the increased number of deaths among young adults. That a similar rise should have occurred in the second world war was not unexpected. Between 1928 and 1938 the deaths in Scotland from all forms of tuberculosis fell from 4722 to 3432, while in Fife the corresponding

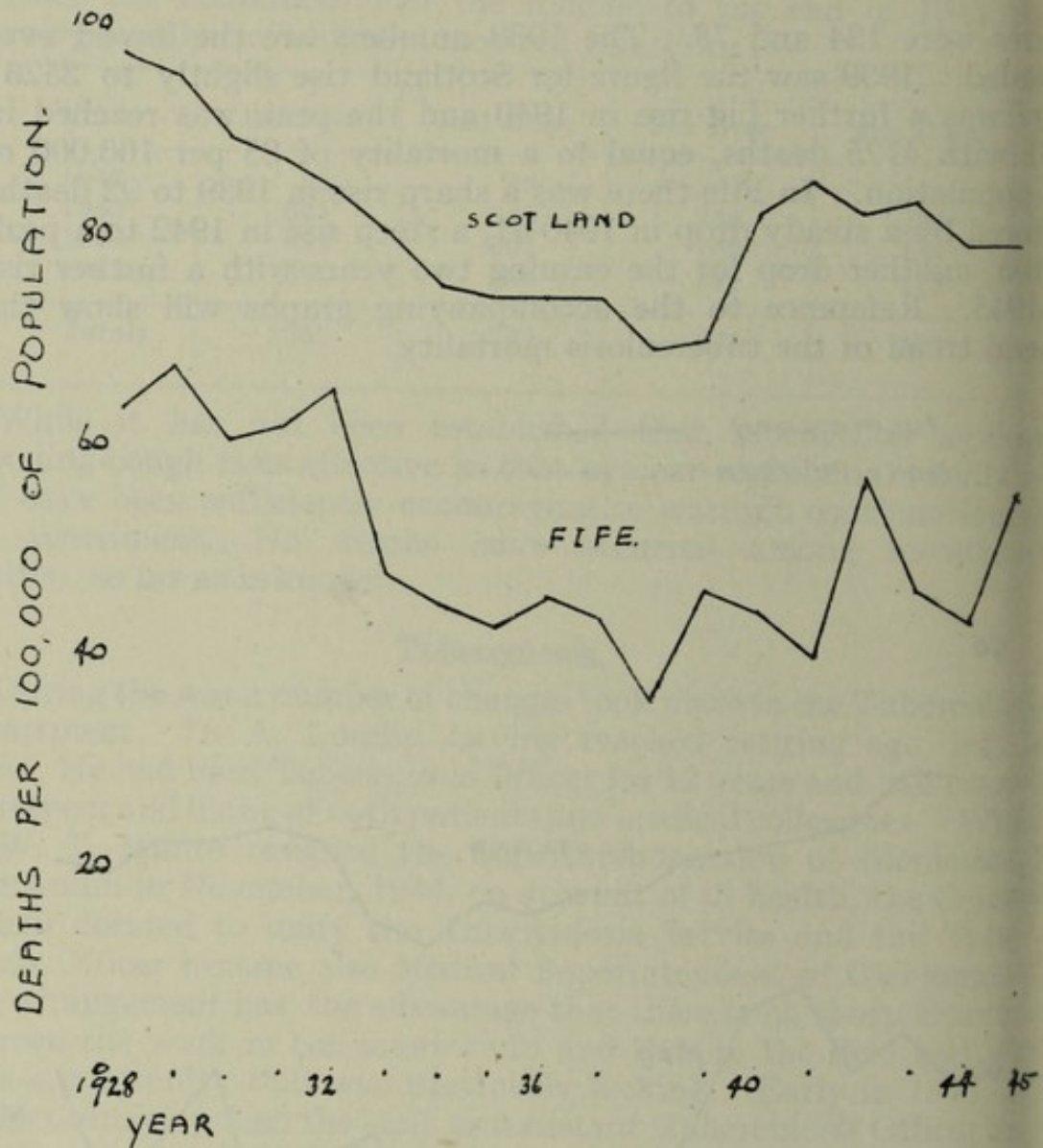


figures were 134 and 73. The 1938 numbers are the lowest ever recorded. 1939 saw the figure for Scotland rise slightly to 3526; there was a further big rise in 1940 and the peak was reached in 1941 with 4175 deaths, equal to a mortality of 85 per 100,000 of the population. In Fife there was a sharp rise in 1939 to 92 deaths followed by a steady drop in 1940-41, a steep rise in 1942 to a peak of 105, another drop for the ensuing two years with a further rise in 1945. Reference to the accompanying graphs will show the general trend of the tuberculosis mortality.



Graph showing death rates for (a) Pulmonary Tuberculosis and (b) Non-Pulmonary Tuberculosis for the period 1928-45.





Graph showing death rates from Tuberculosis (all forms) for the period 1928-1945.

The curve for Fife shows sharper variations than that for Scotland as a whole, but when numbers are relatively small, a few deaths more or less makes a noticeable difference in the rate and a few deaths either way in any one year may be purely accidental and therefore does not necessarily indicate the trend of the mortality. But it will be apparent from the graph that, discounting the sharp variations, the general trend had been upwards during the war years. The curves for Scotland and Fife are similar but the mortality rate for Fife is considerably lower than for all Scotland and the war-time rise reached its peak a year later.

While the rise in the death rate for 1939 and 1940 may in part have been due to accelerated mortality among persons suffering from advanced lung disease as a result of adverse conditions, the increased mortality in the past six years is mainly the result of an actual increase in the incidence of the disease. Notifications



tuberculosis in Scotland have risen steadily since 1940 and the increase in deaths from meningeal tuberculosis and respiratory tuberculosis in children points clearly to increased infection.

In the occurrence of tuberculosis, there are two main factors— infection and the resistance of the individual. As a nation our ability to overcome infection with the tubercle bacillus is high: by the time adult life is reached over 80 per cent. of people are infected, yet only a small proportion develop tuberculous disease. But resistance varies between individuals and between families and conditions tending to lower resistance may arise when the tubercle bacillus overcomes the defence mechanism of the body and actual disease develops. During the war, a large section of the population worked long hours: work was often hard and monotonous and travel to work difficult and time consuming. In addition, few failed to find time to assist in the Civil Defence Services or other national work. All were subjected to the anxieties and disturbed rest incidental to air raids and to the depressing effect of the blackout in home or factory. Life was keyed to a higher pitch than ever before. The effect was a varying degree of bodily and mental fatigue. Young men and women with normal outlets for leisure curtailed, crowded the cinemas and dance halls. All these influences—overwork, overstrain, anxiety and irregular ways of living—tended to lower the individual's general condition and ability to resist disease and were the principal causes of the increased incidence and mortality from tuberculosis. Many of these causes were operative in the years immediately preceding the war: re-armament had started, we lived in an uneasy state between peace and war and the tempo of life was already rising.

What of the part played by increased infection? The M. R. C. Report of the Committee on Tuberculosis in War-time (1942) gave some valuable information on this point. Compared with the immediate pre-war years (1938-39) the deaths in Scotland in 1941 had increased by 18% for respiratory tuberculosis and 28% for non-respiratory tuberculosis; the corresponding increases in England were less—10% and 21% respectively. Two notable features of the situation were the increase in the number of children dying from pulmonary tuberculosis and the increased incidence of meningeal tuberculosis. In Scotland, the deaths from meningeal tuberculosis increased by 24% in 1940 and 48% in 1941 compared with the years 1938-39. In 1941, for the whole country, there were, in children under 10 years of age, 150 more deaths from respiratory tuberculosis, 71 more from meningitis, and 146 more from tuberculosis of other sites, giving an excess of 772 child deaths from tuberculosis over 1939. In children under 5 years the increase was chiefly due to meningitis. It was concluded from the evidence that the increase in respiratory and meningeal tuberculosis in childhood was mainly attributable to human sources of infection.



The deaths in Fife in children under 5 years of age since 1932 were as follows :—

Year	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Resp. ...	1	2	1	—	2	—	1	1	—	1	3	1	2	1	2
Non-resp. ...	11	14	6	13	8	8	9	6	6	6	14	10	6	9	8
Total ...	12	16	7	13	10	8	10	7	6	7	17	11	8	10	10

The numbers varied rather sharply from year to year but comparing the seven years' period 1932-38 with that following there was an increase in deaths in the pulmonary group and the non-pulmonary group showed little improvement.

Increased risk of infection is certainly responsible for part of the rise in tuberculosis morbidity and would appear to be the main cause for the increase extending into early childhood. During the war, certain environmental changes contributed toward this. The blackout, evacuation, overcrowding of homes, shelter life, and the emptying of tuberculosis institutions all played a part but it is not easy to assess the relative importance of each. The evacuation of sanatoria in September, 1939, was certainly a step in the wrong direction and served to increase the number of infectious persons at large in the general population. There is always a fairly large reservoir of infection in the general population but the effect of evacuating the sanatoria was probably significant in those areas in which it occurred. It did not operate in Fife where there was no evacuation of infectious diseases hospitals. The blackout and the consequent diminution of ventilation made greater the chance of cross infection in households with a tuberculous member, and the possibilities of infection in large and crowded shelters must have been considerable. An attempt in one London borough to get unknown tuberculous persons to use a particular shelter was a failure; they used the one most convenient to their homes. In the general evacuation scheme there was always the possibility of billeting children in a tuberculous household or vice versa and many children who had previously consumed pasteurised milk moved to areas where only raw milk was available.

The improvement in social and economic conditions before the war was tending to postpone infection to a later period of life and an increasing number of people were reaching adult life without being infected. It is one of the worst features of the war-time changes that this trend was reversed. It was shown in the increased deaths in children but primary infection in childhood is by no means always followed by serious disease. In the majority, it is a relative benign occurrence. These children may, however, break down



later years and an increase in respiratory tuberculosis is a possibility in the future.

The M. R. C. Committee Report on Tuberculosis in War-time made a number of recommendations to combat the rising mortality from tuberculosis. The more important measures suggested were (1) financial assistance to the tuberculous patient: (2) the use of mass radiography: (3) the examination of contacts: and (4) the provision of a safe milk supply. All who have been connected with the care or treatment of tuberculous persons are aware of the financial difficulties which only too often arise in a family when the wage earner contracts this disease. The treatment is long, the outlook is doubtful and in the end, even with a favourable outcome, the ability to earn impaired. Economic fear led to delay in seeking medical advice, to postponement in accepting institutional treatment and often to premature interruption of treatment. Families were forced to accept relief from Public Assistance and many resented this, but even with relief from public funds the standard of living was scarcely sufficient to maintain resistance to disease. The Government agreed with the Committee's Report on the need for financial help and in 1943 introduced the Tuberculosis Allowance Scheme. The scheme has some defects, but on the whole it was a great forward step: the special needs of the tuberculous person were recognised and it freed a large number of families from immediate financial worry. The scheme will be discussed more fully later.

Mass radiography is simply a method of taking, very rapidly, miniature X-Ray photographs of the chest. The photographs are enlarged by projection on to a screen and if any abnormality is detected a full sized film is taken of the particular case. By this method up to 100 persons an hour can be X-rayed and at a relatively low cost. Mass radiography was used extensively during the war for service personnel both in America and Britain and is now in use in many of the larger cities. Its value in detecting the early and unsuspected lesion has been proved beyond question. One survey of 166,000 ratings in the Royal Navy (Brooks, 1942) revealed 0.82% with demonstrable tuberculous lesions of the lung: a later survey by Brooks (1944) of the results in the Navy showed that of 497,000 men examined, 1.27% had evidence of tuberculosis but in rather more than half the lesion was healed. The U. S. surveys give similar figures. In Middlesex 1.3% of 34,277 persons X-rayed had significant lesions and from this it was estimated that in Middlesex, with a population of two million, there were 3000 undetected cases of pulmonary tuberculosis, of which 1500 required treatment.

The detection and treatment of cases at an early stage will eventually pay a dividend, not only by saving lives but also by limiting the amount of infection in the community, and the wide use of mass miniature radiography would appear to be justified. The



method has, however, certain limitations. A single negative examination does not mean that a person will always be free from tuberculosis: periodic re-examination is necessary. To do this for the population of Britain between the ages of 15 and 45 years would require hundreds of X-ray sets each with its trained team: neither the sets nor the staff are available. Difficulty may also be encountered in persuading the general public to attend for periodic examination. A team of technicians, with a radiologist to interpret the films, is not enough. Having found a case with what appears to be a tuberculous lesion, a physician experienced in tuberculosis is necessary to assess whether the lesion is one that requires treatment or not. Hospital beds will be needed both for observation and treatment, and at the moment beds cannot be found for cases discovered by ordinary methods. A pre-requisite of the complete success of mass radiography is the provision of hospital beds and sufficient nursing and domestic staff to run the hospitals. At present, with the available limited number of sets, mass radiography is most usefully employed in surveying groups of persons in industry.

The proper supervision of contacts offers a hopeful immediate field for detecting the early case. Tuberculosis is very much a family disease and only too often do cases come to light with advanced disease and a history of other cases in the family.

Milk is unlikely to be responsible for any appreciable part in the increased deaths from tuberculosis but it should not be forgotten that raw milk infected with the tubercle bacillus takes a heavy toll each year of the youth of the country. These are preventable cases: all milk should come from tubercle free herds or should be pasteurised.

In recent years nothing concerning tuberculosis has been more prominently before the public than the great shortage of nurses and domestics to staff sanatoria. This shortage, which has existed for four or five years has led to many institutions closing down a number of beds. Glenlomond Sanatorium has not had its full complement of patients for several years. This inability to admit cases, often infectious and urgently needing treatment and isolation, has unfortunate repercussions beyond immediate damage to the patient. Most of these patients come from working class homes where room is limited: many wait for months before getting into the sanatorium, some do not get in at all. There is also a strong tendency to send out of hospital the more chronic advanced case, even if infectious, to make way for some more acute but possibly treatable patient. The result is that there is probably a bigger reservoir of infection in the country at the moment than there has been for many years. This was apparent generally in the rising mortality in children from respiratory and meningeal tuberculosis. It is showing in Fife in a rising notification rate: although notifications fell slightly in Scotland in 1944, there was a rise in Fife



and a further rise in 1945. This is not of good import for the tuberculosis mortality in years to come. Dr Lissant Cox, then Chief Tuberculosis Officer for Lancashire, many years ago gave as a slogan in his campaign to prevent tuberculosis—"Find, isolate and treat the sputum positive case." It was and is sound advice. Unfortunately it cannot be followed. No single factor militates so strongly against an improvement in the tuberculosis position as the continued reluctance of women to work in tuberculosis institutions.

In this brief review of the probable causes of the increased incidence of tuberculosis during the war, food has not so far been mentioned. The importance of nutrition in sustaining resistance to disease cannot be over emphasised and a deficiency in proteins, butter fat, and certain vitamins certainly leads to lower resistance. It was so in the first world war when there was an enormous increase in tuberculosis in Central Europe. But the British nation was adequately fed during the recent war years: the diet was perhaps monotonous but the rationing and points system insured equal distribution. If some have had less to eat than formerly, the poorer sections of the population, among whom most cases of tuberculosis occur, have been better off. With abundance of work, higher pay, and fixed prices for food, the poorer households have been in a better economic position and more able to feed their families well. Priority milk, school meals, milk at school and the issue of orange juice and cod liver oil to pre-school children, have all helped to maintain the nutrition of the younger generation. There are still sections of the community with little knowledge of what constitutes a correct diet but much information on this subject has been broadcast by the Ministry of Food and the population as a whole is now probably better informed on what to eat and how to cook than ever before. It is unlikely that the nation's war-time diet played any appreciable part in the increase in tuberculosis.



## NOTIFICATIONS.

	FIFE						SCOTLAND						
	Pulmonary		Non-Pulmonary		Total	Pul.	Non-Pul.	Total					
	M.	F.	M.	F.	M. & F.	M. & F.							
1938	59	40	46	38	77	53	76	56	247	174	4793	2772	7565
1939	43	27	55	27	49	39	76	56	223	149	4657	2440	7097
1940	65	40	50	29	56	49	53	43	224	161	5212	2510	7722
1941	57	39	53	28	39	31	45	37	194	135	5739	2555	8294
1942	61	34	62	36	65	34	72	55	260	159	6224	2824	9048
1943	93	74	76	56	52	47	73	65	294	242	7215	2873	10088
1944	114	100	104	95	54	31	71	69	343	295	7073	2568	9641
1945	125	113	106	92	77	67	62	60	370	332	7316	2342	9658

Figures in *italics* represent confirmed cases of Tuberculosis.

The figures for Scotland are actual notifications and not confirmed cases of tuberculosis and they are included to show the general trend of notifications for Scotland as a whole. Both in Fife and in Scotland there was a drop in the number of notifications in 1939 but at that point the similarity ceases. Notifications rose steadily in Scotland to a peak of 10,088 in 1943, dropped slightly in 1944 and remained level in 1945. From 1939 to 1942 notifications in Fife rose and fell slightly but on no occasion reached the 1938 level and were actually lowest in 1941 when the death rate for Scotland was at its war-time peak. No satisfactory explanation for this can be offered. From 1943 notifications have risen steadily for both pulmonary and non-pulmonary tuberculosis.

It would be a mistake to take the Fife figures set forth in this Table too literally and to draw conclusions from them. Part of the increase shown is undoubtedly due to a real increase in the incidence of tuberculosis but other factors share responsibility. It is hard to believe that the incidence of lung tuberculosis has trebled since 1938. As already mentioned, various changes have taken place in the staff of the Tuberculosis Department since 1942, and the personal element enters into the interpretation of each case: there are borderline cases which one man may accept and another refuse. In the past few years attention has been directed to gaining the co-operation of general practitioners and an increasing number of patients has been referred to the Department for investigation, and as a result more cases of tuberculosis are coming to notice. The



most important change has been in the use of X-Ray examination to assist in diagnosis. Prior to 1942, the Tuberculosis Officer had no facilities for radiographic examination. Now every case referred to the Tuberculosis Officer and an increasing number of contacts have an X-ray examination and cases that would otherwise be missed are detected. Similarly, mass radiography in the services helps to swell the numbers. Tuberculosis has certainly increased in the County but not quite so seriously as the figures for pulmonary disease suggest: probably the notifications for the earlier war years did not reflect the true position.

## DEATHS.

## Deaths and Rates per 100,000 of Population.

	Pul.		Rate Pul.	Non- Pul.		Rate Non- Pul.	Pul. and Non-Pul.		Total	Rate all forms	Rate (Scotland) all forms
	M.	F.		M.	F.		M.	F.			
1939	36	32	34	12	12	12	48	44	92	46	70
1940	33	29	32	17	7	12	50	36	86	44	82
1941	27	19	24	15	17	16	42	36	78	40	85
1942	36	40	40	14	15	16	50	55	105	56	82
1943	31	33	34	9	12	12	40	45	85	46	83
1944	23	30	28	14	13	15	37	43	80	43	79
1945	38	37	40	17	12	15	55	49	104	55	79



Deaths : Pulmonary and Non-Pulmonary : Age and Sex Distribution.

	-1		1-		5-		10-		15-		25-		35-		45-		55-		65-		75-		85-		Total		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
P. 1939	—	—	—	—	—	—	—	—	5	13	9	9	9	5	6	1	5	1	2	1	—	2	—	—	—	36	32	68
	1	2	2	1	—	1	—	—	3	4	1	1	3	—	1	2	1	1	—	—	—	—	—	—	12	12	24	
P. 1940	—	1	—	—	—	—	—	—	8	4	7	9	5	7	9	3	4	3	—	2	—	—	—	—	33	29	62	
	—	1	4	1	2	—	1	—	4	2	2	—	1	2	—	1	1	—	2	—	—	—	—	—	17	7	24	
P. 1941	—	—	1	2	—	—	1	—	3	7	10	6	3	3	3	—	5	—	1	—	—	1	—	—	27	19	46	
	4	—	2	8	—	2	—	1	5	2	1	1	1	1	—	—	1	2	1	—	—	—	—	15	17	32		
P. 1942	1	—	—	—	1	—	—	3	8	16	7	7	5	3	8	4	5	3	—	2	1	2	—	—	36	40	76	
	—	2	6	2	1	1	—	—	2	3	1	2	1	2	3	1	—	2	—	—	—	—	—	—	14	15	29	
P. 1943	1	1	—	—	—	—	—	—	6	12	5	9	5	4	5	2	4	3	3	2	2	—	—	—	31	33	64	
	—	1	1	4	2	1	—	—	—	2	3	2	—	1	3	—	—	1	—	—	—	—	—	—	9	12	21	
P. 1944	—	—	1	—	—	—	1	—	4	14	6	10	4	2	3	1	5	2	—	—	—	—	—	—	23	30	53	
	5	2	1	1	3	—	—	2	—	4	1	—	1	2	1	1	1	1	1	—	—	—	—	—	14	13	27	
P 1945	—	1	1	—	—	—	—	1	7	14	9	8	7	5	7	4	4	4	2	—	1	—	—	—	38	37	75	
	—	—	4	5	4	—	1	1	4	2	1	1	—	1	3	2	—	—	—	—	—	—	—	17	12	29		



Deaths from tuberculosis have already been discussed when dealing with the effects of the war. The main features are that (a) the death rate in Fife did not rise till 1942 whereas it reached its maximum for Scotland in 1941: (b) the higher rate was more or less maintained for Scotland for the period 1940-43, whereas in Fife it fluctuated and rose again in 1945: (c) there was an increase in the number of deaths from respiratory tuberculosis in children: (d) the death rate for Fife remained well below the rate for the whole of Scotland. With the notification rate rising from 1943 onward an increase in the deaths in Fife in 1945 was to be expected. It would be unwise to expect any drop in the death rate in the immediate future.

**Cases on the Tuberculosis Notification Register.**

	Pul.		Non-Pul.		Total		Total M. & F.
	M.	F.	M.	F.	M.	F.	
1939	242	191	290	286	532	477	1009
1940	281	204	334	316	615	520	1135
1941	228	174	203	193	431	367	798
1942	213	160	185	215	398	375	773
1943	295	195	187	254	482	449	931
1944	415	290	208	285	623	575	1198
1945	472	351	230	293	702	644	1346

The Tuberculosis Register should contain the names of all persons living within the Local Authority's area, who are suffering from tuberculosis which may be either active, quiescent or arrested, but have not reached the stage of being classed as healed. Not every case is under the supervision of the Tuberculosis Officer and one tends to lose sight of these: some leave the area without notifying the Department and in course of time the register accumulates redundant names. Periodic revision is advisable and this was done in 1941 with a fairly drastic reduction in numbers. Since then the register has been kept reasonably up to date but there has been too much work of a more important nature to permit of complete revision. The apparent anomaly that the number increased in 1944 by more than the notifications less the deaths is due to the restoration to the register of cases that had previously been erroneously removed when classed as quiescent. These cases were restored in their original year of notification. The rising notification rate in the past years has increased the register by 75% since 1942. The increase is mainly in the pulmonary group which is greater by 120% whereas the non-pulmonary group has risen only 30%.



## Cases examined each year.

	New.	Old.	Contacts.	Total.
1939	234	1168	216	1618
1940	301	1539	203	2043
1941	245	910	164	1319
1942	300	919	152	1371
1943	399	1498	411	2308
1944	504	1137	268	1909
1945	557	1126	368	2051

Illness of the Tuberculosis Officer and the smallpox epidemic were responsible for the relatively small number of visits in 1941 and 1942. A feature of the Table is the steadily increasing number of new cases seen each year: in one sense this is gratifying in that it means more patients are being referred to the Tuberculosis Officer by general practitioners, but it also reflects the increased incidence of the disease. The investigation of new cases takes much longer than the re-examination of old patients and this consequently reduces the possible amount of supervision of old cases. With over 1300 patients on the register it will be obvious that 1100 to 1200 visits are not sufficient for adequate supervision. The number of contacts examined has risen slightly but it still far from adequate. Reference to these points will be made again.

## Patients Admitted to Sanatorium.

	PULMONARY.				NON-PULMONARY.				Total.
	Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	
1939	25	25	2	6	7	5	18	11	99
1940	38	24	5	2	10	9	20	8	116
1941	40	22	2	2	7	9	14	15	111
1942	29	23	4	0	9	7	16	10	98
1943	27	25	0	4	3	4	8	8	79
1944	28	33	8	9	7	5	9	13	112
1945	51	50	4	2	4	4	9	4	128



The above figures refer only to those patients admitted to the sanatorium by the Local Authority. From 1940 onwards, patients coming ill in the services were admitted to E. M. S. Hospitals pending transfer to sanatorium but sanatorium beds have been so scarce that transfer has usually been long delayed and at any time during the past six years there has been a number of Fife patients, in addition to those shown, in receipt of residential treatment. Not all the above went to Glenlomond, which had many staffing difficulties: a few beds were obtained at Ashludie, Stracathro, Southfield, Law Junction and Bridge of Earn. The "Pleurisy Unit" at the latter hospital also gave considerable assistance by taking a number of non-infectious cases with pleural effusion.

The total assistance given by outside hospitals was, however, relatively small: they, too, were short of nursing and domestic staff. Nearly every authority had long lists of patients awaiting treatment and for the past five years the demand for accommodation has exceeded the supply. Since 1943, the number of cases on the waiting list in Fife has been seldom below 50 and has at times exceeded 70. Not infrequently, while waiting, cases pass beyond the stage when treatment is likely to have a favourable result and during that time they are a danger to others in the household. At the time of writing there is no sign of improvement.

#### **Glenlomond Sanatorium.**

Glenlomond Sanatorium has been the subject of a separate report each year, but as all Fife cases are normally treated there and as it is now closely linked with the County Public Health Department certain changes there should be recorded. During the war years, no repairs were done and renewal of equipment was not possible. In December, 1944, the Sanatorium Committee decided to carry out a fairly extensive programme of renovation and improvement. This included the overhaul of the heating system, the complete renewal of electric cables and wiring and the installation of wireless to each bed, the redecoration of the hospital except for the administrative and children's blocks, the modernising of the sanitary annexes in two blocks, and the improvement and re-equipment of the main kitchen and all ward kitchens. Much of this work has now been completed. A modern X-Ray plant with processing unit and items of orthopaedic and theatre equipment have been supplied and there have been many minor improvements which cannot be detailed.

The Sanatorium was fortunate to secure, early in 1945, the services of Mr Bruce Dick for thoracic surgery and of Mr Stirling for orthopaedic surgery. Both have visited the sanatorium frequently and much work has been done. Although further alterations and additions are necessary at Glenlomond and will be carried out in course of time, the institution is now equipped and staffed to carry out a complete programme of modern treatment. This is being done now except that patients requiring major thoracic



surgery are transferred to the Thoracic Unit at Hairmyres Hospital under Mr Dick's care. The arrangement works well.

All persons in Fife receiving out-patient artificial pneumothorax treatment attend at Glenlomond and an increasing number of persons come there for consultation and X-ray examination. Lastly, much felt gap was filled when a school teacher was appointed to Glenlomond in October, 1945. Treatment of children suffering from tuberculosis frequently lasts for years and interferes seriously with education. Many children, even if confined to bed, are fit to receive a certain amount of instruction and the presence of a school teacher can be beneficial, provided she accommodates herself to the children's limitations, in that she gives them definite occupation.

#### X-RAY EXAMINATIONS.

	Total X-rays.	X-rays of Contacts.	No. of Contacts four to have Pul. T. B.
1942	6	—	—
1943	275	47 (46 persons)	4 (and four others subsequently developed T. B.)
1944	521	100 (83 persons)	5
1945	837	198 (167 persons)	12 (and 3 others had definite involvement of hilar glands).

Prior to 1942, no arrangement existed whereby the Tuberculosis Officer could have an X-ray examination of a patient referred to him. A move was made to repair this very serious omission towards the end of 1942, when the James Mackenzie Institute, St Andrews, agreed to assist. In 1943, satisfactory arrangements were made with the Adamson Cottage Hospital, Cupar; the General Hospital, Kirkcaldy, and the Memorial Cottage Hospital, St Andrews. In 1944, Dunfermline joined the list and there was then a hospital within convenient reach of any part of the County to which patients could be sent. The agreement with each hospital is for taking the skiagram only: films are sent to the Tuberculosis Officer for interpretation and remain the property of the Department. The 1945 figure includes 132 examinations done at Glenlomond.

Each year has seen an increase in the amount of work and a further rise is almost certain. The value of X-ray examination in the diagnosis of pulmonary tuberculosis is established and it is especially useful in doubtful and early cases. Cases of lung tuberculosis occur in which there are neither symptoms nor clinical signs. Realisation of this was the chief reason for the introduction of mass radiography. Every case now notified or referred for an opinion has an X-ray examination, as well as a clinical examination, unless the person is too ill to get out of bed or has disease that is so advanced that radiography would not add materially to knowledge of the case. If a general practitioner is sufficiently suspicious of a patient's condition to refer him to the Tuberculosis Officer, the latter, knowing



disease can be present without clinical signs, would not be justified in giving a negative report unless confirmed by X-ray examination. It is not suggested that diagnosis should rest solely on radiography: the history, clinical examination and bacteriological findings must also be taken into account, but, apart from finding tubercle bacilli in the sputum, X-ray examination is the most important single factor in diagnosis. Even when the diagnosis is known beyond dispute by clinical and bacteriological methods, a skiagram is usually required to assess the possibilities of treatment.

Since 1943, there have been 345 X-ray examinations of contacts. In some instances the examination was repeated and 296 persons were involved. Twenty-one were found to have tuberculous lesions of the lung: put in other words, 6 cases were discovered for every 100 examinations. It must be understood that these were routine contact examinations. Although some had clinical evidence of tuberculosis, none were referred to the Tuberculosis Officer on that account. The total number of cases of tuberculosis notified in the same period with a history of contact was many times that number. The rate of 6% for contact examination is high but there was a good deal of selection. The number of contacts the Tuberculosis Officer can see is distinctly limited and X-ray examinations were done mainly in those families where overcrowding, prolonged or intimate contact, or a bad family history made the probability of a secondary case highest. The figures will serve to impress the importance of contact examination and the part radiography can play. Mass radiography is not yet available in Fife and it has its limitations: radiography of contacts is possible and its wider use is strongly indicated. The cost relative to the gain is not high.



## Sputum Examinations.

	1939			1940			1941			1942			1943			1944			1945		
	Pos.	Neg.	T.	Pos.	Neg.	T.	Pos.	Neg.	T.	Pos.	Neg.	T.	Pos.	Neg.	T.	Pos.	Neg.	T.	Pos.	Neg.	T.
Specimens (Tuberculosis Officer)	13	63	76	12	55	67	9	40	49	18	32	50	42	94	136	43	113	156	45	92	137
Specimens (General Practitioners)	19	122	141	15	128	143	17	121	138	22	121	143	11	161	172	10	82	92	16	92	108
	32	185	217	27	183	210	26	161	187	40	153	193	53	255	308	53	195	248	61	184	245



During 1945 when a case occurred in which the diagnosis was in doubt and the sputum persistently negative on direct examination, specimens were sent to Glenlomond for culture or guinea pig inoculation. These are not included in the above figures.

#### TREATMENT ALLOWANCES.

	Number granted Maintenance Allowances.	Number granted Discretionary Allowances.	Number granted Special Payments.
1943	28	1	2
1944	56	—	1
1945	51	—	2

*Cost of Allowances*—July, 1943, to 15th May, 1944   £1,163  
16th May, 1944, to 15th May, 1945   £2,584

The total cost of the allowances is met by Government grant. In granting a maintenance allowance there is no means test: *e.g.*, if a man is undergoing approved treatment he gets an allowance for himself, his wife and dependent children, and this allowance is not affected by any income the wife may earn. The income of the family is assessed only when there is an application for a discretionary or special allowance for such things as insurance premiums, hire purchase payments, school fees, help in the home or pocket money while in Sanatorium. A maintenance allowance is payable provided the Tuberculosis Officer certifies that a person comes within the terms of the scheme and is carrying out treatment approved by him. Allowances are not payable to single persons in receipt of institutional treatment, but they get an allowance while awaiting admission, and, if necessary, after leaving the hospital or sanatorium.

Although the scheme has been welcomed by all and has conferred benefits on many, criticism has been directed against it and with some reason, on two main points: (1) that the amount of the allowance is rather meagre with the present high cost of living: and (2) that the allowances are payable only to persons with pulmonary tuberculosis who give up remunerative employment and who are likely to benefit by treatment to an extent that will permit of return to work. The payments are certainly not very generous but it is mainly in the amount allowed for young children that the rates are below what is desirable. As regards the other criticism, when the M. R. C. Committee recommended financial assistance, it referred to persons suffering from tuberculosis and did not differentiate types of the disease. The government scheme not only limited the grants to cases of pulmonary tuberculosis but restricted payment to certain classes within this group. While a case can be



made out for excluding persons with surgical tuberculosis, the limitation of the scheme to persons likely to recover under treatment is more difficult to justify. To tell a patient that he cannot have an allowance because his disease is too extensive is a most unpleasant job and it is most disheartening to the patient. Perhaps fortunately, it is often not easy to say if a patient is likely to do well and recover his working capacity and the Tuberculosis Officer can give the patient the benefit of the doubt. With the scheme as it stands, one cannot help feeling that the Government was moved to bring in the scheme less by kindness of heart to the tuberculous population than by a desire to encourage people to submit to mass radiography.

#### SUPPLY OF DRUGS AND DRESSINGS.

The cost of the County Council Scheme for the provision of drugs and dressings to persons suffering from tuberculosis, in each year, was as follows :—

1939	...	...	...	...	...	£95	3	4½
1940	...	...	...	...	...	92	0	5½
1941	...	...	...	...	...	78	14	0½
1942	...	...	...	...	...	65	15	6½
1943	...	...	...	...	...	65	2	10
1944	...	...	...	...	...	96	16	10½
1945	...	...	...	...	...	102	11	11

These drugs are supplied on medical practitioners' prescriptions. The greater cost in the past two years parallels the increase in numbers notified, but it is still below the pre-war expenditure which for the 1936-38 period averaged £133 12s 6d.

#### DOMICILIARY TREATMENT : SUPPLY OF EXTRA NOURISHMENT.

Year.	Number of Persons.	Cost.
1939	76	£266 11 9
1940	46	180 18 6
1941	33	173 15 1
1942	28	164 12 7
1943	41	187 14 4
1944	40	268 17 2
1945	38	290 12 6

Additional nourishment nowadays is limited to the supply of milk, except that a few patients get cod liver oil and malt. The greater cost in 1944 and 1945 is due to the fact that most of the people getting milk received it throughout the whole year.



## LUPUS TREATMENT.

Patients suffering from lupus attend Edinburgh Royal Infirmary for treatment and the cost of travel is met by the County Council whenever the patient's financial circumstances do not permit of him paying for himself. In addition, a charge is made for Lomholt Lamp treatment. The details are as follows :—

Year.	No. of Patients.	Cost of Travel.	Cost of Lomholt Lamp Treatment.
1939	6	£88 13 0	£25 2 0
1940	5	59 19 2	43 18 0
1941	6	86 6 4	33 16 0
1942	4	89 7 7	68 16 0
1943	7	115 9 9	40 6 0
1944	7	163 7 8	45 18 0
1945	8	188 12 11	35 6 0

## GENERAL COMMENTS ON THE TUBERCULOSIS SCHEME.

The majority of new cases are brought to notice by general medical practitioners, either by notification or on a request for an opinion and it is, therefore, of the first importance that close co-operation with the general practitioner be maintained. The better the service provided by the Local Authority the more likely is the practitioner to use it. Careful investigation of every new case followed by a detailed report of the findings is essential if the general practitioner is to have confidence that his patients are being dealt with adequately. This part of the service is now satisfactory, but much more than this is needed to make an efficient service.

Many patients do not need institutional treatment but they require supervision: cases coming out of sanatorium should be seen at regular intervals for several years. At the end of 1945, there were 1346 names on the tuberculosis register. When one considers the number of new cases and contacts to be examined and bears in mind that all patients are seen in their own homes, it will be obvious that patients can be seen only infrequently and in practice there has to be a good deal of selection as to which patients require visiting. More frequent examination is desirable, but Fife is a large County, and the bulk of the visiting is done by one man: with the increasing number of new cases he cannot overtake much more of the work of supervision. Fortunately the general practitioners know they can always again call in the Tuberculosis Officer and this is usually done when a patient is not progressing satisfactorily.

With regard to contacts, the position is less satisfactory. Tuberculosis is largely a family disease and secondary cases are not



infrequent. All family contacts should not only be examined and X-rayed at the time the first case is discovered but should be seen at intervals thereafter. With the present staff, and in view of the fact that examination must be done at the home, this is not possible and again there has been selection as to which families were to be kept under observation. Reference to this was made earlier in the Report: 7% of the persons examined had pulmonary tuberculosis. This alone indicates the need for the fullest possible investigation of contacts.

The difficulty of coping with all the work in supervision of cases and contacts would be eased by the adoption of a limited dispensary system. Such a system is of doubtful benefit for the more sparsely populated areas but a clinic at Lochgelly, serving Lochgelly, Cardenden, Lochore and Glencraig, Cowdenbeath and possibly Kelty, and one at Methil for Leven, Methil and Buckhaven, Methilhill and East Wemyss, would be well worth while. Each would be the centre of a populous area and the Tuberculosis Officer could, by holding regular clinics, get through much more work in a given time. An additional advantage would be that the health visitor attending the clinics could do all the tuberculosis health visiting for the area covered by the clinic: she would be employed wholly or mainly at this work. There would always be direct contact between the Health Visitor and the Tuberculosis Officer and she would be able at any time to arrange for the attendance at the clinic of any patient or contact she thought required an overhaul. At present, each Health Visitor in the County visits those cases of tuberculosis in her area: contact with the Tuberculosis Officer is remote and there is not the same incentive to develop an interest in tuberculosis as in some other branches of her work. This arrangement must continue in most County areas but there is scope for a full-time or near full-time Health Visitor working for a clinic both in Lochgelly and Methil. The existing arrangement for X-ray examinations at Kirkcaldy and Dunfermline would meet the needs of these clinics, and patients from the Lochgelly area could be X-rayed at Glenlomond. Adequate clerical assistance would, however, be necessary: the Tuberculosis Officer should be free to devote most of his time to clinical work and reports.

In the supervision of children who are contacts the School Medical Officer can give valuable help and a closer liaison with the School Health Service will be established.

### **Venereal Diseases.**

#### **GENERAL.**

The advent of war resulted in a considerable increase in the incidence of venereal infection.

The wide social and economic upheaval which occurs in war-time, the lowering of ethical standards and of moral values, the removal



from the steady influence of the home, often for the first time, of large numbers of young people, their segregation, rapid improvement in health and physique, the restriction of their time and activities to pursuit of the grim purposes of war, all result in rapid wear of the frail fabric of convention and in a quickening of the pace of mental relaxation to a point where the shallowest diversion will suffice to provide adequate escape from the general strain.

Manifestly there took place a steady decline in entertainment standards towards what may be termed the readily assimilated and spicy mental foods with a progressively increasing appetite for the most elemental forms of relaxation.

An increased incidence in venereal infection thus becomes the direct, natural, and fully anticipated consequence of war. The same general causal factors obtained in the War of 1914-1918, and the outcome in these years, and for many years subsequently, was an enormous increase in venereal infections. The increase at that time was staggering and the results devastating.

During the recent war, however, consequences of the same magnitude have not ensued. Since 1918, there has been a broadening of view and a more realistic conception of some aspects of human behaviour with an improvement in the physiological erudition of the adolescent of both sexes, and there has been built up, by the provisions of the Venereal Diseases Act of 1917, a progressively efficient machinery for diagnosis and treatment.

Premises, equipment, personnel, methods of treatment, drugs, and medical knowledge in general, all show a very material advance on the standards which were accepted as reasonably satisfactory a generation ago. During the war years, further advances in treatment have been made and, whilst the principal of these, penicillin, did not until very late, become available to civilian treatment centres, its widespread use in the Services, by cutting short the period of infectivity and ensuring an almost complete absence of complications, has exercised a very profound effect in protecting the civilian population from a still greater aggravation and acceleration of rising incidence. It has been apparent also, and apart from the availability to them of penicillin, that the administrative arrangements on the part of the Services' medical departments for dealing with venereal disease have been well conceived and carefully executed.

There has been, then, not only the will to fight these infections but the weapons too, and the general increased incidence during recent years is remarkable in no way for its occurrence, but is notable for the relative moderation of its extent, and particularly notable for its unexpected limitation in duration.

*New Cases.*—The essential statistics of cases reporting during the period 1939-1945 at the various treatment centres are tabulated on the following page :—



**Cameron Hospital.**

	Syphilis.		Gonorrhoea.		Other Ven. Dis.		Total Ven. Dis.		Non-Ven. Dis.		Attends.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1939 ...	—	—	—	—	—	—	—	—	—	—	—	—
1940 ...	—	—	—	—	—	—	—	—	—	—	—	—
1941 ...	—	—	—	—	—	—	—	—	—	—	—	—
1942 ...	—	—	—	—	—	—	—	—	—	—	—	—
1943 ...	2	—	—	—	—	—	2	—	—	—	2	—
1944 ...	50	—	13	—	—	—	63	—	16	—	146	—
1945 ...	2	—	—	—	—	—	2	—	—	—	2	—
Totals ...	54	—	13	—	—	—	67	—	16	—	150	—

**Dundee Centre.**

1939 ...	6	2	10	7	3	—	19	9	2	5	335	488
1940 ...	4	2	5	4	—	—	9	6	3	4	249	376
1941 ...	1	2	9	17	2	—	12	19	4	3	186	570
1942 ...	5	6	12	20	2	—	19	26	3	15	425	757
1943 ...	9	9	18	29	5	—	32	38	8	25	371	896
1944 ...	5	5	9	16	—	—	14	21	2	9	369	947
1945 ...	4	5	5	24	2	2	11	31	5	14	521	953
Totals ...	34	31	68	117	14	2	116	150	27	75	2456	4987

**Dunfermline Centre.**

1939 ...	28	23	58	4	22	1	108	28	47	23	6001	785
1940 ...	29	23	68	12	34	2	131	37	35	15	5759	823
1941 ...	57	20	101	29	40	8	198	57	54	21	6546	1033
1942 ...	52	20	62	28	43	8	157	56	40	20	6248	1081
1943 ...	25	19	52	22	42	17	119	58	44	13	5510	1121
1944 ...	24	18	37	23	40	16	101	57	52	35	5137	1240
1945 ...	28	13	40	20	43	16	111	49	49	40	5008	1061
Totals ...	243	136	418	138	264	68	925	342	321	167	40209	7144

**Kirkcaldy Centre.**

1939 ...	42	28	79	19	23	—	144	47	21	34	1655	1161
1940 ...	56	23	73	17	29	—	158	40	9	23	1380	1117
1941 ...	115	27	168	40	47	—	330	67	16	44	2318	1594
1942 ...	123	29	95	46	47	—	265	75	25	46	2377	2066
1943 ...	89	46	86	56	31	4	206	106	42	60	2365	2560
1944 ...	32	29	71	34	27	—	130	63	39	67	1964	2439
1945 ...	33	21	76	29	53	1	162	51	66	54	1731	1806
Totals ...	490	203	648	241	257	5	1395	449	218	328	13790	12743

**Totals for all Treatment Centres.**

1939 ...	76	53	147	30	48	1	271	84	70	62	7991	2434
1940 ...	89	48	146	33	63	2	298	83	47	42	5388	2316
1941 ...	173	49	278	86	89	8	540	143	74	68	9050	3197
1942 ...	180	55	169	94	92	8	441	157	68	81	9050	3904
1943 ...	125	74	156	107	78	21	359	202	94	98	8248	4577
1944 ...	111	52	130	73	67	16	308	141	109	111	7616	4626
1945 ...	67	39	121	73	98	19	286	131	120	108	7262	3820
1939-45	821	370	1147	496	535	75	2503	941	582	570	56605	24874

**Travelling Expenditure.****Year.**

1939	£33 12 4	1940	£16 4 8	1941	£38 7 11	1942	£21 5 0	1943	£21 4 10	1944	£14 8 3	1945	£16 7 1
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The slow increase apparent in the first full year of war, the sudden bound to peak figures in 1941 and 1942, and the subsequent decline are evident. The rather sluggish increase in women, the later peak, and the slower fall, are similarly evident.

Minor venereal infections remain in both sexes considerably in advance of pre-war figures. Public awareness, in consequence of



widely diffused and well-maintained propaganda, is reflected in the high figures for conditions found not to be venereal.

It is noteworthy that in the case of the two major infections the figures for 1945 are significantly *lower* than the corresponding figures for 1939 except in the case of female gonorrhoea where the figure is maintained at a level approximately 150% *in excess* of the pre-war figure. This is disquieting. It has long been a belief, shared by all those who are engaged in the management of venereal diseases, that the proportion of infected females who report for diagnosis and treatment is much less than the corresponding proportion of infected males, and may indeed be but a small fraction of the whole.

There is no reason to suppose that the intensive and inspired propaganda of the later war years has fallen more fruitfully on the feminine ear, and the continued incidence of gonorrhoea at a high level in the female, if confirmed elsewhere and continued in the current year, must indicate the presence of a reservoir of infection, of proportions much greater than existed before the outbreak of war.

It was at one time believed that male gonorrhoea was contracted from a comparatively small reservoir of female infection. Experience arising out of Regulation 33B, however—multiple cases infected from the same source have proved to be comparatively rare—has shown that this is not so and it may be well to consider whether the present generally low incidence of venereal infections is but the ebb of a tide which will shortly and inevitably flow again.

Throughout the immediate future, there will continue to be released from the various branches of the Forces, a large number of young people of both sexes who, torn from their normal environment, have been thrown into swirling currents whose obvious dangers they have happily survived.

It is not to be expected, however, that in the mass all will emerge unscathed from the robust experience of arduous service, and, in addition to a very considerable amount of human flotsam which will drift ashore during the ensuing years, it is necessary to anticipate that the sudden relaxation of discipline, return to former life and associations, and, particularly, to the less spartan environment of quickening industrial life, will be accompanied by repercussions which will, in all probability, bring as an early consequence, a following tide of fresh venereal infection.

It will be surprising if it is not so and it is necessary to view the present continuing fall in incidence of these infections in the light of such a probability, with the knowledge that much of the damage caused by them during the past five years will require to be made good in the course of the next five years, and with the expectation that a further increase of fresh infections will make itself evident as the surge of industrial life gathers momentum.



The background to the problem of venereal disease reaches dark and sullen through the many shortcomings of our social structure and until these are remedied there will continue a considerable and unnecessary incidence of these wasteful and damaging infections.

The Venereal Diseases Treatment Centre is remote from the root of the problem. It deals only with the fruits and for many years to come it must be prepared to gather the malignant harvest.

It is not sufficient that the clinic be well situated, built, decorated, equipped and staffed adequately to its use, and free of any atmosphere of squalor or of recrimination. The venereal diseases are infectious diseases and, until tackled on epidemiological lines, even the best of clinics will fail fully to achieve its purpose. It is necessary to track each infection to its source and to pursue each to final cure. While this is meantime possible in a proportion of cases only it cannot be fully achieved unless (1) all fresh cases of venereal infection are brought to notice, and (2) means are available to ensure that treatment is continued until cure is attained.

It is apparent that fresh legislation is desirable and it is to be hoped that the enlightened efforts at present being made to secure this will reach fruition. Even so, in anticipation of such possible legislation, and in anticipation of the administrative changes which will no doubt come about under the new health scheme, has not the time now arrived when the effective field service of the Venereal Diseases Scheme should be consolidated and strengthened?

### Diabetes.

#### SUPPLY OF FOOD AND INSULIN.

In terms of the Scheme under the Public Health (Amendment) Act, 1925, insulin and food was supplied as follows :—

Year.	INSULIN.		FOOD.	
	No. of Patients.	Cost.	No. of Patients.	Cost.
1939	36	£86 17 10	15	£97 19 6
1940	35	95 5 4	13	72 1 10
1941	36	116 1 11	9	51 17 1
1942	39	147 11 5	7	67 12 5½
1943	32	115 12 10	6	51 9 2½
1944	29	86 5 6	6	54 3 4
1945	31	83 15 7	4	39 13 2

### Cancer.

The period allowed under the Cancer Act, 1939, for the submission to the Department of Health of arrangements for the diagnosis and treatment of persons suffering from cancer was extended yearly during the war. No other course was possible.



Facilities in Fife are entirely inadequate and only through the development of a regional scheme will it be possible to provide all the necessary resources. At present there is an insufficiency of beds, a scarcity of costly appliances and an inadequacy of medical and nursing staff. In due course, however, it should be possible to make arrangements for a full scheme in collaboration with the other Local Authorities in the south-eastern area.

Next to diseases of the heart and arteries, cancer is the chief killing disease in the County. It is not a notifiable disease so that there are no accurate means of estimating its prevalence, but some indication is afforded by study of mortality tables.

#### Deaths from Malignant Disease.

##### Fife County (inclusive of Small Burghs).

Year.	MALE.		FEMALE.		TOTAL.		Quinquennial Average.
	Deaths.	Rate per 1000	Deaths.	Rate per 1000	Deaths.	Rate per 1000	
1931 ...	127	·64	162	·82	289	1·46	1·41
1932 ...	118	·59	166	·83	284	1·42	
1933 ...	124	·61	151	·76	275	1·37	
1934 ...	139	·70	148	·73	287	1·43	
1935 ...	128	·63	154	·77	282	1·40	
1936 ...	133	·65	165	·82	298	1·47	1·43
1937 ...	131	·65	163	·80	294	1·45	
1938 ...	134	·66	168	·83	302	1·49	
1939 ...	132	·65	139	·69	271	1·34	
1940 ...	123	·62	160	·81	283	1·43	
1941 ...	155	·80	180	·93	335	1·73	1·69
1942 ...	136	·72	167	·88	303	1·60	
1943 ...	146	·78	190	1·02	336	1·80	
1944 ...	148	·79	175	·93	323	1·72	
1945 ...	141	·74	164	·86	305	1·60	

These numbers are not sufficiently large to enable definite conclusions to be drawn but they certainly show that more people in Fife are dying of cancer yearly. The quinquennial death rate per 1000 of population has risen since 1931 from 1·41 to 1·69. The increase was evenly distributed among males and females which fact is at variance with national figures which show a diminishing rate for females. The numerical increase is not, however, a real indication of a growing prevalence of the disease. It is a direct consequence of the increased expectation of life of the population as a result of improved social conditions. Nevertheless, the figures seem to emphasise the need for more active measures against the disease.

The most difficult part in the elaboration of a scheme for the treatment of cancer will be to induce people to come forward for treatment. An educational campaign will be essential but care will be necessary lest false hopes are aroused. In our present state of knowledge it would be wisest to restrict claims for cure to cancer of accessible parts of the body—breast, uterus, mouth, skin and



perhaps the rectum. The public are aware that much cancer is not curable, but they should be made equally aware that life can be prolonged in comfort and that there are types of cancer which can be cured provided advice is sought early enough. Intensive propaganda on a national basis when times are opportune will do more to save life and allèviate suffering than any other educational campaign yet undertaken.

### Pathological Examinations.

The following Tables show the number of specimens submitted to the Bacteriological Department, University College, Dundee during the period under review.

Diphtheria Swabs	1939			1940			1941		
	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.
	44	152	196	45	194	239	32	175	207

1942			1943			1944			1945		
Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.	Pos.	Neg.	Tot.
28	120	148	25	130	155	22	124	146	15	157	172

Blood for Enteric Fever	1939				1940				1941				1942			
	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL
	8	2	2	12	20	3	1	24	24	3	1	28	26	11	2	39

1943					1944				1945			
Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	Neg. for Abortus	TOTAL	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL	Neg. for Enteric and Abortus	Pos. for Enteric	Pos. for Abortus	TOTAL
19	2	8	3	32	11	3	1	15	15	12	2	1



## HOSPITAL SERVICES.

### Hospital Policy.

In 1942, a Memorandum was submitted to the Public Health Committee directing attention to hospital facilities in the County. It was pointed out that the number of small infectious diseases hospitals were uneconomical in staff, equipment and expenditure : that more specialised technique in the treatment of tuberculosis combined with the isolated situation of Glenlomond Sanatorium called for consideration of its continuation as a divorced unit : that no adequate means were available for the treatment of adults suffering from crippling disablements or for the vocational training and rehabilitation of cripples of all ages : that accommodation for the retention and training of mental defectives was deplorably inefficient : that there were insufficient beds for maternity cases and ailing babies : that no organised scheme existed for the early diagnosis and treatment of cancer cases : that arrangements for the hospital treatment of the sick poor were unsatisfactory, and that the County was dependent on outside resources for the treatment in hospital of general sickness and accidents.

After full consideration of the Memorandum and of other information which was brought to their notice, the Public Health Committee in 1942 obtained the approval of the County Council for adoption of the following hospital policy and proposals for reconstruction.

#### 1. GENERAL POLICY.

(a) The Hospital Policy of the County should take into consideration the needs of all sick persons so that every case likely to benefit may have ready access to all forms of treatment available to others. A hospital service, to be comprehensive, should be capable of dealing with all forms and stages of sickness and invalidity, and should include out-patients' departments, clinics, laboratory facilities and ambulance services. The time has now passed when poor persons suffering from acute or remediable ailments should be treated as a separate class. There can be no objection to poor persons who are feeble or infirm or who are suffering from incurable chronic complaints being accommodated as a group, but the acutely sick who can benefit from treatment should be provided for under a hospital scheme open to the public as a whole.

(b) A Hospital Service should embrace the resources of both Voluntary and Local Authority Institutions and should be available to all members of the community. All facilities for diagnosis and treatment provided in one hospital should be available to every patient admitted to any other of the hospitals.

(c) Hospital and allied services should be an integral part of the Public Health Service and the duty of providing these services



should be the function of the County Council as Public Health Authority in co-operation with adjoining Public Health Authorities and with Voluntary Hospitals. The Committee would oppose most strongly the creation of an ad hoc Hospital Authority for the purpose of administering Hospital Services.

(d) The County Council should preserve all their powers to create a Hospital Service according to their own policy. An association with a Regional Scheme should be on the basis that any Hospital Service Regional Committee so established would act in an advisory capacity only. The Committee recognise that highly specialised treatment may be more readily provided in neighbouring hospitals serving regions, and the County Council should be prepared to assist in any Regional Scheme created for the purpose of making provision for specialised treatment.

(e) With a view to achieving the aforesaid policy, the Committee consider that hospital facilities should be elaborated so as to provide diagnostic centres and facilities for after-treatment, and that Health Clinics, linked up with hospitals, should be created in populous parts of the County.

## 2. CONSTRUCTIONAL.

The operation of the policy outlined above will necessitate the extensions and alterations of existing hospital services in the County and the provision of new hospitals as hereinafter detailed, and the Committee recommend that before any scheme of hospital provision is finally decided upon there should be consultation between representatives of the County Council and representatives of the Town Councils of Kirkcaldy and Dunfermline and with the management of other hospitals in the County.

### (i) Hospitals.

(a) *Infectious Diseases*.—A scheme for centralisation should be developed. Infectious diseases should be treated at Dunfermline and West Fife Infectious Diseases Hospital and at Cameron Hospital extended by the addition of two more pavilions. The existing East of Fife Infectious Diseases Hospitals, namely, at Auchtermuchty, St Michaels, St Andrews and Ovenstone, should be closed as such. Cameron Hospital should become a training school.

St Andrews Infectious Diseases Hospital might become a convalescent home for children: St Michaels and Ovenstone Infectious Diseases Hospitals might become holiday homes or retreats for the folk. Auchtermuchty Infectious Diseases Hospital should be disposed of.

(b) *General Sickness and Accidents*.—Subject to statutory powers being obtained, accommodation should be provided in the County for the treatment of such cases for which purpose an extension of Cameron Hospital or building elsewhere should be considered.



(c) *Maternity and Diseases of Women*.—There is need for more hospital provision for these purposes and this should be arranged by the establishment of additional accommodation at Cameron Hospital or elsewhere in the County.

(d) *Ailing Babies*.—There is need for the provision of accommodation for infants not suffering from diseases but in need of care and dietary attention and a suitable institution should be erected in the County.

(e) *Tuberculosis*.—In due course, according as measures for combating the disease advance, consideration should be given to the future of Glenlomond Sanatorium. Ultimately, it might prove to be the best policy to provide accommodation for cases at a Common Hospital at Cameronbridge.

(f) *Mental Deficiency*.—An Agreement was entered into in 1939 by and between the County Council and the Town Councils of Kirkcaldy and Dunfermline under which Thornton Infectious Diseases Hospital (when its present use is terminated) will be administered by the County Council for the treatment of low-grade mentally defective children and patients falling within the category recognised as "nursing cases" and, if accommodation permits, mentally defective adults may also be admitted. The arrangement does not allow for the institutional treatment in Fife of educable mental defectives. Withdrawal of uneducable cases from outside institutions will give rise to vacancies which can be filled with educable cases, thus providing a temporary partial solution of the problem.

(g) *Orthopaedics*.—In 1933, the County Council inaugurated a scheme whereby the treatment of orthopaedic cases up to the age of 16 is carried out at Fairmilehead Hospital, Edinburgh. Under the Scheme, the Surgeon Specialists of the Hospital attend at clinics throughout the County where they see cases referred to them by general practitioners and the Area Medical Officers and instruct the Orthopaedic Nurses and Physiotherapists regarding treatment. There are deficiencies in the County Scheme. It provides for the early detection, treatment in hospital and after-care of juveniles but as regards adults, no provision is made for treatment, vocational training, or rehabilitation, nor are there arrangements for assisting orthopaedic cases to find suitable employment. The Local Authority is restricted in its endeavours by lack of hospital accommodation and by existing powers which confine the treatment of adults to public assistance and tuberculosis cases only. Further developments should await the formation of the South-Eastern District Orthopaedic Schemes. In the meantime, orthopaedic treatment of adults by voluntary agencies in the County should be encouraged.

(h) *Diseases of the Eyes, Ear, Nose and Throat, &c.*—In organising the County Hospital Service, provision should be made for



accommodation of patients suffering from such diseases in so far as treatment can be undertaken by visiting Specialists.

(i) *Contagious Diseases*.—Consideration should be given to the provision of cleansing facilities at the new Infectious Diseases Hospitals.

(ii.) *Clinics*.

(a) There are already established in the County ante-natal, child-welfare, school, &c., clinics. These should be extended by the creation in populous areas of Health Centres available for everyone. These centres should, in every case, be linked up with general practitioners and hospitals, and hospital organisation should be extended to provide diagnostic centres and facilities for after-treatment.

(b) *Venereal Diseases*.—Clinic facilities are available for the County in Dundee, Kirkcaldy and Dunfermline. The Dunfermline Clinic should be extended in accordance with the plans which have been approved.

### Hospitals and the War.

The hospital services within the County continued to function along normal lines during the war years with the following exceptions :—

- (1). Cameron Hospital in 1940 became an emergency hospital for the reception of war casualties under the Government Emergency Medical Services Scheme and ceased to be available for the treatment of infectious diseases. It remained, however, under the control of the County Council.
- (2). At Auchtermuchty Hospital, cases of infectious diseases ceased to be admitted in 1940 and the Hospital was thereafter utilised for the treatment of contagious diseases.

The following hospitals continued to be used for the treatment of infectious diseases throughout the war years :—

- (1) West Fife Infectious Diseases Hospital, Dunfermline.
- (2) Thornton Fever Hospital.
- (3) Fosterton Smallpox Hospital, Thornton—in use from October, 1942, to January, 1943, during a smallpox outbreak.
- (4) St Andrews Infectious Diseases Hospital.
- (5) St Michael's Infectious Diseases Hospital.
- (6) Ovenstone Infectious Diseases Hospital.

The following hospitals continued to be used for the treatment of general sickness in addition to the Infirmarys at Edinburgh, Dundee and Perth, and to the general hospitals in Kirkcaldy and Dunfermline :—

- (1) St Andrews Cottage Hospital.
- (2) Cupar Cottage Hospital.
- (3) Randolph Wemyss Memorial Hospital, Buckhaven.

An investigation was undertaken into the number of patients suffering from general medical and surgical conditions who were



admitted to the various hospitals serving the County, and it was found that 43 per cent. were dealt with in hospitals in the County ; 41 per cent. in Edinburgh Hospitals ; 10 per cent. in Dundee Royal Infirmary, and 6 per cent. in Perth Infirmary.

### Cameron Hospital.

Towards the end of 1940, the new buildings at Cameron Hospital were completed and the new hospital was formally opened on 28/2/41. There had been erected a new administrative block, a nurses' home, three pavilions each with 30 beds, a two-storeyed cubicle block with 36 beds, and an operation theatre together with a new boiler-house, laundry and mortuary. Furnishings and equipment were of the latest pattern. For infectious diseases purposes, the hospital contained 150 beds but for purposes of a war-time hospital there was accommodation for 202 beds. All the latest ideas in hospital planning were adopted in its design and it will form the nucleus of a modern common hospital with buildings suitably sited in the wide area of flat land which adjoins to the north and west.

In 1939, 238 cases of infectious diseases were admitted and the average duration of stay of patients was 31 days. The highest number of beds occupied was 39 on 20th December and the lowest 11 on 24th June, 1939. Admissions in 1940, up to the closure of the hospital for infectious cases on 29th October, numbered 122, and the average duration of stay was 22 days. The average number of beds occupied was 19, the highest being 29 on 19th February and the lowest 2 on 1st December, 1940.

For the remainder of the war years until 15th November, 1945, in conformity with the Government's policy, the hospital admitted both service and civilian patients for medical and surgical treatment. The following is a summary of the types of cases treated :—

(1) <b>Service</b>	1941	...	57	(2) <b>Merchant</b>	1941	...	46
<b>Personnel</b>	1942	...	67	<b>Navy</b>	1942	...	62
	1943	...	115		1943	...	62
	1944	...	287		1944	...	81
	1945	...	278		1945	...	27
			<u>804</u>				<u>278</u>
(3) <b>Prisoners of War</b>	1941	...	<i>Nil</i>	(4) <b>Surgical</b>	1941	...	80
	1942	...	<i>Nil</i>	<b>Civilians</b>	1942	...	78
	1943	...	<i>Nil</i>		1943	...	118
	1944	...	82		1944	...	55
	1945	...	12		1945	...	82
			<u>94</u>				<u>413</u>
(5) <b>Gynaecological</b>	1941	...	2	(6) <b>Ophthalmic</b>	1941	...	<i>Nil</i>
	1942	...	95		1942	...	16
	1943	...	170		1943	...	7
	1944	...	109		1944	...	4
	1945	...	1		1945	...	18
			<u>377</u>				<u>45</u>



(7) <b>Ear, Nose, and Throat (School Children)</b>	1941	...	<i>Nil</i>	(8) <b>Public Assistance</b>	1941	...	11
	1942	...	199		1942	...	74
	1943	...	377		1943	...	100
	1944	...	315		1944	...	14
	1945	...	503		1945	...	43
			<hr/> 1394				<hr/> 242
(9) <b>Others</b>	1941	...	4				
	1942	...	3				
	1943	...	3				
	1944	...	2				
	1945	...	<i>Nil</i>				
			<hr/> 12				

The total number of service personnel, merchant navy and prisoner of war cases treated was 1166 as compared with 2483 civilians.

Great credit is due to Miss Margaret Jack, the Matron, for the administrative skill she showed in maintaining efficient organisation in the hospital and for her self-sacrifice in remaining on duty after her term of retirement had been reached.

#### **Thornton Infectious Diseases Hospital.**

Dr Fleming, Medical Superintendent, has submitted a final report dealing with the work of Thornton Infectious Diseases Hospital during the five years 1941 to 1945, and it is fitting that it should be reproduced as an acknowledgment of the high quality of the work undertaken by him, Miss Seal, the Matron, and the nursing staff.

"Owing to pressure of work, it has not been possible for me to issue an annual report on the work of Thornton Isolation Hospital since 1940. It may be of interest, and of some value in view of the impending closure of the hospital, to give a final report summarising the work of the Hospital during the five years 1941 to 1945.

It is remarkable that, during these years of stress and difficult living conditions, there has been no serious epidemic of infectious disease. As a result, it has been possible for Thornton Hospital to accommodate practically all of the patients who would normally have gone to Cameron Hospital, in addition to those from the usual area.

The incidence of scarlet fever has been at a minimum—one can only say as the result of good fortune. That of diphtheria, on the other hand, has probably been greatly reduced by the efforts of the public health staff. In fact it is more than likely that, but for the immunisation drive against diphtheria, there would have been a serious epidemic of diphtheria of a highly dangerous type.

There was no significant change in the incidence of respiratory, intestinal or puerperal infections and cerebro-spinal fever which reached epidemic proportions in the first winter of the war, gradually became less prevalent.

The numbers of patients treated in the Hospital during those five years, together with the figures for the various diseases, admissions and deaths, are tabulated on the accompanying table:—



**Thornton Infectious Diseases Hospital.**

Disease	1941		1942		1943		1944		1945	
	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths	Admissions	Deaths
Scarlet Fever ...	122	—	223	—	256	—	138	—	244	2
Diphtheria ...	196	5	163	2	175	5	208	6	182	6
Pneumonia ...	133	16	119	9	113	10	90	1	79	5
Puerperal Sepsis	17	1	20	—	22	2	17	1	16	—
Meningitis ...	26	4	12	10	17	1	7	—	12	6
Ophthalmia Neonatorum ...	19	—	23	—	32	—	23	—	19	—
Typhoid Fever...	4	1	—	—	1	—	1	—	2	—
Dysentery ...	4	—	5	—	1	—	2	—	—	—
Erysipelas ...	8	—	4	—	1	—	1	—	2	—
Encephalitis ...	3	1	7	2	1	—	1	1	2	—
Malaria ...	2	—	1	—	2	—	2	—	—	—
Infective Jaundice	3	—	2	—	1	—	—	—	—	—
Malignant Endocarditis ...	1	1	—	—	—	—	—	—	1	1
Nephritis ...	—	—	2	1	—	—	—	—	—	—
Agranulocytosis	—	—	1	—	—	—	—	—	—	—
Smallpox ...	—	—	28	7	—	—	—	—	1 (suspect)	—
Glandular Fever	—	—	—	—	—	—	2	—	—	—
Miliary Tuberculosis ...	—	—	—	—	—	—	1	1	—	—
Marasmus ...	—	—	—	—	—	—	1	1	—	—
Influenza ...	—	—	—	—	—	—	—	—	1	—
Cerebral Embolism	—	—	—	—	—	—	—	—	2	—
TOTALS ...	538	29	710	31	622	18	494	11	563	20



*Scarlet Fever.*

During the past five years, the numbers of patients have been unusually low and, for the most part, scarlet fever has been of an extremely mild type. There is some indication recently that the nadir of the epidemiological cycle has been passed.

Patients are still kept in hospital for four weeks or longer, three weeks of which are spent in bed. It is probable that those periods could be reduced with safety in many of the mild cases. I still think that this time is necessary for the more severe or toxic cases. Herein lies the value of hospitalisation of children with scarlet fever. The rest and warmth, essential in the first ten days or so for the prevention of complications, can be easily enforced in hospital. Even in the best homes and with capable parents, this is difficult to achieve when the child begins to feel well.

Scarlatinal antitoxin is given to severe cases only. It is unlikely that this treatment will be superseded entirely because scarlet fever is due to a toxæmia.

Sulphonamides are not effective for the initial toxæmia of the disease but they are of value in treating secondary infections such as otitis media. A soluble preparation of sulphathiazole has been tried and I consider it to be useful for otitis—by instillation into the ear.

Penicillin, like the sulphonamides, is active against organisms and does not counteract their toxins. It is probable that it will remain subsidiary to antitoxin in the treatment of scarlet fever.

*Diphtheria.*

The admission numbers for diphtheria cases have been heavy only at occasional periods, and, since with many of the patients the diagnosis of diphtheria was not confirmed, it can be assumed that the immunising campaign is beginning to show results. For several years now, there has been a higher proportion than formerly of adults among the patients admitted, probably due to the protection given by immunisation to the children of school age.

Against these considerations must be placed the fact, that in recent years an extremely virulent type of diphtheria has been commonly seen. As long as this grave type of the disease occurs, the problem of diphtheria and its prevention and treatment can never be regarded with complacency. This type is characterised clinically by the rapid development of an intense oedema of the throat with severe glandular swelling of the neck—even before there is any well formed or extensive membrane of the fauces. Thus, in a recent case of a young adult, there was swelling of the tonsils and fauces and a typical 'bull-neck' in less than 24 hours from the onset of illness, while the membrane consisted only of a thin film over the posterior pharynx. In spite of 100,000 units of antitoxin, the membrane thickened and extended during the next 24 hours. In my experience, if this type of case does not have large doses of antitoxin, 100,000 units or so, in the first 24 hours, the chances of survival are very poor. Certainly in several cases of this type, doses of 100,000 to 120,000 units given (some intravenously) on the 2nd, 3rd or 4th day failed to avert a fatal issue.

*The spectacle of a previously healthy young adult dying suddenly from an overwhelming toxæmia due to an avoidable disease, causes one to question the wisdom of allowing any freedom in the matter of immunisation.* It is not uncommon to find diphtheria in patients who have been immunised but it is seldom that these patients are dangerously ill and in only two such cases was the disease fatal.

Data have been furnished to Professor Tulloch regarding patients with diphtheria to assist him in assessing the value of the immunising campaign. From his reports on the typing of diphtheria organisms, it is apparent that the clinical types do not correspond with the bacteriological types. Thus the grave clinical type may be the result of infection with types other than *B. diphtheria gravis*. Bacteriological



typing of diphtheria may be of significance epidemiologically but it is of no value clinically in assessing the gravity of the illness.

Diphtheria antitoxin, of the concentrated type which gives few serum reactions, given intravenously or intramuscularly at the earliest possible stage of the disease is the only effective treatment. The proper place of penicillin in the treatment of diphtheria has still to be assessed. Like the sulphonamides, it appears to be of value in the treatment of carriers when given in the form of pastilles.

Diphtheria will always be a disease which will require hospital treatment owing to the great risk of serious complications.

#### *Pneumonia.*

The introduction of the sulphonamide drugs revolutionised the treatment of pneumonia and the use of sulphapyridine or sulphathiazole tablets has become routine. The former is considered to be the more effective and is used regularly, except in those cases which cannot tolerate this drug. Sulphadiazine has also been used. It is not any more efficacious than the M. and B. preparations but it is useful as a substitute for them in cases of intolerance.

The use of those drugs makes it feasible to nurse cases of pneumonia at home with a reasonable prospect of success, where the household conditions are favourable and where a capable nurse or sensible parents are in charge. However, it is always difficult even in the best private home for the patient to have adequate fresh air and this is still a vital part in the treatment of pneumonia—especially in young children. Sulphonamide treatment, to be successful, must be given in full doses every four hours—an unpleasant ordeal for a patient with nausea—and it is common experience that a recalcitrant patient can be helped through the difficult stage of the first few days more successfully in hospital than at home.

Some cases of pneumonia do not respond to treatment with the sulphonamides. Those patients are now treated with penicillin, which must be given by injection in doses every three hours. Only a small number of cases have been thus treated and, so far, no conclusions can be made.

A few cases of empyema occurred and, according to the type, were treated by aspiration or by rib resection. Since we have had the opportunity of using penicillin, we have obtained excellent results by instilling a penicillin solution into the pleural cavity after drainage of the pus.

#### *Puerperal Sepsis.*

Those patients invariably improve more rapidly in hospital than at home. This can be attributed to the effects of rest, both mental and physical, fresh air and good nursing—three factors which are just as important in the treatment of puerperal sepsis now as in the pre-sulphonamide days. Every case of notifiable pyrexia in the puerperium should be hospitalised without delay.

Sulphathiazole is now the sulphonamide of choice as, from experience, it has been shown to have a wider range of activity.

Hot vaginal douching is used if the perineum is septic or if the vaginal discharge is purulent.

Uterine curettage is avoided unless there is haemorrhage and, when this is resorted to, instruments are never used. I am convinced that, for this type of case, digital curettage is the only safe method. When there are retained products of conception, frequently a piece of tissue is lying across the os preventing drainage of the uterus. Removal of this is often sufficient to allow the uterus to clear itself and in the presence of gross sepsis, nothing more should be done. The longer the delay with those cases, the more danger there is when curettage becomes necessary. Conservative interference and administration of ergot will usually allow the uterus to clear itself completely.



The majority of the cases requiring curettage were admitted with the label 'septic abortion.' In most instances, incomplete abortion would have been a more correct diagnosis, a fact which reflects the difficulty experienced in getting this type of patient into hospital. Cases of incomplete abortion should not be treated in the same ward as puerperal sepsis and more adequate provision should be made for those patients in future.

A high percentage of cases of puerperal sepsis are very anaemic and blood transfusion is frequently of great assistance in expediting recovery. The volunteers on the list of the Blood Transfusion Service were always ready to give blood and this greatly facilitated the selection of suitable donors.

#### *Meningitis.*

As a result of a considerable experience in treating meningococcal meningitis during the early years of the war, a routine of treatment was established which gave very good results. If the patient could swallow, full doses of sulphapyridine were given immediately on admission. Lumbar puncture was done as soon after admission as possible—usually within one hour. Immediate examination of the cerebrospinal fluid verified the diagnosis and gave a guide to further treatment. If the fluid was turbid or purulent, 20 c.c. of a 10% solution was given intravenously and sulphapyridine in full doses continued by mouth. In the comatose patients, sulphapyridine was continued by injection. Morphia was often required during the first 24 hours. Later, Soneryl given by suppository was usually sufficient. It was seldom necessary to repeat the lumbar puncture or to do cisternal puncture. With this treatment, those patients were often fit to go home convalescent in about two weeks' time, instead of two months as in former years.

The chief difficulty in those cases was to keep up an adequate fluid intake and intravenous infusions were necessary at times. If the urine becomes too concentrated, sulphonamide crystals may be deposited in the kidney causing serious trouble. A few cases of this complication of sulphonamide treatment were seen with profuse haematuria. It can be recognised early by daily examination of the urine and this should never be omitted when an acutely ill patient is being treated with sulphonamides.

During the past few years, there has been an increase in the incidence of tuberculous meningitis. This type of tuberculous infection is invariably fatal. A unique case was admitted about Christmas time, 1942. She was a young married woman who was pregnant and almost at full term. It was apparent that she was doomed and I was of the opinion that the child could be saved. Strongly supported by Dr Munro of Glenlomond, we prevailed on Dr Sanson to do a Caesarean section. The result of the operation, performed in the ward, was a healthy baby which was reported to be free from disease a year later. The mother succumbed, as expected, a few days after the operation.

Several cases admitted as suspected meningitis were found to be suffering from haemorrhage into the meninges. This is a commoner disease in young people than is generally recognised. The diagnosis can be established only by lumbar puncture. Good results were obtained with treatment by hypertonic rectal saline but the danger of recurrence is always a real one and the cure is not absolute.

#### *Ophthalmia Neonatorum.*

Although ophthalmia in babies may be due to many different organisms, the treatment does not vary. Sulphapyridine, given orally, has been found to be effective in almost all cases. Our opinion is that sulphapyridine is more effective than sulphathiazole and the former is still used as a routine. Occasionally a baby has sickness with it



and, more rarely, it may produce a drug fever. In such cases, sulphathiazole is used. Albucid solution in the form of eye drops has been tried but it is not nearly so effective as sulphonamide given internally. Recently two cases were treated in which the infecting gonococcus was resistant to the sulphonamides. Penicillin was obtained and solutions of different strengths used. The weak solutions used at first gave only temporary improvement. A strong solution (10,000 units per c.c.) dropped into the eye at short intervals (half an hour or less) produced rapid and permanent cure.

At present, sulphonamide given orally is still the treatment of choice. This will cure most cases in a few days. If there is not a rapid improvement, say, within 48 hours, the organism responsible is probably sulphonamide resistant and treatment with penicillin drops should be instituted without further delay.

The usual irrigation of the eyes is necessary so long as there is purulent discharge from the eye.

#### *Intestinal Infections.*

Cases of dysentery and the infective gastro-enteritis of infants respond rapidly to treatment with sulphaguanadine. This new drug has undoubtedly reduced the numbers requiring admission to hospital.

Typhoid fever is one of the diseases uninfluenced by sulphonamides or penicillin. Fortunately, the numbers for enteric fever cases have been small. Those cases still require a long period in hospital before they are free from infection and skilful nursing is required during the acute stage. There has been no significant change in the methods of treatment except that it is not considered necessary now to restrict the diets so rigorously as formerly.

#### *Erysipelas.*

With the use of sulphonamides, this disease can now be successfully treated at home and it is only in exceptional circumstances that hospitalisation is required.

#### *Whooping-Cough.*

Each year, several cases of pneumonia, secondary to whooping-cough, were admitted. This is usually a broncho-pneumonia of a very intractable type which does not respond to treatment with sulphonamides. Open-air treatment is, in my opinion, the only effective remedy and this can only be done adequately under hospital conditions. In infants and young children, whooping-cough is a highly lethal disease, the fatal issue usually being the result of broncho-pneumonia or convulsions. The latter complication can be relieved by lumbar puncture.

#### *Smallpox.*

The outbreak of smallpox in the County in October, 1942, made it necessary for the Fosterton Smallpox Annexe to be opened at short notice. Twenty-eight patients were treated, the cases varying in severity from the most severe type of haemorrhagic smallpox to the mildest type of modified smallpox. Seven of those patients died.

The nursing staff was comprised of volunteers who were confined to the grounds of the Smallpox Hospital for the two months during which the hospital functioned. There was no sickness among the staff nor was there any evidence of infection being carried by those of us who visited and examined the patients daily. One man, however, who came near to the Hospital grounds and who had, unfortunately, failed to take the precaution of having himself revaccinated, contracted smallpox in a modified form.

A few of the patients were treated with 'convalescent serum,' obtained from the blood of patients who were in the convalescent stage of the disease. This appeared to shorten the duration of the illness. The results were encouraging but not conclusive.



*Cross-infection.*

In children's wards, the risk of cross-infection is unavoidable since a child admitted with any illness may be incubating some infectious disease. The commonest diseases occurring as cross-infections are chickenpox, measles and mumps, all having a long incubation period of two to three weeks. Apart from the history of contact, there can be no warning of disease during this interval between the time of infection and the first appearance of signs.

Measles, which is the most infectious, can be controlled when it occurs in a ward by injecting the contacts with immune serum. Except in very young children, it is often more desirable to modify the disease rather than arrest it completely.

Obviously, the danger of cross-infection diminishes with the size of the wards, the ideal being single cubicle wards.

*Valedictory.*

It has been a high privilege for me to be in charge of the Hospital during the past eleven years. The scope and variety of the work have given me a wide experience. Often it has been time-absorbing to the point of difficulty when working single-handed, frequently with dangerously ill patients it has been worrying (laryngeal diphtheria takes first place in this category), but at all times it has been full of interest. The medical interest has been accentuated during these years by the advent of two of the most potent therapeutic substances known to medical science—the sulphonamide group of drugs and penicillin. As is now well known, both have been shown to be life-saving drugs. Moreover, with their assistance, the course of many diseases can be cut short with consequent saving in hospital accommodation. The use of penicillin for generalised infections is limited by the fact that it must be administered by injection every three hours and this can only be done conveniently in hospital. Nevertheless, it is possible that development of those new methods of treatment will have an effect on hospital policy and planning for the future."

The admissions to Thornton Infectious Diseases Hospital in 1939 and 1940 were 474 and 626 cases respectively. The average number of beds occupied in 1939 was 28, the highest number 62 on 19th November, and the lowest 15 on 9th August, 1939. In 1940 the average number of beds occupied was 48, the highest number being 67 on 19th November, and the lowest 20 on 20th August, 1940.

**West Fife Infectious Diseases Hospital.**

Annual reports have been issued by Dr C. Barclay Reekie, Medical Superintendent, for each of the war years 1939-45, and reference to these is made for full details. The following table shows the total number of admissions each year with the average number of patients in hospital per day, the maximum number and the average duration of stay of patients in hospital :—

Year.	No. of Admissions.	Average Number of Patients per Day.	Maximum Number of Patients.	Average Duration of stay in Hospital.
1939	861	72	150	27
1940	1160	73	122	22
1941	861	50	85	22
1942	988	65	123	24
1943	773	50	92	21
1944	757	42.6	76	19
1945	728	46	82	22



### East of Fife Infectious Diseases Hospitals.

The following Table shows the number of admissions and average duration of stay in hospital for each year from 1939 to 1945 in the Fever Hospitals at Ovenstone, St Andrews, St Michaels and Auchtermuchty. As indicated above the latter hospital was closed for the admission of infectious diseases in 1940 and thereafter mainly used for the treatment of contagious diseases and other allied conditions. During the war years 703 cases of scabies and 52 with allied conditions were treated in Auchtermuchty Hospital.

Hospital.	Year.	Total Admissions.	Average Duration of stay in Hospital (Days).
Ovenstone ...	1939	68	28
	1940	107	21
	1941	58	50
	1942	77	29
	1943	84	29
	1944	46	25
	1945	77	27
		<u>517</u>	
St Andrews ...	1939	53	26
	1940	59	24
	1941	46	25
	1942	80	22
	1943	75	22
	1944	52	13
	1945	28	20
		<u>393</u>	
St Michaels ...	1939	96	26
	1940	193	20
	1941	141	28
	1942	145	22
	1943	180	22
	1944	127	30
	1945	129	21
		<u>1011</u>	
Auchtermuchty ...	1939	102	33
	1940	87	20
	1941	158	10
	1942	207	14
	1943	176	14
	1944	117	19
	1945	81	13
		<u>928</u>	



## TREATMENT OF SICK POOR.

The greater amount of employment during the war years materially reduced the Poor Roll and a corresponding reduction took place in demands for medical attention.

Year.	No. of Prescriptions Issued.			Cost of Drugs and Appliances.
1939 ... ..	7,496			£534 1 9
1940 ... ..	5,487			455 10 1
1941 ... ..	3,653			363 15 10
1942 ... ..	2,941			327 19 8
1943 ... ..	2,985			351 10 6
1944 ... ..	2,648			334 14 0
1945 ... ..	2,783			392 14 10½

Difficulty arose in finding adequate hospital accommodation for the sick poor. The influences at play were two-fold. In the first place, the Home and Hospital at Thornton became an annexe to Springfield Mental Hospital to allow for the reception of insane persons transferred from Larbert Institution as a result of a war-time reorganisation. This resulted in Dunfermline Home and Hospital having to admit cases from the whole County. It proved unable to do so. Patients were accordingly admitted to Cameron Hospital and a temporary building was erected at the Dunfermline Institution for the accommodation of able-bodied males and for nurses. In the second place, the ageing of the population has resulted in an increased demand for the nursing care of the aged and infirm and the serious housing situation has contributed by rendering younger folk perhaps less willing to have a sympathetic regard for the old. It is one of the major tragedies of our times that the old when they are not shut away in one room undernourished, lonely and neglected, have so often to spend their last days in the cheerless surroundings of an institution. The problem is becoming an urgent one and serious consideration will require to be given to provision for the chronic sick and the aged in equal measure as for those who are younger. The aged are not a people apart to be set aside and left to end their days with the briefest of attention.

The following numbers of persons were admitted to hospital for medical and nursing care :—

Year.	Dunfermline Home and Hospital.			Cameron Hospital.
1939 ... ..	232			—
1940 ... ..	382			—
1941 ... ..	358			11
1942 ... ..	255			74
1943 ... ..	290			100
1944 ... ..	260			14
1945 ... ..	302			43



## NUTRITION.

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Responsibility for the war-time food policy rested with the Ministry of Food and there is little doubt but that the manner in which the problem was handled was one of the outstanding achievements of the war. The Public Health Department, apart from routine duties involving the inspection and sampling of foodstuffs and the seizure of unsound food, had a part to play in the organisation. The Sanitary Inspectors acted as Food Enforcement Officers and the Medical Officer of Health as County Milk Officer until such time as the Ministry were able to take over the duties.

At a time when housing conditions were at their worst and when the population of the County was subjected to unprecedented physical and mental strain, it was a surprising phenomenon to find its health and stamina so well maintained. The maternal, infantile and neonatal death rates and the still-birth rate fell steadily; the physical condition of the school children was, in general, excellent; the adult population, although in the early years there were indications of waning vigour, quickly corrected by supplementary diet, in the mining community, showed no evidence of disability arising from inadequate diet; infectious diseases had a constantly low incidence; tuberculosis, always responsive to the deprivations of war-time, did not show the alarming increase which was an outcome of the first world-war. A major influence in maintaining this noteworthy state of health in the population was the national diet, which was more than ever before in conformity with physiological requirements and available to everyone irrespective of income. People may have complained about the monotony of their diet but no one during the war suffered from hunger.

There was one section of the community, however, which fared less satisfactorily than the remainder. Elderly people, particularly males, on the whole proved less able to withstand the pressure of the time than those who were younger. Continued work and unrelieved responsibilities at a time when they would normally have retired from active duties, often combined with unaccustomed home conditions, tended in many cases to accelerate the ageing process.



## FOOD INFECTION.

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As is indicated in the section on Infectious Diseases, an outbreak of para typhoid fever in 1945 in Cellardyke involving 15 persons was traceable to the consumption of infected ice-cream.

In January, 1943, in St Andrews, there was an outbreak of acute arsenical poisoning following on the consumption of sausages. Pure arsenious oxide in large amounts was recovered from the sausage meat. Traces of arsenic were still present in the faeces and urine of patients 101 days after consumption. In spite of intensive investigation by the Police, the source of the arsenic was not discovered. There were at least 150 cases of illness and 2 deaths. The occurrence pointed to the need for further safeguard in the sale and storage of arsenic. The outbreak was fully reported in the *Lancet* of 13th November, 1943, and is referred to at greater length in the section of the Report dealing with St Andrews.



## MENTAL HEALTH SERVICE.

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The extent to which the population is suffering from illness due to emotional disturbance is not known but it is now commonly recognised that the persistent worries, discouragements and other emotional upsets which people experience in these restless, insecure times are more and more being translated into symptoms of ill-health. The effects are manifest at all ages and result in much misery and loss of efficiency.

The County Council in 1944 had before them a report on the influences of emotional disturbances on general health and on the advisability of developing a mental health service integrated with the various services they have created for the promotion of physical health. As a result, they brought into being a Health Care Scheme under which they have established psychiatric clinics in general hospitals and have in view the provision of bed accommodation for cases requiring observation. They have created Child Guidance Clinics at which the educational and medical aspects of psychological investigation are co-related. They have provided children's homes and have elaborated a system for the careful selection of foster parents and are now contemplating the establishment of a hostel for instable or difficult children. The new service, therefore, provides for adults, including war service casualties in need of social after-care, and children including children removed from their parents and delinquent children.

In control of the Scheme is the Health Care Committee composed of representatives in equal numbers of the Social Welfare, Education and Public Health Committees with the County Medical Officer as administrative head. Collaboration is maintained with the Director of Education and with the Chief Social Welfare Officer. On the executive side, the clinical team is composed of the County Psychiatrist, who is also Medical Superintendent of the County Mental Hospital, a Psychologist, a Psychiatric Social Worker and the Deputy Medical Officer (Welfare). There are also three Teacher Psychologists who are concerned with the educational side of the work. Already there are indications that the staff is inadequate in number and composition to deal with the work involved.

A separate report was submitted to the County Council giving details of the work accomplished during 1945.



## SEA AND AIR PORT SANITATION.

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Methil is not an "Approved Port" in terms of the International Sanitary Convention of Paris, and in pre-war years the inspection of shipping was confined to specific complaints and the routine medical examination of passengers arriving from infected ports abroad. The volume and class of shipping did not call for any special comment until July, 1940, when the Port assumed a degree of importance comparable with many of the "Approved Ports" in the country. All manner of ships began to call at the Port and the "roads" outside were used as an assembly point for north, south and west bound convoys. Large numbers of passengers were also disembarked, necessitating the attendance of a Medical Officer almost daily and often during the night.

In July, 1941, representation was made to the County Council by the Seamen's Welfare Committee as to the necessity for securing improved living conditions on board ships for merchant seamen, and it was suggested that this could best be accomplished by instituting a system of regular inspection of all ships using the Port.

A measure of the position revealed that during the month of September, 1941, the number of ships which entered the Port was 185 and of that total, 4 only remained for less than 24 hours. Several of these ships were boarded and, from inspection of the crews, accommodation, it was evident that there was a definite need for a regular system of inspection.

From the beginning of October, 1941, inspections of ships were made by the Area Sanitary Inspector, as often as his other duties allowed, and while an improvement in seamen's living conditions was effected, it became increasingly evident that there was sufficient work in this direction to warrant the appointment of a full-time inspector. The Local Authority enlisted the co-operation of the Department of Health and, after agreement had been reached in regard to responsibility for expenses, a fully qualified Assistant acting under the Area Sanitary Inspector, was appointed for this duty in September, 1942.

A systematic and regular inspection of all ships using the Port was soon in operation and by means of repeated intimations to the Masters and Owners of defective or insanitary ships, the seamen's conditions were much improved whereby the men received some encouragement in their dangerous work. There is no doubt, however, but that much remains to be done before the living conditions of crews of the greater proportion of British ships is brought up to reasonable standards.

With the cessation of hostilities in Europe, the Port of Methil lost its strategical importance and the volume of shipping diminished.



considerably, and at the time of writing the traffic is less than that of the pre-war period owing to the lack of coal exports to the Baltic and Scandinavian Countries.

During the war years, the Area Sanitary Inspector also assisted the Medical Officer in the routine medical inspection of passengers disembarked at Methil when numbers were large. Sometimes as many as 100 or more were landed at one time and valuable assistance was rendered by the Sanitary Inspector in preparing lists of passengers with the address of their destinations and in checking up on the number disembarked from each boat while medical examination was proceeding.

### **Leuchars Airport.**

In December, 1941, additional and unexpected duties had to be undertaken in connection with the arrival of civilian passengers, refugees and service personnel at Leuchars Aerodrome from Sweden. The passengers were brought to Leuchars mainly by the British Overseas Airways Corporation, and the scheme was in operation until March, 1945. Arrangements for medical inspection of arriving passengers were undertaken during alternate weeks by the medical staff of the Public Health Department and the R. A. F. Medical Officers at Leuchars. The purpose of the examination was mainly to exclude persons suffering from infectious and contagious disease. Altogether, approximately 3,800 passengers were seen, but only a few minor cases of contagious disease were encountered, and for those appropriate arrangements were made. All the work had to be undertaken at night as the passenger carrying planes only travelled during darkness, and the work formed a considerable addition to ordinary daily duties.

The arrivals of passengers by air creates new problems for Port Sanitary Authorities in the control of infectious disease. For example, a passenger leaving Sweden by air might have been in contact, possibly unknown to himself, with a case of smallpox shortly before boarding the plane. He would arrive in this country in a few hours, and would not develop signs of smallpox until some days later, and would have shown no abnormality on arrival at an airport in this country. In such circumstances, and considering conditions in enemy occupied countries during the war, it is satisfactory to record that, so far as is known, no passenger arriving at Leuchars gave rise to an outbreak of infectious disease in this country. While this was no doubt partly due to good fortune, medical inspection on arrival at Leuchars contributed to the result.



## CIVIL DEFENCE MEDICAL SERVICES.

The 3rd of September, 1939, found the emergency medical services of the County in an advanced state of preparation. Premises for first-aid posts, first-aid and other parties had been selected, equipment had been secured and a substantial nucleus of personnel had been trained. In a short time there were in being :—

- 15 First Aid Posts.
- 5 Mobile First Aid Posts.
- 56 First Aid Party Depots.
- 62 First Aid Parties.
- 39 First Aid Points (including 9 up-graded).
- 16 Decontamination Depots.
- 16 Decontamination Squads.
- 73 Ambulances (including 15 converted buses).
- 126 Cars for sitting cases.
- 39 Mortuaries with appropriate transport.

In 1941, Cameron Hospital (202 beds) ; the extension of which had just been completed, was equipped and staffed for the immediate reception of war-casualties. With the addition of the beds in the three Cottage Hospitals and the hospitals in Kirkcaldy and Dunfermline, a total of 555 beds were available in the County for the reception of service and civilian casualties. At the Base Hospital at Bridge of Earn, there were 1,200 beds.

The training of personnel in first-aid and in anti-gas measures formed an important part of the war-time work, and this duty fell to the Public Health Department with the assistance of a number of general medical practitioners and trained nurses. In all 9000 people were trained in first-aid and 10,000 in anti-gas measures. The Sanitary Inspectors took a leading part in the training of the latter group and, as the war proceeded, they were helped by specially qualified volunteers. The Fife Branch of the British Red Cross Society and of the St Andrews Ambulance Association also rendered valuable assistance in placing trained personnel at the disposal of the County Council and in training others. The Women's Voluntary Services helped in organising classes for the training of housewives in emergency duties. There was indeed no lack of helpful support in the development of the civil defence medical services and it stands to the credit of a great many people that, in spite of the increased burdens placed upon them by the war, they willingly undertook the toils of training and the monotony of long spells of duty. When incidents occurred calling for a practical application of the knowledge they had acquired, without exception they acquitted themselves well.

Responsibility for the Civil Defence Services as a whole lay in the hands of the County Civil Defence Committee, of which the A. R. P. Controller was principal officer. Through the agency of



both, the medical services were closely integrated with the whole organisation. For the purpose of co-relating the hospital services, the County Medical Officer was appointed as Hospital Officer under the Department of Health.

As a means of retaining interest during long spells of inactivity arrangements were made for the treatment of minor injuries and of scabies in certain of the first aid posts, notably those at Lochgelly, Buckhaven and Torryburn. As a result voluntary personnel became inured to the sight of blood and proficient in practical first-aid and dressing.

An exceptional feature of the County medical arrangements was the duty of providing services for the Home Guard and certain military units. In this connection, 49 additional casualty collecting points were organised and the combined systems were so planned and interlinked that, had invasion occurred, premises, first-aid equipment and trained personnel would have been available at a maximum distance of two miles in any part of the County. The semi-military nature of the medical organisation thus created provoked an interest—sometimes an excitement—which did much to maintain efficiency throughout the period of the war.

Between 300 and 400 high explosive bombs and thousands of incendiary bombs were dropped in the County; the great majority during 1940 and 1941. Fortunately, few reached their target and no major incident arose. Casualties occurred in several places, notably St Andrews, Guardbridge, Anstruther, Crail and Burntisland. Nineteen people were killed and 46 injured by bombing. In addition, 14 civilians were killed and several injured through the explosion of sea mines and such incidents as the crashing of aeroplanes. A pictorial representation of the localities in which bombs fell is reproduced by kind permission of Messrs D. C. Thomson & Co., Ltd., Dundee.

Although at no time were the Civil Defence Medical Services severely tested, their state of efficiency was favourably commented upon by impartial observers, most of the credit for which rested with Drs. G. W. McIntosh, James Lawson and R. V. C. Ash, who, at Headquarters, devoted much time and thought to their elaboration and maintenance.

Now that the dust of conflict has subsided and there is no longer need for the maintenance of an emergency medical service, there is room for reflecting on the loss which has occurred in the disbanding of large groups of people who had become proficient in simple methods of alleviating human suffering. No doubt the lessons they learned will be carried into their own homes, but the nation as a whole would have benefited had means been taken to encourage war-time volunteers to assume a recognised place in the national peace-time services.







## MILK SUPPLY.

It is not proposed to give figures showing the variation in the numbers of milk producers during each of the war years. The following table for the eastern and western divisions will, however, serve to show the changes that have taken place within the County during that time.

	Year.	Total No. of Registered Producers.	No. of Producers		
			Certified Milk.	T. T. Milk.	Standard Milk.
Eastern Division	1939	176	7	6	18
	1945	164	6	29	14
Western Division	1939	200	1	7	16
	1945	192	2	45	64

It will be noted that while there has been a fall in the total number of producers, the percentage of those producing designated milk has increased from 12% in 1939 to 30% in 1945 for the eastern division, and from 12% to 57·8% in the western division. The sharp rise in the number of producers of designated milk, in spite of the difficulties of war-time, calls for favourable comment. It must not be presumed, however, that all dairy premises or producers' methods are satisfactory although there is no reasonable doubt that the standard of milk production is steadily, if perhaps slowly, rising. During the war years, it was not possible for either Medical Officers or Sanitary Inspectors to give the same attention to dairy premises as in peace-time. Producers were also handicapped and were not without their difficulties. Shortage of suitable staff, shortage of labour and materials to carry out improvements, work in the blackout and difficulties of transport are only a few of the circumstances which weighed against them. The inadequacy of the milk supply in relation to demand, with consequent rationing, has meant that no source of production could be curtailed or terminated without the most serious consideration. There can be no doubt that an abundant supply would make the present powers of Local Authorities to secure an improvement in the quality of the milk supply more easy of application.

In an endeavour to improve methods of production and to ensure a wholesome milk supply to the community, Fife County Council appointed two fully qualified Milk Officers in September, 1943. These Inspectors have done valuable work, not only in dairies producing designated milk but also in ordinary dairies for which there is no bacteriological standard for cleanliness. They are always on the move, inspecting, advising on proper methods of production or taking milk samples from this dairy or that. Where



samples are adversely reported on by the bacteriologist, they revisit in an advisory capacity and help the dairy management to eliminate any harmful influence which is likely to affect the milk, whether it be faulty methods or improperly cleansed and sterilised utensils.

In a White Paper issued in July, 1943, the Government announced its intention of taking power to exercise closer control over the quality of milk as it reached the consumer. The Minister of Food was by Regulation to make it an offence to sell milk in any area which he might schedule unless the milk was either heat-treated or from disease-free animals. The White Paper was followed by an Order made by the Secretary of State for Scotland under Regulation 55G of the Defence (General) Regulations, 1939, and entitled "The Heat Treatment of Milk (Prescribed Tests) Order (Scotland), 1944." At the same time, the Secretary of State issued an Amendment Order entitled "The Milk (Special Designations) Amendment Order (Scotland), 1944," to be read with the principle Order of 1936. In this Order, a new designation was created, viz., "Heat Treated," and it removed the ban on heating pasteurised milk more than once but restricted the temperature to which milk could be heated at any time to 173°F. This Order also defined two tests for pasteurised milk, viz., the Phosphatase Test and the Coliform Test whose purpose is to provide a check on post-pasteurisation contamination of the milk.

With regard to the White Paper mentioned above, no areas were ever scheduled or specified and the supposed control which was to be exercised by the Government has never materialised. It was intended under this scheme that all bulked milk sold would be pasteurised or heat-treated, but it permitted sale by retail of certain categories of milk without pasteurisation, viz., Certified and T. T. milk lawfully sold as such and Standard milk lawfully sold as such provided that all such milk sold by a dairyman was derived from a single herd.

The Heat Treatment of Milk (Prescribed Tests) Order (Scotland), 1944, prescribed two tests—the Phosphatase Test and the Methylene Blue Test—to which, under Defence Regulation 55G, pasteurised milk sold in areas specified by the Minister of Food and heat treated and sterilised milk sold anywhere in Scotland would be subject. As already indicated, no areas were ever specified and the Order, though now in force, has not been applied since, apart from the regular pasteurising plants licensed by the Local Authorities and not yet provided with approved testing facilities, there have been no applications for new heat treating or sterilising plants in the County or large Burghs.

As already indicated, the methods and, for the most part, the equipment used in dairying are satisfactory and the general standard of milk production is steadily rising but there are still some dairymen who take little or no practical interest in their work which is left to hired labour with no real experience of dairy methods or manage-



ment. This is only too apparent in the case of some of the producers of ordinary milk and the tests carried out clearly indicate that insufficient attention is being given to this important article of diet. The time is now opportune for instituting some fixed standard for non-designated milk as has already been done for Certified, T. T., and Standard milks. From the administrative side, this would be a decided advantage. At present, in the revocation or refusal of a registration certificate, it is largely a matter of opinion whether a dairyman is producing satisfactory milk. With a definite standard to work to, there would be no question but, as meantime there is no legal standard fixed for ordinary milk, officials are handicapped when it comes to a question of taking action against a dairyman. It is very desirable that dairy workers should be educated to regard dairy work as a skilled trade. A great deal could be done in this way to improve methods of handling milk, methods of production and the cleanliness of dairy premises and workers. Fife Regional Planning Advisory Committee have suggested the desirability of establishing a farm school in the County at which dairy workers could be trained. Representatives of the Department of Agriculture have also reported on a scheme drawn up by the Milk Marketing Board under which scholarships would be available for promising dairy workers and under which they would be entitled to attend a dairy course at Craibston Farm School, Aberdeenshire. While attendance at this course would not entitle the student to pay above the standard rates, it would increase his qualifications for the position of manager of a dairy farm.

The question of unregistered dairies has, for years, presented a problem to Public Health officials. In Fife County there are some 1,500 such dairies from which milk in small quantities is sold to employees or neighbours. There is no control over milk sold from unregistered premises and there can be no doubt that much of it is unsatisfactory and a frequent cause of tuberculous glands in young children. It is true that cows in unregistered premises are subject to clinical examination by the Veterinary Surgeons of the Department of Agriculture and that, under Section 5 of the Milk and Dairies (Scotland) Act, 1914, the Medical Officer of Health has power of inspection of cattle in unregistered premises but neither have the time for this very necessary work if it is to be done properly.

There is also need for more intensive veterinary supervision of dairy herds. The existing staff of Veterinary Inspectors is inadequate to deal with this work and they are, to a certain extent, hampered in their work by too many restrictions.

There is another matter with regard to designated dairy herds (Certified and Tuberculin Tested) which calls for attention. While the animals in such herds are healthy and free from disease and steps are taken both by clinical examination and by tuberculin testing to see that they remain tubercle free, it is found every now and again



that certain animals fail to pass the tuberculin test. They are, of course, immediately removed to prevent danger to the other animals and to safeguard the milk supply although there is little likelihood, at this early stage, that the milk will be infected. Such animals instead of being slaughtered, however, are sold in the open market and find their way into non-tested herds where they continue to give milk for human consumption. While at the time of testing these animals may not be actively tuberculous they do, as a rule, become actively so in the course of a year or so, infect other animals in the herd and contaminate the milk supply to the danger of the public. Against the slaughter of such animals out of hand, it is contended that the tuberculin test is not 100 per cent. reliable and that there would be a danger of slaughtering animals which are not, in fact, affected. Apart from immediate slaughter, these infected animals might be isolated into separate herds and the milk derived from them could then be pasteurised for the safety of the public. All calves of reactors should be removed at birth from the mother and all reactors should be specially marked in some way to identify them as such so that there would be a depreciation in their market value and as a deterrent to their purchase for ordinary herds.

The annual yield of milk from dairies within the County is not sufficient to meet the needs of the population and a considerable volume is supplied from sources outwith the County by the Milk Marketing Board. Nevertheless, as will be noted from the following Table for 1945, there is a large quantity of milk, both ordinary and designated, produced in Fife County. The estimated yield is based on an average of two gallons of milk per cow per day. The actual yield may be higher than this but two gallons per cow is considered to be a fair average.

**Estimated Milk Yield for 1945—Fife County.**

PREMISES REGISTERED	EASTERN DIVISION.			WESTERN DIVISION.		
	No. of Dairies.	No. of Cows.	Estimated Gallons of Milk.	No. of Dairies.	No. of Cows.	Estimated Gallons of Milk.
(1) Non-Designated (Ordinary)	115	952	694,960	81	1,461	1,066,530
(2) Certified	6	321	234,330	2	49	35,770
(3) Tuberculin Tested	29	1,087	793,510	45	1,560	1,138,800
(4) Standard	14	469	342,370	64	1,914	1,397,220
Totals	164	2,829	2,065,170	192	4,984	3,638,320

Total Yield of Milk for 1945	...	5,703,490 gallons.
Certified Milk for 1945	...	270,100 gallons.
T. T. Milk for 1945	...	1,932,310 gallons.
Standard Milk for 1945	...	1,739,590 gallons.
Ordinary Milk for 1945	...	1,761,490 gallons.



During the war years, an effort was made by the Public Health staff to encourage dairy farmers to undertake higher grade milk production—Certified, T. T., and Standard. Despite the many difficulties encountered, the response has been very gratifying. It will be noted from the above Table that out of a total yield of 5,703,490 gallons estimated for the County in 1945, no less than 3,942,000 gallons were derived from designated herds and that, of this quantity, 2,202,410 gallons were from Certified and T. T. herds, thus ensuring a large volume of milk which was safe for mothers and infants. Efforts will continue to be made to encourage other dairy farmers to produce the two higher grades of milk and it is hoped that, at no distant date, the bulk of our home produced milk will be from animals which have passed the Tuberculin Test.



## MEAT INSPECTION.

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In 1939, there were 7 public slaughter-houses situated in the western division of the County, viz. :—Buckhaven, Leven, Cowdenbeath, Lochgelly, Markinch, Leslie and Burntisland. There were, in addition, 7 private slaughter-houses. In the eastern division of the County, there were 3 public slaughter-houses, viz. :—Cupar, St Andrews and Anstruther. There were also 19 private slaughter-houses—13 in Cupar District, 3 in St Andrews District and 3 in Anstruther District. Of these slaughter-houses, 6 public and 4 private in the western division and 3 public and 6 private in the eastern division, were licensed by the Town Councils of the small Burghs.

Early in 1940, control of all slaughter-houses passed to the Ministry of Food. All the private slaughter-houses in the County, with the exception of that at Springfield Mental Hospital, were closed. In addition, the two public slaughter-houses at Leslie and Burntisland were closed. Slaughtering was confined to Cupar, St Andrews and Anstruther public slaughter-houses, and to Springfield in the east, and Buckhaven, Leven, Markinch, Lochgelly and Cowdenbeath public slaughter-houses in the west. This action of the Ministry in cutting down the number of small slaughter-houses had a great deal to commend it in controlling the number of animals slaughtered and in simplifying the work of meat inspection, which remained a function of the County Council. Sanitary Inspectors of the areas in which slaughtering was continued act as Detention Officers under the Meat Regulations. During the war years, they did an excellent job and maintained the high standard of meat inspection set in previous years. In view of the short supplies of meat throughout the war years, when it was essential that all meat fit for human consumption should be released and made available, Detention Officers exercised great care in ensuring that no sound meat was destroyed. The Ministry's prices were fixed to encourage farmers to dispose of their low-grade animals to the Ministry as only by this means could all meat fit for human consumption be secured. Where, therefore, many low-grade animals enter a slaughter-house, the weight of meat condemned was relatively higher than where only prime young animals were slaughtered.

The following Tables show the number of animals slaughtered and the weight in lbs. of meat condemned during the war years. It will be noted that while the number of cattle slaughtered has remained fairly constant, there has been a big drop in the number of pigs dealt with. The number of sheep slaughtered fell by more than half in the eastern division but was more than three times greater in the western division. As the bulk of meat condemned is derived



mainly from cattle, a column showing the lbs. of meat condemned per head of cattle slaughtered is included. This varied from year to year but is largely governed by the number of carcasses totally condemned.

**West Fife—Meat Inspection.**

Year.	No. of Animals Slaughtered.				Lbs. of Meat Condemned and Destroyed.	Lbs. Condemned per head of Cattle Slaughtered.
	Cattle.	Sheep.	Pigs.	Total.		
1939	8,545	11,438	4,081	24,064	161,339½	18·8
1940	10,025	19,351	2,209	31,585	243,049	24·2
1941	7,711	32,083	637	40,431	182,499¾	23·6
1942	7,928	41,257	416	49,601	153,744	19·3
1943	7,844	37,099	142	45,085	145,706	18·5
1944	8,297	38,573	304	47,174	157,359	18·9
1945	7,623	40,293	170	48,086	160,893½	21·1

**East Fife—Meat Inspection.**

Year.	No. of Animals Slaughtered.				Lbs. of Meat Condemned and Destroyed.	Lbs. Condemned per head of Cattle Slaughtered.
	Cattle.	Sheep.	Pigs.	Total.		
1939	4,685	38,406	2,658	45,749	87,987	18·7
1940	4,045	52,744	1,097	57,886	118,354	29·2
1941	3,488	30,244	383	34,115	91,653	26·3
1942	4,044	17,038	188	21,270	88,900	22·0
1943	3,746	16,375	110	20,231	76,602	20·4
1944	3,991	14,952	261	19,204	108,357	27·1
1945	4,093	17,381	100	21,574	117,558	29·1



## SALE OF FOOD AND DRUGS ACTS.

Despite the difficulties of war-time, the number of samples of food and drugs submitted to the County Analyst for investigation progressively increased. The greater part of the increase was due to intensification of sampling of milk supplies—a very necessary procedure, particularly in the interests of the health and safety of mothers and infants.

The following Tables give in detail the number of official and test samples collected each year in the landward and burghal areas of the County. Notes are appended indicating the action which was taken in respect of adverse reports of official samples.

1939.

	Official Samples		Test Samples		Total
	Total	Adul- terated	Total	Adul- terated	
Cupar Area ... ..	7	—	23	1	30
Burghs in Cupar Area ...	15	2	15	1	30
Anstruther Area ... ..	3	—	—	—	3
Burghs in Anstruther Area ...	13	1	—	—	13
St Andrews Area ... ..	—	—	—	—	—
Burghs in St Andrews Area ...	11	2	—	—	11
Kirkcaldy Area ... ..	—	—	—	—	—
Burghs in Kirkcaldy Area ...	1	—	—	—	1
Wemyss Area ... ..	—	—	—	—	—
Burghs in Wemyss Area ...	—	—	—	—	—
Lochgelly Area ... ..	49	3	—	—	49
Burghs in Lochgelly Area ...	10	—	—	—	10
Dunfermline Area ... ..	37	1	—	—	37
Burghs in Dunfermline Area ...	21	1	—	—	21
Beath Area ... ..	—	—	—	—	—
Burghs in Beath Area ...	—	—	—	—	—
Total ... ..	167	10	38	2	205

*Adulterated Official Samples.*—10 (Sweet Milk, 8; Mince, 2). Five vendors were fined sums ranging from £1 to £2, involving a total of £7; four were warned and in one case the charge was withdrawn on payment of expenses.



## 1940.

	Official Samples		Test Samples		Total
	Total	Adulterated	Total	Adulterated	
Cupar Area ... ..	17	—	12	1	29
Burghs in Cupar Area ...	31	—	26	2	57
Anstruther Area ... ..	6	—	—	—	6
Burghs in Anstruther Area ...	20	—	1	—	21
St Andrews Area ... ..	3	—	—	—	3
Burghs in St Andrews Area ...	52	1	—	—	52
Kirkcaldy Area ... ..	—	—	5	3	5
Burghs in Kirkcaldy Area ...	6	—	—	—	6
Wemyss Area ... ..	—	—	7	—	7
Burghs in Wemyss Area ...	6	2	4	2	10
Lochgelly Area ... ..	20	—	1	—	21
Burghs in Lochgelly Area ...	8	—	—	—	8
Dunfermline Area ... ..	33	2	—	—	33
Burghs in Dunfermline Area ...	4	1	1	—	5
Beath Area ... ..	3	—	—	—	3
Burghs in Beath Area ...	3	—	—	—	3
Total ... ..	212	6	57	8	269

*Adulterated Official Samples.*—6 (Sweet Milk). Four vendors were fined sums ranging from £1 to £5, involving a total of £14; one was warned and in another case no action was taken.

## 1941.

	Official Samples		Test Samples		Total
	Total	Adulterated	Total	Adulterated	
Cupar Area ... ..	8	—	3	—	11
Burghs in Cupar Area ...	—	—	—	—	—
Anstruther Area ... ..	11	—	71	3	82
Burghs in Anstruther Area ...	21	—	—	—	21
St Andrews Area ... ..	—	—	—	—	—
Burghs in St Andrews Area ...	35	2	40	—	75
Kirkcaldy Area ... ..	12	—	79	1	91
Burghs in Kirkcaldy Area ...	43	1	5	—	48
Wemyss Area ... ..	12	—	71	—	83
Burghs in Wemyss Area ...	41	4	2	—	43
Lochgelly Area ... ..	28	3	49	3	77
Burghs in Lochgelly Area ...	10	—	2	—	12
Dunfermline Area ... ..	22	3	189	1	211
Burghs in Dunfermline Area ...	2	—	—	—	2
Beath Area ... ..	—	—	—	—	—
Burghs in Beath Area ...	—	—	—	—	—
Total ... ..	245	13	511	8	756

*Adulterated Official Samples.*—13 (Sweet Milk, 12; Sliced Sausage, 1). Even vendors were fined sums ranging from £1 to £10, involving a total of £27; one was warned and in another case no action was taken. In four cases the charges were withdrawn.



## 1942.

	Official Samples		Test Samples		Total
	Total	Adul- terated	Total	Adul- terated	
Cupar Area ... ..	11	6	27	5	38
Burghs in Cupar Area ...	25	3	2	1	27
Anstruther Area ... ..	17	—	103	6	120
Burghs in Anstruther Area ...	32	2	—	—	32
St Andrews Area ... ..	1	—	26	—	27
Burghs in St Andrews Area ...	20	2	33	—	53
Kirkcaldy Area ... ..	1	—	119	4	120
Burghs in Kirkcaldy Area ...	10	1	2	—	12
Wemyss Area ... ..	27	1	86	—	113
Burghs in Wemyss Area ...	32	2	2	1	34
Lochgelly Area ... ..	48	4	86	3	134
Burghs in Lochgelly Area ...	17	—	—	—	17
Dunfermline Area ... ..	44	3	198	8	242
Burghs in Dunfermline Area ...	4	1	—	—	4
Beath Area ... ..	3	1	—	—	3
Burghs in Beath Area ...	3	—	—	—	3
Total ... ..	295	26	684	28	979

*Adulterated Official Samples.*—26 (Sweet Milk, 16 ; Whisky, 8 ; Mince, 1 ; Mince Meat, 1). Fourteen vendors were fined sums ranging from £1 to £10, involving a total of £55 ; three were warned and in eight cases no action was taken. In one case the charge was withdrawn.

## 1943.

	Official Samples		Test Samples		Total
	Total	Adul- terated	Total	Adul- terated	
Cupar Area ... ..	11	1	78	3	89
Burghs in Cupar Area ...	9	1	—	—	9
Anstruther Area ... ..	5	2	126	5	131
Burghs in Anstruther Area ...	19	2	—	—	19
St Andrews Area ... ..	9	—	37	—	46
Burghs in St Andrews Area ...	33	—	17	—	50
Kirkcaldy Area ... ..	—	—	114	3	114
Burghs in Kirkcaldy Area ...	—	—	1	—	1
Wemyss Area ... ..	16	—	64	1	80
Burghs in Wemyss Area ...	28	—	—	—	28
Lochgelly Area ... ..	61	1	121	2	182
Burghs in Lochgelly Area ...	16	2	—	—	16
Dunfermline Area ... ..	32	2	186	7	218
Burghs in Dunfermline Area ...	4	—	—	—	4
Beath Area ... ..	—	—	7	—	7
Burghs in Beath Area ...	—	—	—	—	—
Total ... ..	243	11	751	21	994

*Adulterated Official Samples.*—11 (Sweet milk, 8 ; Whisky, 2 ; Rum, 1) Seven vendors were fined sums ranging from £1 to £10, involving a total of £26 two were warned and in two cases no action was taken.



## 1944.

	Official Samples		Test Samples		Total
	Total	Adulterated	Total	Adulterated	
Cupar Area ... ..	2	—	155	9	157
Burghs in Cupar Area ...	29	2	—	—	29
Anstruther Area ... ..	1	—	199	5	200
Burghs in Anstruther Area ...	10	1	—	—	10
St Andrews Area ... ..	4	4	75	2	79
Burghs in St Andrews Area ...	31	2	15	—	46
Kirkcaldy Area ... ..	—	—	177	3	177
Burghs in Kirkcaldy Area ...	—	—	—	—	—
Wemyss Area ... ..	—	—	139	2	139
Burghs in Wemyss Area ...	—	—	—	—	—
Lochgelly Area ... ..	57	4	146	—	203
Burghs in Lochgelly Area ...	28	1	—	—	28
Dunfermline Area ... ..	48	4	211	2	259
Burghs in Dunfermline Area ...	5	—	—	—	5
Beath Area ... ..	1	—	15	—	16
Burghs in Beath Area ...	—	—	3	—	3
Total ... ..	216	18	1135	23	1351

*Adulterated Official Samples.*—18 (Sweet Milk, 14 ; Whisky, 2 ; Rum, ; Mince, 1). Twelve vendors were fined sums ranging from £1 to £10, involving a total of £56 ; three were warned and in three cases no action was taken.

## 1945.

	Official Samples		Test Samples		Total
	Total	Adulterated	Total	Adulterated	
Cupar Area ... ..	18	2	189	9	207
Burghs in Cupar Area...	11	2	1	—	12
Anstruther Area ... ..	4	—	191	8	195
Burghs in Anstruther Area ...	8	4	—	—	8
St Andrews Area ... ..	—	—	94	2	94
Burghs in St Andrews Area ...	52	—	7	—	59
Kirkcaldy Area ... ..	—	—	176	2	176
Burghs in Kirkcaldy Area ...	2	—	—	—	2
Wemyss Area ... ..	—	—	95	—	95
Burghs in Wemyss Area ...	—	—	—	—	—
Lochgelly Area ... ..	16	—	143	7	159
Burghs in Lochgelly Area ...	17	1	—	—	17
Dunfermline Area ... ..	22	3	296	6	318
Burghs in Dunfermline Area ...	5	—	—	—	5
Beath Area ... ..	—	—	21	1	21
Burghs in Beath Area ...	—	—	—	—	—
	155	12	1213	35	1368

*Adulterated Official Samples.*—12 (Sweet Milk, 7 ; Whisky, 2 ; Rum, 2 ; Gin, 1). Six vendors were fined sums ranging from £2 to £6, involving a total of £24 ; three were warned and in three cases no action was taken.



## HOUSING.

### General Survey.

War-time scarcity of labour and material, added to the inadequacy of the pre-war building programme, had a lamentable effect on the housing situation. It would be superfluous now to draw attention to the shortage of houses which is only too apparent and to the imperative necessity for a speedy remedy. The sight of new houses being erected in large numbers will be a source of satisfaction not only to those in desperate need of accommodation but also to those officials of the County Council who have had the painful duty of dealing with appeals ranging from the pitiful to the angry or embittered. In the case of the vast majority of applicants, nothing could be done as the necessary houses did not exist. Probably no class of applicant has caused so much concern as married couples with families, forced to live in sub-let rooms without sanitary conveniences and often without a suitable fireplace on which to cook meals. In addition to overcrowding, the number of houses unfit for human habitation has sharply increased because of the impossibility of effecting repairs and renovations.

The following Table shows the number of County houses completed during the years 1939-45, the majority in 1939.

Sites.	Apartments.			Total.
	3	4	5	
Cardenden ... ..	47	42	12	101
High Valleyfield ... ..	8	16	2	26
North Queensferry ... ..	6	—	2	8
Woodside ... ..	10	8	—	18
Chapel ... ..	8	4	—	12
Glencraig ... ..	32	36	12	80
Thornton ... ..	4	32	4	40
Halbeath ... ..	30	16	2	48
Lumphinnans ... ..	14	22	4	40
Methilhill ... ..	36	54	16	108
Colinsburgh ... ..	18	2	—	20
Freuchie ... ..	8	10	2	20
Kingskettle ... ..	8	10	2	20
Lower Largo ... ..	18	4	—	22
Kelty ... ..	—	16	2	18
Lochore ... ..	12	8	—	20
East Wemyss ... ..	12	6	—	18
Comrie ... ..	19	10	4	33
Wellwood ... ..	26	8	2	36
<i>Agricultural Houses—</i>				
Auchtertool ... ..	—	4	—	4
Arncroach ... ..	—	2	—	2
Craigrothie ... ..	—	2	—	2
Dunshalt ... ..	—	4	—	4
Totals ... ..	316	318	66	700



As regards the housing situation in rural areas, mention is made elsewhere in the Report of the difficulties which arise owing to the absence of water supply and drainage in several desirable villages in East Fife.

### **Housing (Rural Workers) Acts, 1926-38.**

The discontinuance of these Acts on 30th September, 1945, has had an adverse effect on the housing of rural workers. It is understood to be the intention of the Government to introduce new legislation dealing with this aspect of the housing problem. The delay in the appearance of concrete proposals is to be regretted. Owing to the importance of agriculture at the present time and to the necessity of securing a sufficiency of workers on the land, provision of adequate housing accommodation for this, the largest of the country's industries, is of as much importance as the provision of houses for workers in other industries which are apt to be placed more in the limelight.

The following Table shows the number of houses which were renovated under the Acts from 1939 to 1945.

1939	...	...	...	...	...	302
1940	...	...	...	...	...	186
1941	...	...	...	...	...	32
1942	...	...	...	...	...	12
1943	...	...	...	...	...	34
1944	...	...	...	...	...	45
1945	...	...	...	...	...	69
Total						680

### **Housing (Agricultural Population) (Scotland) Act, 1938.**

During the war years, relatively little advantage was taken of this Act, which is still in force. The Act enables a proprietor to obtain grant towards the replacement of a condemned house by a new house provided the new house is used to accommodate certain classes of workers, mainly agricultural. No doubt, high prices and shortage of labour and material had an influence.

The following table shows the number of houses completed under the Act during the years 1939-45.

1939	...	...	...	...	...	<i>Nil</i>
1940	...	...	...	...	...	27
1941	...	...	...	...	...	<i>Nil</i>
1942	...	...	...	...	...	2
1943	...	...	...	...	...	7
1944	...	...	...	...	...	6
1945	...	...	...	...	...	1
Total						43

### **Estimate of Housing Needs.**

It has not been possible to undertake during the war years, any accurate survey of housing either as regards overcrowding or



unfitness. A modified census, dealing with overcrowding only, was undertaken in 1945. The opportunity was taken while people were calling at Ration Book Distribution Centres, of asking particulars concerning the number of occupants in their houses and also the number of rooms. The information obtained was necessarily incomplete as all householders did not attend to collect their own ration books but sufficient information was obtained to give a rough approximation of the extent of existing overcrowding. In calculating from the survey the number and sizes of houses required to rehouse overcrowded families the standard defined in the Housing (Scotland) Act, 1935, was used to assess overcrowding and to allow for decanting while the formula of two persons per bedroom advocated by the Scottish Housing Advisory Committee was used to compute the numbers of houses required. These figures are given in the following table. They do not include houses necessary to replace unfit houses, to allow for natural increase in the population, or for any probable future industrial developments.

<i>Areas—</i> Wemyss	...	...	...	...	196
Kirkcaldy	...	...	...	...	224
Lochgelly and Beath	...	...	...	...	263
Dunfermline	...	...	...	...	626
Cupar	...	...	...	...	196
St Andrews	...	...	...	...	82
Anstruther	...	...	...	...	116
Total	...	...	...	...	2701

In January, 1944, an estimate of total housing requirements was made in West Fife based on the number of houses revealed by the 1939 Survey to be required to deal with overcrowding and unfit houses, and the estimated number of additional houses required during the years 1943-45 and 1945-60. In East Fife no estimate was made of the 1945-60 requirements. A summary of the results of the estimate is given in the following table.

Area.	Houses shown in 1939 Survey as required for Overcrowding and Unfit Buildings.	Additional houses required for normal growth of Population, Marriages, and Industry.		Grand Total of Houses required in	
		1943-45	1945-60	1943-45	1945-60
Wemyss ...	59	598	1,290	657	1,947
Kirkcaldy ...	134	433	1,330	567	1,897
Beath ...	202	250	—*	452	452
Lochgelly ...	997	1,080	2,000	2,077	4,077
Dunfermline	495	1,206	2,758	1,701	4,459
<i>Total—</i>					
<i>Western Division</i>	1,887	3,567	7,378	5,454	12,832
Anstruther ...	67	67	—	134	—
Cupar ...	162	194	—	356	—
St Andrews	106	96	—	202	—
<i>Total—</i>					
<i>Eastern Division</i>	335	357	—	692	—

\* No estimate given as migration to East and West coalfields is a possibility



At the beginning of 1944 therefore it was estimated that a long term housing policy in West Fife would involve the building of at least 12,000 houses. This programme will take years to complete and changing economic, industrial and other factors are liable to alter the estimated requirements but it seems unlikely that the ultimate number of houses which will require to be provided by the Local Authority will be far short of this figure. As the war drew to its close in 1945, there was a tendency to believe that all problems, including that of housing, would, in the near future, right themselves. Current events are doing much to modify any such view.

### **Size of House.**

A housing problem which is becoming of increasing urgency is concerned with the high proportion of existing houses of three apartments or less. The problem will be accentuated if the standard of overcrowding recommended by the Scottish Housing Advisory Committee is eventually adopted. This standard is two persons per bedroom, each individual being counted as a person, irrespective of age. In Fife, the proportion of houses with three rooms or less is high. The 1931 Census showed that 73·3 per cent. of all houses in the County were in this category as compared with 71 per cent. in Scotland as a whole, and only 15 per cent. in England and Wales. Many of these small apartment houses, like others, have fallen increasingly into disrepair during the war and the owners will, in many cases, require to undertake repairs and reconditioning but it is exceedingly doubtful if they will be willing or able to increase their size. Accordingly, it must fall upon the County Council to provide houses of four and five apartments as the chief item of their building programme. The recognised evils attending overcrowding, the pressing need for more space for growing families, particularly in these days of extension of the school age, all point to the five-roomed house as being the ideal family house.

### **Housing of the Aged.**

A further problem to which the County Council have given preliminary consideration is the housing of the aged. Increase in the number of old folk and a proportionate diminution in the number of young people is rendering it more and more necessary for the Local Authority to intervene in the interests of the comfort and welfare of the aged. Meanwhile, scarcity of housing accommodation and a superabundance of small houses are restricting the living rooms available for the aged, and young people in this restless age are, in general, showing less regard for the old. The result is that a growing number of old people are being compelled to spend the evening of their days in insanitary houses or in a regimented institutional environment deprived of the privacy and comforts of home life. Before the immediate housing needs of the population have been fully satisfied, attention will require to be directed to the housing of the aged.



## **FIFE COUNTY COUNCIL ORDER CONFIRMATION ACT, 1940.**

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The passing of this Act was an event of major importance and its effect on matters affecting public health in the County will be far-reaching. Its two main provisions enable the County Council to acquire lands and construct works for the purpose of establishing water supply and drainage systems on a regional basis. Properly used, these powers will lead to a vast improvement in living conditions in large areas of the County. Pollution of the River Leven will come under control: a great impulse will be given to the development of modern housing conditions in the rural areas of the East of Fife: populous communities, both burghal and landward, will be assured of a plentiful supply of pure water. The Act foreshadows the end of most of the small water supply undertakings in the County and the purification of one of the worst polluted rivers in Scotland.

Other powers which the Act confers on the County Council are in relation to such matters as the control of buildings, cleansing, camping grounds and cleanliness in meat and provision shops.

War-time restrictions have prevented the County Council operating the powers conferred upon them but there has been no lack of evidence as to their intention to do so as soon as circumstances permit.



## WATER SUPPLIES.

As regards water supplies in general, there were no radical changes. In the Western Division available sources of water were adequate. In East Fife, the position still remains generally unsatisfactory in that difficult and embarrassing conditions exist in houses and dairies as a result of inadequate supply. Such conditions prohibit the County Council from discharging to the full their responsibilities regarding the renovation of old and the building of new houses and regarding the production of clean milk. The following are the villages in the East of Fife in which housing developments are seriously handicapped by inadequacy, poor quality, or lack of water :—Kilconquhar and Barnyards, Arncroach, New Gilston and Woodside, Ceres, Craigrothie, Pitscottie, Chance Inn, Dairsie, Collessie, Burnside, Kilmany, Logie, Letham, Luthrie, Gaudry, Kingsbarns, Strathkinness, Springfield. In these localities, the water supply is mainly or wholly from wells, often of doubtful quality and uncertain quantity.

In Kingskettle and Guardbridge, the existing supply is liable to be affected by summer drought, as is that of Pitlessie which is also of poor quality. In Balmullo, only a few houses have a gravitation supply, the remainder being supplied from wells. Leuchars supply was severely taxed by the large requirements of Leuchars Aerodrome and a special pipe conveying water from the Dundee-Newport main was laid down to augment the supply from Leuchars and was in use for some time.

As in previous reports, it must be stressed that a satisfactory water supply to the eastern part of the County must await the completion of the Regional Main. By the end of 1945, it seemed that a commencement with the actual work of the scheme might not be long delayed. The rapidity of the progress made will largely determine the speed of future housing development in East Fife, to say nothing of the termination of a part of household drudgery which too many of the population in that part of the County have had perforce to put up with for too long.

*Chlorination.*—During the war, all water supply undertakings were placed under the direction of the Secretary of State, acting in terms of the Defence (General) Regulations so as to ensure the chlorination of water supplies as a safeguard against contamination by possible enemy action. Investigations were also made into possible sources of alternative supply in case of enemy damage to main sources. Forty-two different emergency sources, mainly wells, were examined in Landward Areas and prepared for use, including arrangements for emergency chlorination.

**Preiodical Examinations as regards Quality.**—In the early summer of 1942, a report was submitted on the results of analyses



of the various supplies under the control of the County Council. Following this, arrangements have been continued for an analysis of supplies in Spring and Autumn. In spring, bacteriological examination is undertaken and in autumn both a bacteriological and a chemical examination. As was to be expected, results for different supplies have sometimes been of doubtful quality but have not in any case given cause for alarm from the standpoint of Public Health. Such supplies are often obtained from gathering grounds subject to manurial contamination and in present circumstances this cannot always be avoided.

In 1943, in compliance with a request from the Department of Health for Scotland, a return was made concerning the availability of piped water supplies for domestic use in rural areas. As a matter of interest the information supplied is reproduced in the following table :—

		BEATH	LOCHGELLY	WEMYSS	DUNFERMLINE	KIRKCALDY	ANSTRUTHER	ST ANDREWS	CUPAR	TOTAL
1	No. of houses in Landward Area ...	2050	4680	414	5735	1161	1878	1731	4419	22,068
2	(1) No. of houses with inside water supply (pumped or gravitation)	2030	4557	309	5219	989	1429	915	1988	17,436
	(2) No. of houses not having an inside supply, but within 100 yards of an available water main ...	<i>Nil</i>	93	71	338	135	70	21	252	980
3	No. of houses not covered by (1) or (2) above, but in villages, hamlets or groups of 20 or more houses so placed as to lie within a circle $\frac{1}{4}$ -mile in diameter ...	20	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>	30	165	305	1094	1,614
4	No. of houses in villages, hamlets or groups of 20 or more not connected to a public sewer ...	27	37	94	421	99	174	305	1568	2,720



## DRAINAGE.

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No important alterations in drainage arrangements were made in the County during the war years. It is necessary, however, to draw attention to conditions in East Fife, where the introduction of the Regional Water Scheme and the influence it will have on housing will compel the provision of extensive sewage disposal arrangements.

In the following places in East Fife, drainage arrangements are inadequate or absent.

*Anstruther Area.*—Kilconquhar and Barnyards, Arncroach, New Gilston and Woodside.

*Cupar Area.*—Ceres, Craigrothie, Pitscottie, Chance Inn, Burnside, Gauldry, Springfield, Collessie, Dairsie, Kilmany, Logie, Letham, Luthrie, Dunshalt, Kingskettle, Kettlebridge, Balmalcolm, Pitlessie, Gateside.

*St Andrews Area.*—Kingsbarns, Strathkinness and Balmullo.

It is evident that extensive works will be required to enable housing conditions to be brought up to modern standards. While the Rural Water Supplies and Sewerage Act, 1944, afforded encouragement in that it showed that the Government were alive to the problems of rural sanitation, in spite of its preoccupation with the war, the sum set aside, viz., £6,375,000, is entirely inadequate to meet the cost of providing adequate water and sewerage arrangements in rural areas in Scotland. The cost of schemes in Fife County alone would absorb more than one-third of the amount.

In order to submit to the Department of Health estimates for projected schemes, the County Engineer in a preliminary report put forward the following proposals for East Fife :—

- (1) *The Eden Valley Scheme*, consisting of a sewer in the course of the River Eden from below Springfield to Gateside draining Cupar Muir, Springfield, Pitlessie, Kingskettle, Kettlebridge, Freuchie, Newton of Falkland, Dunshelt, Strathmiglo and Gateside.
- (2) *Ceres Burn Scheme* dealing with Ceres and Craigrothie.
- (3) *Separate Schemes dealing with* Pitscottie, Dairsie, Balmullo, Strathkinness, Kingsbarns, Colinsburgh, Kilconquhar, Barnyards, Letham, Gauldry and Balmerino.

As regards the West of Fife, the County Engineer put forward schemes for the following places :—Cairneyhill, Carnock and Gowk-hall, Hillend, Kelty, Kinglassie, Milton of Balgonie.

*The River Leven Purification Scheme*, powers to promote which were conferred by the Fife County Order Confirmation Act, 1940,



includes the construction of a main sewer from the Firth of Forth at Leven up-river to Walkerton, with a branch outfall up the River Ore to Lochgelly and Glenraig, and another up the Lochty Burn to Kinglassie.

This scheme will provide drainage for all the villages en route, including Kennoway, Windygates, Milton of Balgonie, Coaltown of Balgonie, Cadham, Woodside, Walkerton, Thornton, Auchterderran, Lochore and Glenraig, Lochgelly Burgh, Kinglassie and Ballingry, and will also deal with trade effluents from the numerous industrial premises situated in the Leven Valley.

It will thus be seen that works required to put sewage disposal arrangements in the County on a satisfactory long-term basis will involve a heavy expenditure.



## REFUSE DISPOSAL.

The following are the numbers of Scavenging Districts in the County.

<i>Area.</i>	<i>No.</i>
Dunfermline ... ..	11
Lochgelly ... ..	4
Kirkcaldy ... ..	6
Wemyss ... ..	6
Beath ... ..	1
Anstruther ... ..	2
St Andrews ... ..	2
Cupar ... ..	11

In 1943, consideration was given to what improvements might be effected in existing arrangements, particularly as regards amalgamation of districts and the use of direct labour and motor freighters, especially in places where scavenging was let out to contractors. It was realised that the war-time difficulties of scarcity of vehicles, their high cost, and the shortage of labour would probably prevent the operation of any radically different arrangements, but it was felt that preparations should be made in good time in view of the large post-war building programme. Provisional proposals are briefly as follows :—

### *Dunfermline Area.*

Three districts to be formed :—

- (a) Crossford, Limekilns, Charlestown, Tulliallan, Valleyfield and Torryburn.
- (b) Milesmark and Parkneuk, Halbeath, Crossgates, North Queensferry and Aberdour.
- (c) Blairhall and Saline.

The possibility of Dunfermline Burgh disposing of refuse from neighbouring Special Districts was also suggested.

*Lochgelly Area.*—The amalgamation of Auchterderran with Kinglassie, and Lochore and Glencraig with Lumphinnans or the combination of the four into one unit, and possibly such amalgamation with Lochgelly Burgh as would be most practicable.

*Kirkcaldy Area.*—Two districts :—

- (a) Thornton, Woodside, Coaltown of Balgonie, and Cadham.
- (b) Windygates, Milton of Balgonie, Kennoway and Star ; Little Raith could be grouped with Cowdenbeath Burgh.

*Wemyss Area.*—Kennoway might be linked with Windygates, &c., as noted above. The remaining five special districts are already amalgamated and form one scavenging area.

*Beath Area.*—Kelty with Little Raith and Hill of Beath might be formed into one area or combined with Cowdenbeath Burgh.



*Anstruther Area.*—The two districts, Largo and Colinsburgh, with Kilconquhar have already formed one scavenging area.

*St Andrews Area.*—There is need for improved means for refuse disposal for Strathkinness, Balmullo, and Kincaple, and the whole area might be dealt with as one, especially if a dumping ground became available at Guardbridge in connection with a proposed foreshore reclamation scheme contemplated by the Guardbridge Paper Company.

*Cupar Area.*—Alternative arrangements are possible for this area. One would be to secure the co-operation of the six burghs in the area and for each burgh to collect refuse from the villages and hamlets related to these burghs. The alternative would be to divide the area into three zones, with a freighter and staff for each zone, as follows :—

- (a) Existing districts of Ceres and Dairsie plus Blebo Craigs, Pitscottie, Dura Den, Craigrothie and Chance Inn.
- (b) Existing districts of Springfield and Pitlessie plus Cupar Muir, Brunton, Abdie, Letham, Collessie and Giffordtown.
- (c) Existing Districts of Freuchie, Kingskettle and Strathmiglo, Dunshelt and Gateside.



## FACTORIES ACT, 1937.

The following table shows the work carried out by Sanitary Inspectors in the supervision of factories, workshops and workplaces in the landward areas of the County. Under the Act, the Local Authority is concerned in enforcement of the provisions regarding sanitary conveniences in all factories and the enforcement of provisions regarding cleanliness, overcrowding, temperature, ventilation, and drainage of floors in factories where mechanical power is not used. Black-out arrangements during the war in many cases interfered with ventilation as well as with lighting. Under prevailing conditions this was to some extent unavoidable. Under normal conditions, conditions of work are reasonably satisfactory, the main sources of complaint being in regard to sanitary conveniences, want of cleanliness, and inadequate drainage of floors. Defects were of a minor character, and were remedied following verbal or written notice.

### Defects Found.

	Insp.	Written Notices.	Want of Cleanliness.	Defective or Insufficient Sanitary Conveniences.	Other Offences.	No. Remedied
Kirkcaldy	208	5	6	6	4	14
Lochgelly	150	—	7	2	—	2
Vemyss	214	1	13	1	—	13
Dunfermline	58	10	3	5	1	9
Cupar	57	8	6	19	—	21
Struthers	96	1	—	1	—	1
St Andrews	76	1	—	1	—	1



## EXCERPTS FROM REPORTS BY SANITARY INSPECTORS.

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Each of the Sanitary Inspectors submitted to the Local Authority and the Department of Health reports on sanitary conditions in their respective areas. The following are excerpts from their reports :—

### Anstruther Area—Mr W. Falconer.

#### HOUSING.

As was to be expected there was a considerable decline in the amount of building work carried out in the Area during the war years, resulting in a decrease in the number of plans dealt with.

Ninety-seven sets of plans were submitted under the County Council's Building Bye-laws, five of these being in respect of the erection of 13 new houses ; 28 sets of plans for the reconstruction of 57 houses were dealt with under the Housing (Rural Workers) Acts ; also 4 sets of plans for the erection of 8 houses under the Housing (Agricultural Population) Act.

The withdrawal of the Housing (Rural Workers) Act Grants is to be regretted. These Grants had been particularly useful in this Area, and were likely to have been even more so during the next few years after the County Council's Regional Water Scheme is sufficiently far advanced to permit of the introduction of an adequate water supply to many rural cottages, which at present are badly supplied. It would then be possible to call for other improvements to those houses, to bring them up to modern requirements.

### Cupar Area—Mr G. Mark.

#### DRAINAGE.

*Eden Valley Scheme.*—While tentative proposals have been formulated, consideration should still be given to the scope of the Eden Valley Scheme. A trunk sewer from the County Boundary at Burnside following the River Eden with outfall at Guardbridge would not only link in the Ceres Burn Scheme and other isolated schemes such as Dairsie but could also take in the sewerage of the Burghs of Falkland, Auchtermuchty and Cupar. Such a scheme would not only have the advantage of minimising the number of small isolated works but would also be a means of providing suitable outfall for the drainage from many farm places. At present outfall from sewage disposal plants, and other isolated drainage schemes including factories, discharge into the River Eden. A trunk sewer as outlined would therefore prevent pollution of the Eden which from time to time is subject to pollution to varying degrees.

Samples of the River Eden have been taken over a period of years and there is no doubt that during certain periods the condition of the river water is seriously affected. Without exception, each



year, complaint is lodged by the Angling Association of dead trout in the river.

The proposals outlined in the Eden Valley Scheme would provide drainage for eighteen villages and three Burghs with an approximate population of 20,000. In addition, it would also serve to take the effluent from at least ten manufactories and five existing sewage disposal plants. The number of farm places which drain directly or indirectly to the River Eden number approximately sixty. These could also be incorporated.

All these factors tend to keep the River Eden polluted to a certain degree. To safeguard against this pollution and at the same time maintain the amenities of the River Eden, the only solution would appear to be a purification scheme as outlined.

The sewage disposal works at Strathmiglo continue to function satisfactorily, but although of fairly modern design the effluent discharged into the River Eden cannot be regarded as in every respect satisfactory. Complaints were received regarding the effluent for a period after the plant was put into operation, but conditions have improved considerably due principally to careful management.

At Freuchie the system is of obsolete design and while re-conditioning of the filters was carried out in 1939 they again require complete reconstruction. On this occasion it will be necessary to rebuild the entire walling of the filters and substitute a more modern type of distribution.

As a result of continual flooding after rain in Eden Valley Row it was necessary to carry out certain alterations to the line of the sewer. Since this was done no further flooding has occurred.

Drainage facilities throughout many villages and populous places are most unsatisfactory. In villages where considerable progress has been made in modernising and introducing sanitary conveniences, drainage systems without exception discharge into ditches or other water courses and where these are not available sub-soil percolation is adopted. The result is that water courses have become more or less open sewers. This is most evident in the village of Dunshalt where approximately 80 per cent. of the houses have inside conveniences. At this village the majority of the drainage systems are dependent on sub-soil percolation. Such a system has been worked for a number of years, but as will be realised the sub-soil through time must become water logged.

The position now is that with rains of normal fall, gardens in which percolation sumps are situated become flooded with sewage. A scheme for sewerage for this village was formulated but owing to war restrictions in the supply of labour and materials it was held in abeyance. Other villages where conditions are most unsatisfactory are Kingskettle, Pitlessie, Ceres, Gauldry and Springfield.



*River Tay Outfall.*—An area which has not so far been included in any proposals is Lindores, Glenburnie and Abdie villages. These three villages could be combined to have a main outfall to the River Tay. Such a scheme would also provide drainage facilities for groups of houses and farm places en route.

As will be realised, to undertake a scheme such as is outlined for the Eden Valley, will take a considerable number of years, and it may be thought that villages where drainage is most essential now will be neglected. Should it be decided, however, to proceed with such a scheme, drainage systems in villages with temporary purification could be proceeded with immediately and laid down at such levels that outfalls can be taken into the trunk sewer as it proceeds.

Representation has been made to form the villages of Letham Gaudry and Balmerino into Special Drainage Districts.

#### **Dunfermline Area—Mr A. M. Thomson.**

##### **MILK.**

Despite the difficulties of a nation embroiled in a protracted life and death struggle, the safety of the country's food and in particular, its milk supply, has, I think, been zealously guarded, and I am sure, nowhere more than in this County. At no time since Public Health administration began, has so much thought and effort been directed towards maintaining and improving the cleanliness and purity of the milk supply, as now, and rightly so, of course, but still more thought and still greater effort are required. We are a very long way from our goal. No one, having a knowledge of the subject can be anything like satisfied with the present state of affairs and a long up-hill climb lies ahead for all concerned—administrators, producers, and even consumers who have much to learn about milk.

It must be conceded, I think, that producers, especially of the designated milks, have, in the main, done a fairly good job of work during the past six difficult and troublous years. To those who know, their difficulties have been legion. They have been badgered by Departments, Ministries and Officials (and not the least of these ourselves) often with conflicting interests and small wonder that few threatened to put his cows "down the road" which threats were not, of course, carried out. And the result—without doubt cleaner milk supply, but not yet clean enough.

There are, in this Area now, some 75 registered dairy premises accommodating approximately 2,150 milk cows. Of the 75 herds 43 are licensed to produce designated milk—20 to produce Tuberculin Tested Milk, and 23 Standard Milk. Four retailers are licenced to retail designated milk—3 to sell Tuberculin Tested Milk and one to sell Pasteurised Milk.

Throughout the war years, these designated milks were regularly sampled, as is required by the Orders, at the point of production.



and at varying stages up to the time of delivery to the consumer. In all 1294 samples were taken of which 1051 complied and 243 did not comply. It will, perhaps, be appreciated that the great bulk of this work was, perforce, done outwith normal office hours because the vast majority of the samples were taken at the places of production and, as may be known, milking is usually done between 4 and 8 o'clock in the morning, and during the evening, between 4 and 7 o'clock. And after the samples were collected and brought back to the office, there remained the incidental book-keeping to be done, the packing of the bottles and their dispatch by passenger train.

Since the appointment by the Council of the Lady Milk Inspectors in every case where a sample has been found to have failed to comply, the failure has been followed by visits by the Lady Inspector. During these visits, methods were observed in order to detect faults, utensils and equipment were examined and advice given to those concerned. Demonstrations in the proper methods to be employed were also given. And here, perhaps, I may be excused if I digress a little in order to pay tribute to the wisdom of those responsible for the decision to appoint these Lady Milk Inspectors.

The Sanitary Inspector has not the time to follow up these samples which fail, with advisory visits which, in some cases at least, require the best part of a whole day, and this work is done very satisfactorily indeed in this Area by the Lady Inspector. Much patience and perseverance are necessary for this work and if I were a dairy farmer I think I would consider myself very fortunate if I were in a position to have such assistance and guidance.

The outcome of these advisory visits has been, with only one exception, the ultimate restoration of the milk supply to the standard required by the Order. The exception referred to resulted in the standard Licence held by a producer being revoked.

I think I am right in saying that, except in one or two cases only, milking at those premises producing Designated Milks is now done by machine with only here and there an isolated cow being milked sometimes, of course, only temporarily, by hand. The introduction of those milking machines must have meant much to the producers, harassed as they have been during the war by the prevailing shortage of labour. But the introduction of the machine has also brought with it the need for increased scrupulousness in the cleansing methods employed. The machine is a great asset provided it is properly cared for but it can be a big headache where rigid methods of cleansing and sterilisation are not adhered to.

Sampling, of course, is not confined to the Designated Milks and the milk produced from non-designated herds has also been regularly sampled. Likewise the milk supplied to schools has also been sampled as time permitted. It should perhaps, here, be noted that the milks supplied to schools in this area is Pasteurised and only two distributors are involved in this work—both Co-operative Societies.



During recent years, three samples of milk each year have been taken for biological testing. Without exception, the guinea-pigs when killed off, were found to be healthy.

Even during the war, with materials in short supply, a great many producers installed steam sterilisation plant in their dairy sculleries and there is no doubt that this has resulted in a very big improvement on the old method of plunging utensils into a boiler the water in which, I fear, was often far from boiling point.

Generally speaking, I think it has to be reported that each year has seen a definite and marked improvement in the methods designed to produce a cleaner and safer milk supply and I think we can confidently hope and expect to see a still more marked improvement in the immediate post-war years, but I would repeat that the situation still leaves much to be desired.

### **Kirkcaldy Area—Mr I. Goodfellow.**

#### **RIVER POLLUTION.**

Periodic inspections were made of the three main water courses viz., the Ore, Lochty and Leven, to ascertain the extent to which pollution was occurring due to sewage, trade and other effluents which discharge into them from the villages, pits and towns on the banks, but these rivers will never be free from pollution until such times as the Leven sewer is installed.

The only pollution complaint which I wish to record is that received from the anglers at Thornton regarding the destruction of fish at one particular part of the waterway. Several dead trout were submitted to the County Analyst who reported that they had been killed by phenols. The source of these phenols (tar acid) was traced to the local Marts where stock floats are regularly washed down with disinfectant, &c. The complaint was brought to the notice of the Mart proprietors who had the catchment traps in the wash beds cleaned out and who also, I understand, compensated the anglers for their loss.

#### **NUISANCES.**

The usual type of nuisances, *i.e.*, accumulation of refuse, choked drains, dirty back yards, were either reported or came to notice during visits for other purposes but in no case was it found necessary to resort to legal proceedings to have matters remedied.

Two types of nuisances which were the outcome of war conditions occurred—one was that created in the tank traps by persons dumping rubbish there and the other the use of the shelters as lavatories. The tank trap has now been filled in but until labour is available for the demolition of the shelters children and others will continue to create nuisances there. I trust that labour will soon be available for the removal of these shelters, especially the surface type of shelter erected on the Housing Scheme roads and gardens as this is where the cause of complaint occurs most frequently.



## FOOD SUPPLIES, &amp;C.

Very little sampling in terms of the Food and Drugs Act was carried out during the period under review but a great deal of sampling of milk, either at its source at the farm or in transit to the buyers, was done. The quality of milk reached quite a satisfactory standard but at times, especially in the summer months, the bacterial counts were higher than that permitted by statute but following visits of inspection, either by myself or the Milk Officer, better results were usually obtained on resampling.

Frequent visits were paid to food shops and inspections were made of the various foods exposed there for sale. A considerable quantity of tinned and other foods was found unfit for human consumption and was seized and destroyed.

*Food Depots.*—There are two County Council Food Depots for the preparation of school meals in Kirkcaldy Area—one at Redford, Thornton, and the other at The Ritz, Cowdenbeath—and these were regularly visited and inspected.

The Ritz Depot, which was in a building previously used as a public hall and variety theatre, was closed some time ago and a new modern depot established in Cowdenbeath Burgh. The Redford Cooking Depot is still in operation but it too will be closed whenever the new depot under construction at Markinch is ready. Each depot carried out its work satisfactorily though the premises were none too suitable for the purpose and the management in each is to be congratulated on their work.

**Lochgelly Area—John S. Riddle.**

## DRAINAGE.

There are four Special Drainage Districts—Auchterderran, Lochore and Glenraig, Lumphinnans and Kinglassie.

In Auchterderran District the purification works are situated adjoining the River Ore and are apt to be partly flooded when the river is in spate. Some years ago the County Engineer reported on extending and improving the works but nothing has been done and only the septic tanks and humus tanks are now in action, the contributors for the filter beds being worn out. The sewers are liable to be affected by subsidence and have to be carefully watched.

A section of the sewer in the Balgreggie Park Housing Scheme has sunk considerably and plans were prepared for laying a new sewer, but the work has not yet been carried out.

In Lochore and Glenraig District there are no purification works. Here the sewage flows into the Fitty Burn after passing through open trenches. The sewers on the whole have functioned satisfactorily but one part has had to be relaid twice owing to underground workings. New sewers were laid to serve new Housing Schemes at Crosshill and Lochore.



In Lumphinnans District the outfall sewer joins up with the Lochgelly Burgh sewers which in turn discharge the crude sewage into the River Ore. A sewer to serve a new Housing Scheme was laid and connected to the main outfall, but just beyond the point of connection a portion of the sewer has sunk and while it is functioning at present it may not be long before it will require to be relaid. Mining operations are, however, being carried out here and these may cause a further subsidence.

Large new Housing Schemes are in progress in the foregoing Drainage Districts and further schemes are contemplated, and I am doubtful if the existing sewers are fit to cope with the additional sewage.

In Kinglassie District there is no proper system of sewers. New sewers were laid to serve the Housing Schemes and these discharge into septic tanks with outlets to the Lochty Burn. Some private houses are connected to these sewers, and other houses not connected have small septic tanks which also discharge into the Burn. This is not satisfactory as this burn which receives all the drainage of the district flows quite close to a row of cottages and in dry weather the flow in the burn is very low.

The extra war-time duties undertaken were :—

*Decontamination.*—I was appointed Area Decontamination Officer with squads in Cowdenbeath, Lochgelly and Auchterderran who had to be trained, and special exercises were carried out either by the squads themselves or in conjunction with the Rescue or other organisations. The attendance of the members during "Alerts" was very satisfactory. I also had to organise a squad for Food Decontamination.

*Evacuation.*—As Reception Officer a considerable amount of work was carried out in preparing Visitors' Record Books, supervising the taking of census of accommodation, the reception of evacuees and payments to those taking in evacuees.

In 1939, 259 persons were evacuated from Edinburgh to the district, and in addition, 52 children were admitted to the scheme by being on holiday in the district at the time of the evacuation. The scheme was not a success and by the end of the year 257 had returned home.

In 1940, 151 evacuees were received. These were mainly privately evacuated.

In 1941 another 306 were received, only 30 of whom were official evacuees, and at the end of that year there were 153 evacuees still in the district.

In the beginning of 1942 a lady was appointed to act as a full-time Reception Officer.

*Food Control.*—I also acted as Enforcement Officer for the district and Burgh of Lochgelly from the beginning of 1940 until



October 1941, during which time a considerable number of inspections and enquiries had to be made.

*Fuel Control.*—At first the work in this connection was only the collection of four-weekly returns from coal merchants, but afterwards enquiries had to be made in all parts of the district with regard to other matters but mostly regarding applications for registration, specially for those living in sub-let rooms, and 375 visits have been made in this connection. 1,936 application forms for utility furniture have been issued from this office.

*County Pool Petrol.*—At the end of 1943 I was asked to take charge of the Petrol Pump at Lochgelly supplying petrol for County use and essential services and A. R. P. purposes. A monthly statement of amount of petrol issued has to be made up.

*Removal of Railings.*—In 1941 and 1942 all the iron railings were measured up and reported on and special visits were paid with regard to appeals and during the work of removal.

### **St Andrews Area—Mr R. Just.**

#### **WATER SUPPLY.**

There are four Special Water Districts in St Andrews Area, viz. :—Leuchars, Guardbridge, Dunino and Lathones. During the seven years under review there has been no increase in the number of Districts, and no extension of the existing Districts.

Owing to the introduction of sanitary fitments and to the continuing increase of water consumption, the position regarding water supplies in the Special Districts certainly has not improved. Similar criticism applies to the more rural parts of the District. The present position in the St Andrews Area may be briefly termed unsatisfactory, and therefore the need for the provision of a piped water supply throughout the District, so far as is practicable, is a very real one.

Details of the existing conditions in the four Special Districts have been submitted in previous reports, and as the work of providing a gravitation supply by means of the Regional Water Scheme is now in progress it is sufficient to say that during the war years the supply of water in Special Districts has been maintained, although with difficulty during the summer months and with no margin of reserve.

In order to safeguard the existing water supplies samples from the Special Districts are submitted twice yearly for chemical and bacteriological examination.

With the introduction of the Regional Water Scheme the villages of Balmullo, Strathkinness and Kingsbarns and other rural parts of the area—which draw their water from shallow wells—will be provided with a sufficient gravitation water supply, and improvements to housing conditions carried out which hitherto was practically at a standstill owing to the lack of a piped supply.



### SLAUGHTER-HOUSES.

The three private slaughter-houses formerly in operation at Newport, Tayport, and Mansion House, Mount Melville, were closed in January, 1940. Meat supply to Newport and Tayport is obtained from the slaughter-house in Dundee. The only slaughter-house remaining open in the District is at St Andrews. I carry out the duties of Detention Officer there. Throughout the period no irregularities fell to be reported.

The closing of many private slaughter-houses towards the end of 1940, and centralisation of slaughtering has much to commend it. More efficient control of slaughter-houses and closer inspection of meat has been the result. It is to be hoped that the present method will be continued.

Legislation for the fixing of a standard for ice-cream and registration of the premises in which it is prepared and sold is much overdue. The difficulties are not insurmountable and the most important matter for consideration is to ensure that the public are being supplied with a clean and wholesome product at all times.

### Wemyss Area—Mr A. M. Gough.

#### PASTEURISATION OF MILK.

The Pasteurisation Plant operated by Buckhaven Co-operative Society, Limited, gave much cause for concern and the record of results of samples of milk collected during the years 1939-1940 was such that the Local Authority was obliged to withhold the pasteurisation licence in January, 1941.

Considerable time and effort was devoted to ascertaining the causes of the unsatisfactory results, and although it was demonstrated that the Holder Type plant then in operation could produce milk which complied with the prescribed conditions the Society decided to replace it with a High Temperature Short Time plant. Very few H. T. S. T. plants were then in operation and the Graham-Enoch model which was installed in May, 1943, was the first of its kind to be operated in the country.

Samples drawn from the H. T. S. T. plant have demonstrated that given a reasonably clean supply of raw milk the plant can, when kept properly clean and sterilized, produce pasteurised milk which will satisfy the prescribed conditions. It has been noted that it is not always possible to satisfy these conditions with milk as supplied by the Milk Marketing Board from their Aberdeen Creamery.

The licence to produce Pasteurised Milk was restored to the Society in January, 1945.

The operation of the Milk Testing Scheme would give the Society control over the incoming supplies of milk and the power to reject unsatisfactory consignments and thereby enable them to eliminate all outside factors which might reflect on the quality of the processed milk. The Society have under consideration the removal of their



dairy to more commodious premises which would house a plant of greater capacity, together with suitable bottle, crate and churn washing facilities, also up-to-date bottle filling and cold storage plant; provision is also to be made for a laboratory suitably equipped to deal with all tests under the Milk Testing Scheme. In view of these proposals it has been deemed uneconomic to establish a laboratory on the existing premises, and it is for this reason that the Milk Testing Scheme is not yet in operation at this creamery.

#### PORT SANITATION.

Methil is not an "Approved Port" in terms of the International Sanitary Convention of Paris, and in pre-war years the inspection of shipping, using the docks, was confined to dealing with specific complaints. The volume and class of such shipping did not call for any special comment until July, 1940, when the port assumed a degree of importance comparable with many of the "Approved Ports" in the country. All manner of ships began calling at the port and the "roads" outside were used as an assembly point for north, south and west bound convoys.

In July, 1941, representation was made to the County Council by the Seamen's Welfare Committee as to the necessity for securing improved living conditions on board ships for Merchant Seamen, and it was suggested that this could best be accomplished by instituting a system of regular inspection of all ships using the port.

A measure of the position revealed that during the month of September, 1941, the number of ships which entered the port was 185, and of that total only four remained for less than 24 hours. Several of these ships were boarded and the crews' accommodation inspected, and it was evident that there was a definite need for a regular system of inspection.

From the beginning of October, 1941, I carried out inspections of ships, as often as my other duties allowed, and while a considerable improvement in seamen's living conditions was effected, it became increasingly evident that there was sufficient work in this direction to warrant the appointment of a full-time Inspector. The Local Authority enlisted the co-operation of the Department of Health in the matter and after agreement had been reached in regard to responsibility for expenses, a fully qualified Assistant, acting under my supervision, was appointed for this duty in September, 1942.

A systematic and regular inspection of all ships using the port was soon in operation and by means of repeated intimation to the Masters and Owners of defective or insanitary ships, the seamen's conditions were very much improved and this helped to encourage these men in their dangerous work.

With the cessation of hostilities in Europe the port of Methil was divested of its strategical importance and the volume of shipping using the port diminished considerably and at the time of writing, the traffic is less than that of the pre-war period owing to the lack of coal exports to the Baltic and Scandinavian countries.



## PUBLIC HEALTH SERVICES IN BURGHS

The following is a resumé of public health activities in Burghs for which the County Medical Officer of Health acts as Burgh Medical Officer and a brief report is submitted on transferred services in those Burghs which still retain the services of their own Medical Officer of Health.

### (1) Leslie Burgh.

*Infectious Diseases.*—The incidence of infectious diseases during the war years was remarkably low as will be seen from the following table for the years 1939-45. During the 7 years, there were only 53 cases of notifiable diseases, the highest number being 16 in 1940 and the lowest 2 in 1939. The health of the Burgh generally was good and calls for no comment.

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever. ...	1	9	6	2	—	2	5	25
Diphtheria ...	—	1	1	3	1	—	—	6
Erysipelas ...	1	1	1	1	—	2	2	8
Primary Pneumonia ...	—	1	1	1	2	1	—	6
Influenzal Pneumonia ...	—	—	—	—	—	—	—	—
Non-notifiable Pneumonia...	—	—	—	—	—	—	—	—
Cerebro-Spinal Fever ...	—	3	—	1	—	1	—	5
Dysentery ...	—	—	—	—	—	—	—	—
Malaria ...	—	—	—	—	—	—	—	—
Continued Fever ...	—	—	—	—	—	—	—	—
Typhoid Fever ...	—	—	—	—	—	—	—	—
Para-Typhoid B ...	—	—	—	—	—	—	—	—
Infective Jaundice ...	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	—	—	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—
Smallpox ...	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	—	1	—	1	1	—	—	3
Puerperal Pyrexia ...	—	—	—	—	—	—	—	—
Puerperal Fever ...	—	—	—	—	—	—	—	—
Totals ...	2	16	9	9	4	6	7	53

*Housing.*—In 1939, a start was made in the rebuilding of a clearance area in the east end of the Burgh where it was proposed to erect 16 cottage type houses. Hostilities broke out when only the foundations had been excavated and the work was stopped. On the outbreak of hostilities all empty houses and shops, including some condemned houses, were taken over by the military authorities. Owing to the demand for accommodation, the Town Council decided to reopen empty condemned houses if they were at all suitable for temporary occupation. By 1944, it was apparent that a large number of new houses would be required to meet the Burgh needs and an estimate of 500 was made at that time, 200 being required to meet the needs of overcrowding. In 1945, plans for 16 houses in two blocks of three storeys were approved by the Department of



**Health.** In 1944, plans were prepared for a scheme of 300 houses on ground outside the Burgh but by the end of 1945 the ground had not been acquired by the Town Council. There are meantime 789 inhabited houses in the Burgh and it is proposed to build 120 permanent houses as a first instalment and a further 500 permanent houses in the 10-15 years' programme.

**Water Supply.**—Despite the fact that hundreds of troops were stationed within the Burgh during the war years, the Burgh water supply proved reasonably adequate for the needs of the augmented population. Careful watch was kept for any undue waste, and the auxiliary supply from the Kirkcaldy main was seldom used. In 1944-45 no water was required from this source at all. There is an ample supply of water available at the source but lack of storage is a drawback. The impounding of the Balgillie Burn by building a dam across it would greatly add to the Burgh reserve. Alternatively, participation in the County Regional Water Supply Scheme should be considered. Without an additional source of supply, Leslie Burgh, on completion of their housing programme, are likely to encounter difficulty.

**Sewage Disposal.**—The two sewage disposal works functioned satisfactorily during the years under review but they are working at the limit of their capacity. One section of the Burgh, Cabbagehall, with approximately 100 residents, is without any means for the treatment of sewage and the sewer from this area discharges direct on the north bank of the River Leven. In summer, when the river is low, the crude sewage from Cabbagehall lies on the partly dry bed of the river and thus constitutes a nuisance. A plan has been prepared, however, for a complete new Burgh drainage scheme with larger sewers and a combined disposal works on the north side of the Burgh which will also take in Cabbagehall area. During the war years a small underground stream from Prinlaws, which was previously led into the Burgh sewer, was diverted from the sewer to the Cambo Burn, thus increasing the flow of the burn and decreasing the load on the disposal work by approximately a quarter.

**Vital Events.**—The following table shows the number of births, deaths, marriages, infant deaths and the infant mortality rate per 1000 live births during each of the war years :—

Year.	No. of Births.	No. of Deaths.	No. of Marriages.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	26	32	18	2	76.9
1940	31	47	28	1	35.7
1941	33	35	30	0	0.0
1942	38	28	36	1	37.0
1943	31	42	16	2	64.5
1944	47	26	21	3	60.0
1945	27	35	31	1	37.0



(2) **Kinghorn Burgh.**

*Infectious Diseases.*—During the years 1939-45 there were 161 cases of infectious diseases notified within the Burgh as shown in the following table. The incidence of diphtheria was very low, no cases having occurred since 1941. Scarlet fever remained fairly normal in incidence with the exception of 1943 when 17 cases were recorded. Thirty-five cases of dysentery were notified in 1944. The illness was of a very mild nature with a short duration of only 24-48 hours, and no one required hospital treatment. Diarrhoea was the main symptom with slight headache and malaise. The cases occurred mainly in January and December, 16 in the former month and 8 in the latter.

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ...	6	1	3	6	17	5	3	41
Diphtheria ...	—	1	2	—	—	—	—	3
Erysipelas ...	4	5	—	4	3	4	1	21
Primary Pneumonia ...	3	3	4	5	3	3	—	21
Influenzal Pneumonia ...	—	1	—	1	4	1	—	7
Non-notifiable Pneumonia...	—	1	—	—	—	—	—	1
Cerebro-Spinal Fever ...	—	1	1	—	—	—	—	2
Dysentery ...	—	—	—	9	9	35	4	57
Malaria ...	—	—	—	—	—	—	—	—
Continued Fever ...	—	—	—	—	—	—	—	—
Typhoid Fever ...	—	—	—	—	—	—	—	—
Para-Typhoid B ...	—	—	—	—	—	—	—	—
Infective Jaundice ...	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	—	—	—
Encephalitis Lethargica ...	1	—	—	—	—	—	—	1
Smallpox ...	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	—	2	—	—	—	—	2	4
Puerperal Pyrexia ...	1	—	—	1	—	1	—	3
Puerperal Fever ...	—	—	—	—	—	—	—	—
Totals ...	15	15	10	26	36	49	10	161

*Housing.*—During the war years all housing activity practically ceased. Apart from a few minor alterations and repairs there was only one application in regard to the provision of a new house at Abden Farm in 1944 for farm workers. This house is now completed. Although 198 houses had been provided under the various housing schemes up to 1939 there is a definite need for more new houses. Preparations for the erection of 52 additional houses are well in hand. While there are 699 inhabited houses within the Burgh, it is estimated that 274 additional houses are still required to meet the needs of the community, viz., 10 temporary, 64 permanent in the 2 years' programme and 200 permanent in the 10-15 years' programme.

*Water Supply.*—The Burgh depends mainly on its own supply which gathers in a storage reservoir from a catchment area extending to 175 acres at the Common and on water taken from a stone built field conduit with a catchment area of approximately 85 acres. Requirements over the amount derived from the above



two sources are obtained from Kirkcaldy Burgh. All water from the reservoir and stone conduit is filtered by passing through sand filters. Chlorination is also carried out. An adequate supply of water was available for all purposes during the war years.

*Sewage disposal.*—All sewage from the Burgh is discharged direct to the Forth without treatment. The discharge pipes are taken well out below low water level and periodic inspection of the beach failed to reveal any unsatisfactory features. All sewers were maintained in efficient working order.

*Vital Events.*—The following table shows the number of births, marriages, and deaths, also the infant deaths under 1 year, and the infant mortality rates during the war years.

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate
1939	25	15	34	3	120.0
1940	35	16	30	2	57.1
1941	52	21	29	1	19.2
1942	41	15	35	5	121.9
1943	38	17	28	4	105.2
1944	50	21	26	3	60.0
1945	37	16	26	2	54.0

### (3) Inverkeithing Burgh.

*Infectious Diseases.*—The incidence of disease during the war years is shown in the following table. With the exception of 1942, when there was a big increase in the number of cases of scarlet fever notified, numbers remained relatively low and under the normal average. The cases of scarlet fever coming to notice in 1942 occurred from May to December with the highest incidence in July when 12 cases were notified followed by 9 in the months of August and September, and dwindling to 4 in December.

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ...	9	7	6	51	7	1	16	97
Diphtheria ...	5	4	4	3	1	2	1	20
Erysipelas ...	3	2	—	1	—	—	2	8
Primary Pneumonia ...	10	5	8	4	3	8	6	44
Influenzal Pneumonia ...	1	—	—	—	—	—	—	1
Non-notifiable Pneumonia...	—	1	—	—	—	—	—	1
Cerebro-Spinal Fever ...	—	3	2	2	—	1	—	8
Dysentery ...	—	—	—	—	—	—	—	—
Malaria ...	—	—	—	—	—	—	—	—
Continued Fever ...	—	—	—	—	—	—	—	—
Typhoid Fever ...	—	—	—	—	—	1	—	1
Para-Typhoid B ...	—	—	—	—	—	—	—	—
Infective Jaundice ...	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	1	1	1	—	—	—	3
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—
Smallpox ...	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	1	1	1	—	—	—	—	3
Puerperal Pyrexia ...	—	—	—	—	—	—	—	—
Puerperal Fever ...	—	—	—	—	—	—	—	—
Totals ...	29	24	22	62	11	13	25	186



*Housing.*—Housing activity was at a complete standstill during the war years and as a result of this, and an influx of people from outwith the Burgh, the demand for houses became clamant. As most of the suitable ground within the Burgh was already built on, a petition was presented to the Sheriff in 1945 for an extension of the Burgh boundaries to enable houses to be built. The petition was granted and an area of 262 acres was added. In 1944, a site was acquired within the Burgh for the proposed erection of 82 temporary houses. Preparation of this site was begun in August, 1945, and is now nearing completion. The number of inhabited houses within the Burgh is 869, but 71 additional houses will be added when the Burgh extension takes place at 16th May, 1946. The Burgh contains many old houses which have served their day; they have outlived their usefulness for habitable purposes, and as soon as other accommodation is available, action will require to be taken either for renovation, where this is possible, or demolition where they cannot be modernised.

The estimated need is 1182 houses—82 temporary, 100 permanent in the two years' programme, and 1000 permanent in the 10-15 years' programme.

*Water Supply.*—The Burgh obtains its water from the Fife County Council main, the supply being ample and of excellent quality. Renewal of certain of the water mains within the Burgh was carried out in 1943 when a section of 2½-in. pipe in Preston Crescent was replaced by a 4-in. diameter pipe, and in 1945 when the old 5-in. diameter pipe in Hill Street was replaced by a 9-in. spun iron pipe. This work was necessary to improve the pressure as complaints of shortage of supply were being received, especially from the higher tenements.

*Sewage Disposal.*—All sewage from the Burgh is discharged by means of two pipes direct to the Firth of Forth without previous treatment. The main outfall is now working to full capacity and is laid at a very flat gradient. All sewers and drains have, however, been maintained in efficient working order and there is no evidence of any nuisance on the foreshore.

*Vital Events.*—The following table shows the number of births, marriages and deaths, also infant deaths and the infant mortality rate per 1000 live births for the years 1939-45 :—

Year.	No. of Births.	No. of Deaths.	No. of Marriages.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	57	46	26	4	70·0
1940	56	48	26	4	71·4
1941	76	44	23	4	52·6
1942	57	39	32	5	87·7
1943	78	57	20	1	12·8
1944	61	38	18	3	49·0
1945	61	50	28	2	32·7



(4) **Markinch Burgh.**

*Infectious Diseases.*—During the years 1939-45, 110 cases of infectious diseases were notified. The incidence of the various diseases was fairly normal throughout the period and calls for no comment. The following table shows the cases notified :—

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ... ..	9	1	6	4	2	3	8	33
Diphtheria ... ..	5	3	—	2	2	—	2	14
Erysipelas ... ..	—	1	—	—	4	6	3	14
Primary Pneumonia ... ..	2	—	7	3	3	2	5	22
Influenzal Pneumonia ... ..	1	1	—	—	2	—	—	4
Non-notifiable Pneumonia... ..	—	—	—	—	—	—	1	1
Cerebro-Spinal Fever ... ..	—	1	1	1	—	—	—	3
Dysentery ... ..	—	—	—	—	—	—	—	—
Malaria ... ..	—	—	—	—	—	—	—	—
Continued Fever ... ..	—	—	—	—	—	—	—	—
Typhoid Fever ... ..	—	—	—	—	—	—	—	—
Para-Typhoid B ... ..	5	1	—	—	1	—	—	7
Infective Jaundice ... ..	—	—	—	1	—	—	—	1
Anterior Poliomyelitis ... ..	—	—	—	—	—	—	—	—
Encephalitis Lethargica ... ..	—	—	—	1	—	—	—	1
Smallpox ... ..	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ... ..	—	1	1	—	2	—	2	6
Puerperal Pyrexia ... ..	—	—	1	1	—	—	—	2
Puerperal Fever ... ..	—	—	—	1	1	—	—	2
Totals ... ..	22	9	16	14	17	11	21	110

*Housing.*—Overcrowding within the Burgh is marked and there is a great demand for houses to meet this and the general needs of the community. It was impossible during the war years to build houses but in 1945 advance preparations were begun for 25 temporary houses on a site at George Street and 38 permanent houses at The Croft. As the existing Burgh is built up to capacity and there is no ground available for further houses the Burgh boundary is to be extended to the west. On this new site 100 permanent houses will be erected as a short term policy and a further 300 permanent houses are proposed for a long term programme in the next 10-15 years. The number of inhabited houses within the Burgh at the present time is 671.

*Disposal of Sewage.*—The Burgh sewage disposal works continued to function satisfactorily and sewers were maintained in efficient working order during the period under review. The effluent, which is discharged direct to the River Leven, is clear and relatively inoffensive. Markinch is the only community on the course of the River Leven where adequate provision has been made to deal with crude sewage. In view of the proposed housing programme, the matter of enlarging the works may have to come under review.



*Water Supply.*—The water supply continued to be obtained mainly from the town's own sources at Gledshole, Butterwell, and Railway Well, with the option of drawing from Wemyss County supply if required. Water from Gledshole flows by gravitation to sand filters at Stob Cross at the top of the town while water from the two other sources flows to collecting tanks in the golf course and is pumped to a high level tank at Newton Farm. Water from the latter is at much higher pressure than the Stob Cross water and ensures an adequate supply to all parts of the Burgh. The two supplies can be worked either separately or conjointly by means of a bypass pipe from the high pressure main at Stob Cross joining the low pressure main at School Street. The water from Butter Well and Railway Well is passed through mechanical filters while the Gledshole water is mainly dealt with by sand filtration as indicated above, but water from this source can, if need be at any time, be run into the collecting tank at the pump house and be treated by mechanical filtration. Storage available is very limited and each year some millions of gallons of water run to waste. A connection from Fife County Regional main would be of great benefit to the Burgh. With the housing programme now contemplated some such provision seems essential.

*Vital Events.*—The following table shows the number of births, marriages and deaths, also the infant deaths under 1 year and the infant mortality rate for each of the years 1939-45.

Year.	No. of Births.	No. of Deaths.	No. of Marriages.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	32	30	28	—	0.0
1940	35	27	34	2	57.1
1941	30	35	30	2	66.6
1942	35	36	19	1	28.5
1943	41	15	24	3	73.1
1944	35	24	35	4	114.0
1945	43	34	22	1	23.0

#### (5) Cowdenbeath Burgh.

*Infectious Diseases.*—The number of cases of infectious diseases notified during the years 1939-45 totalled 1034. Of these, 248 were cases of scarlet fever, 355 of primary pneumonia, 107 of influenzal pneumonia, thus forming the bulk of the notifications received. The total cases of diphtheria for the seven years amounted to only 81, the low incidence being undoubtedly favourably influenced by the immunisation campaign which was started in January, 1941. In 1938, 53 cases of diphtheria were notified in a single year. The following table shows the cases notified in each from 1939 to 1945 :—



Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ...	63	42	26	22	30	30	35	248
Diphtheria ...	15	20	12	14	5	9	6	81
Erysipelas ...	19	12	13	15	24	16	13	112
Primary Pneumonia ...	24	54	44	39	59	55	80	355
Influenzal Pneumonia ...	21	31	22	11	13	5	4	107
Non-notifiable Pneumonia...	—	5	—	1	4	1	1	12
Cerebro-Spinal Fever ...	1	5	10	6	2	1	1	26
Dysentery ...	—	—	—	—	—	—	2	2
Malaria ...	—	—	—	—	—	—	1	1
Continued Fever ...	—	—	—	—	—	—	—	—
Typhoid Fever ...	—	—	—	—	—	—	—	—
Para-Typhoid B ...	—	4	1	—	—	—	—	5
Infective Jaundice ...	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	2	1	—	—	—	3
Encephalitis Lethargica ...	—	—	—	2	—	—	—	2
Smallpox ...	—	—	—	1	—	—	—	1
Ophthalmia Neonatorum ...	4	13	6	6	9	9	16	63
Puerperal Pyrexia ...	2	2	1	1	3	2	3	14
Puerperal Fever ...	1	—	—	—	—	—	1	2
Totals ...	150	188	137	119	149	128	163	1034

*Housing.*—The housing position is probably more acute in Cowdenbeath Burgh than in any other part of Fife County. It has been aggravated by damage caused through mineral extraction with subsequent ground subsidence and damage to houses. This is fairly general and not confined to one place. Replacement of many of the damaged properties is the only remedy as repairs can only be of a temporary nature and at best a make-shift. Overcrowding is rampant and the need for new houses clamant. An early start was made, however, with the housing programme. Twenty permanent houses commenced two years ago, have already been completed at Ryrie Street, and the Scottish Housing Association have now completed 22 Weir houses at Barclay Street; 56 other permanent houses are under construction at Factory Road and 12 in James Street. A site has been approved for a further 590 permanent houses at Moss-side to be built in five to ten years. Sites have been prepared and foundations started for the temporary houses as follows:—James Street—22, Primmer Place—11, Barclay Street—6. A site for 35 additional temporary houses has been approved at Foulford Road and a site at Stevenson's Beath, though not yet approved, is being contoured for 136 temporary houses. While there is a long way to go before the complete needs of the community can be fully met the Burgh has made a good start. There are meantime 3,259 inhabited houses in the Burgh and an estimate of the full needs is 1,300 houses, 1,000 of these being in the long term policy.

*Water Supply.*—Cowdenbeath is in the fortunate position of having an abundant water supply of good quality. There is ample storage at Roscobie and Loch Glow Reservoirs. Lochgelly Burgh.



have an agreement with Cowdenbeath so that, in the event of a water shortage in the former, they can be supplied from Cowdenbeath.

*Sewage Disposal.*—The sewage disposal works continued to function satisfactorily and all sewers have been maintained in efficient working order despite ground subsidence affecting the system from time to time.

*Vital Events.*—The number of births, marriages and deaths, also infant deaths and the infant mortality rate are shown for each of the war years in the following table :—

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	218	109	149	19	87.0
1940	235	154	151	20	85.1
1941	256	122	139	17	69.0
1942	245	130	117	16	68.0
1943	296	125	146	20	73.0
1944	282	97	129	10	36.0
1945	252	130	135	16	64.7

#### (6) Buckhaven Burgh.

*Infectious Diseases.*—During the years 1939-45 there were 1,141 cases of infectious diseases notified within the Burgh. Of these, 91 cases were accounted for by scarlet fever, diphtheria and pneumonia. The continued high incidence of diphtheria from 1940 onward despite the immunisation campaign which was vigorously pursued was very disappointing. The type of disease prevalent was severe (gravis type) and, but for the fact that there was no let-up in immunisation, it is likely that the number of deaths would have been much higher. During the years 1939-45 there were 19 deaths—in 1939, 3 in 1940, 5 in 1941, 2 in 1942, 1 in 1943, 5 in 1944, and 2 in 1945. The ages at death varied from 17 years to 2½ years, 8 of the cases being pre-school children and 1 aged 5½ years, 1—6 years, 2—years, 1—8 years, 2—9 years, 1—12 years, 1—14 years, and 2—years. The ages of the pre-school children were as follows :—1—years, 4—3 years, 1—3½ years, and 2—4 years. Of the 19 patients who died, 17 had not been immunised. Although the incidence of both diphtheria and scarlet fever was above the average during the period in question at no time did it assume epidemic form. The following table shows the cases notified from 1939 to 1945 :—



Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ...	85	61	35	66	39	20	52	358
Diphtheria ...	20	51	53	52	42	81	43	342
Erysipelas ...	9	10	7	8	11	9	8	62
Primary Pneumonia ...	32	44	28	22	28	20	16	190
Influenzal Pneumonia ...	7	4	2	2	5	1	—	21
Non-notifiable Pneumonia...	1	—	—	—	1	—	—	2
Cerebro-Spinal Fever ...	1	3	2	2	2	1	2	13
Dysentery ...	—	—	1	—	—	—	—	1
Malaria ...	—	1	—	1	1	—	—	3
Continued Fever ...	—	—	—	—	—	—	—	—
Typhoid Fever ...	1	—	—	—	—	1	4	6
Para-Typhoid B ...	1	—	—	—	—	—	—	1
Infective Jaundice ...	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	1	—	1
Encephalitis Lethargica ...	—	—	—	4	1	1	—	6
Smallpox ...	—	—	—	1	—	—	—	1
Ophthalmia Neonatorum ...	6	11	17	13	24	26	18	115
Puerperal Pyrexia ...	1	3	1	1	4	1	2	13
Puerperal Fever ...	4	1	2	2	1	3	—	13
Totals ...	168	189	148	174	159	165	145	1148

*Housing.*—The housing position in the Burgh is acute and overcrowding is rampant. In 1944, an assessment of overcrowding was made when it was found that 33·7% of 1 roomed houses, 71·9% of 2 roomed houses, 44·8% of 3 roomed houses, 34·5% of 4 roomed houses and 43·2% of 5 roomed and over were overcrowded. There were 505 sub-lets in 1944. The total number of inhabited houses is 747. In 1921, there were 138 single apartment houses and now there are only 67. Three apartment houses have increased from 1,119 in 1921 to 2,344 at the present time.

The present building programme shows 150 temporary and 502 permanent houses already under construction. Sites are in preparation for a further 100 temporary and 120 permanent houses, but it is estimated that a total of 2,000 houses will be required to replace old houses now unfit for habitation, to abate overcrowding and sub-letting in the Burgh, and to meet the general needs of the community.

*Water Supply.*—No change has taken place during the war years in the water supply, which remains entirely satisfactory.

*Sewage Disposal.*—All sewage discharges direct to the Firth of Forth without previous treatment and sewers and drains were maintained in efficient working order. To meet the needs of new housing development several new main and subsidiary sewers have been laid. No complaints of pollution of the foreshore have been received.

*Refuse Disposal.*—Refuse disposal is by means of controlled tipping and the dumps have been kept in a very satisfactory manner. A rat-catcher works at the dumps as required and in this way the spread of rats to other parts of the Burgh is prevented.



*Vital Events.*—The following table shows the number of births, marriages and deaths, also infant deaths under 1 year, and the infant mortality rate for the years 1939-45 :—

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	336	174	191	32	95.0
1940	362	216	216	21	58.0
1941	341	208	225	28	86.0
1942	368	199	226	35	98.0
1943	395	159	208	29	73.4
1944	437	179	203	20	47.0
1945	401	224	216	25	64.0

### (7) Culross Burgh.

*Infectious Diseases.*—During the period 1939-45, there were 56 cases of infectious diseases notified within the Burgh as shown in the following table. The incidence of disease was relatively low over the whole period.

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ... ..	2	2	—	—	2	1	—	7
Diphtheria ... ..	1	2	—	1	—	—	—	4
Erysipelas ... ..	1	3	—	—	—	16	—	20
Primary Pneumonia ...	3	1	5	—	3	3	2	17
Influenzal Pneumonia ...	—	3	1	1	—	—	—	5
Non-notifiable Pneumonia...	—	—	—	—	—	—	—	—
Cerebro-Spinal Fever ...	—	—	2	—	—	—	—	2
Dysentery ... ..	—	—	—	—	—	—	—	—
Malaria ... ..	—	—	—	—	—	—	—	—
Continued Fever ... ..	—	—	—	—	—	—	—	—
Typhoid Fever ... ..	—	—	—	—	—	—	—	—
Para-Typhoid B ... ..	—	—	—	—	—	—	—	—
Infective Jaundice ... ..	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	—	—	—
Encephalitis Lethargica ...	—	—	—	—	—	—	—	—
Smallpox ... ..	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	—	—	—	—	—	1	—	1
Puerperal Pyrexia ... ..	—	—	—	—	—	—	—	—
Puerperal Fever ... ..	—	—	—	—	—	—	—	—
Totals ... ..	7	11	8	2	5	21	2	56

*Housing.*—Little change has taken place and no new houses were erected from 1939 to 1945. Plans have been prepared for 1 houses but the work of erection has not yet commenced. The estimated needs of the Burgh is 40 houses while there are meantime 135 dwellings occupied. Many of the houses are very old and replacement will be necessary of those found to be no longer fit for habitation.

*Sewage Disposal.*—All sewage is discharged to the Firth of Forth without previous treatment but the foreshore is in no way



polluted. Sewers and drains have been maintained in efficient working order.

*Water Supply.*—The Burgh derives its water from Glendevon Reservoir and the supply is ample and good.

*Vital Events.*—The following table shows the number of births, marriages and deaths, also infant deaths and infant mortality rate for the years 1939-45 :—

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	12	12	6	1	90.9
1940	8	24	4	0	0.0
1941	13	24	10	1	83.3
1942	14	33	11	2	142.8
1943	10	23	9	1	100.0
1944	8	14	7	0	0.0
1945	10	32	5	0	0.0

#### (8) Leven Burgh (Transferred Services).

*Infectious Diseases.*—During the 1939-45 period there were 339 cases of infectious diseases notified, the main diseases being scarlet fever 109, diphtheria 68, erysipelas 28, primary pneumonia 70, ophthalmia neonatorum 37. On the whole the incidence of disease was low and well below average from 1942 onwards. The following table shows the cases notified in each year from 1939 to 1945 :—

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ... ..	29	20	15	13	7	9	16	109
Diphtheria ... ..	8	6	18	3	15	4	14	68
Erysipelas ... ..	8	7	4	—	5	2	2	28
Primary Pneumonia ... ..	8	12	25	7	8	8	2	70
Influenzal Pneumonia ... ..	—	3	—	1	—	1	—	5
Non-notifiable Pneumonia... ..	—	—	—	—	1	—	1	2
Cerebro-Spinal Fever ... ..	—	6	2	1	—	—	—	9
Dysentery ... ..	—	—	5	—	—	—	—	5
Malaria ... ..	—	—	—	—	—	—	—	—
Continued Fever ... ..	—	—	—	—	—	—	—	—
Typhoid Fever ... ..	—	—	—	—	—	—	—	—
Para-Typhoid B ... ..	—	—	1	—	—	—	—	1
Infective Jaundice ... ..	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ... ..	—	—	1	—	—	—	—	1
Encephalitis Lethargica ... ..	—	—	—	—	—	—	—	—
Smallpox ... ..	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ... ..	7	8	2	4	5	8	3	37
Puerperal Pyrexia ... ..	—	1	—	—	—	1	1	3
Puerperal Fever ... ..	—	—	—	—	1	—	—	1
Totals ... ..	60	63	73	29	42	33	39	339

*Vital Events.*—The following table shows the number of births, marriages and deaths, also the infant deaths and infant mortality rate during the years 1939-45 :—



Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate
1939	119	76	101	4	33.6
1940	132	90	98	7	53.7
1941	144	94	88	9	64.2
1942	158	94	93	7	45.1
1943	152	57	100	11	72.3
1944	163	55	86	5	31.0
1945	154	90	97	7	45.4

(9) **Burntisland Burgh (Transferred Services).**

*Infectious Diseases.*—There were 320 cases of infectious diseases notified for the 1939-45 year period. Of these, 134 were scarlet fever and 104 pneumonia. The incidence of disease was otherwise very low, especially for diphtheria and no case of this disease occurred in 1945. The following table shows the cases notified in each year over the period in question :—

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ... ..	53	7	10	4	27	15	18	134
Diphtheria ... ..	2	5	4	2	3	3	—	19
Erysipelas ... ..	1	3	4	1	3	5	5	22
Primary Pneumonia ...	6	19	20	12	15	5	10	87
Influenzal Pneumonia ...	1	4	2	1	7	—	—	15
Non-notifiable Pneumonia...	1	—	—	—	1	—	—	2
Cerebro-Spinal Fever ...	—	1	3	1	1	1	—	7
Dysentery ... ..	—	—	2	—	19	—	1	22
Malaria ... ..	—	—	—	1	—	—	2	3
Continued Fever ... ..	—	—	—	—	—	—	—	—
Typhoid Fever ... ..	1	—	—	—	—	—	—	1
Para-Typhoid B ... ..	—	—	—	—	—	—	—	—
Infective Jaundice ... ..	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	—	—	—
Encephalitis Lethargica ...	—	—	1	—	—	—	—	1
Smallpox ... ..	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	1	—	—	1	1	—	1	4
Puerperal Pyrexia ... ..	—	1	1	—	1	—	—	3
Puerperal Fever ... ..	—	—	—	—	—	—	—	—
Totals ... ..	66	40	47	23	78	29	37	320

*Vital Events.*—The following table shows the number of births, marriages and deaths, also infant deaths under 1 year, and the infant mortality rate :—

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate
1939	88	40	56	3	34.3
1940	91	41	65	3	33.0
1941	95	59	67	6	63.0
1942	101	54	86	7	69.3
1943	98	20	64	7	71.4
1944	104	25	72	6	57.0
1945	92	57	59	1	10.8



(10) **Lochgelly Burgh.**

*Infectious Diseases.*—During the seven years from 1939 to 1945, there were 320 cases of infectious diseases notified within the Burgh. Of these, 141 were scarlet fever, 71 diphtheria, 33 erysipelas and 54 pneumonia. The incidence of scarlet fever in 1939 was above normal but there was nothing in the nature of an epidemic. Otherwise, the incidence of disease was low and very satisfactory. The following table shows the cases of each disease notified in each of the years under review :—

Disease.	1939	1940	1941	1942	1943	1944	1945	Totals.
Scarlet Fever ... ..	53	23	2	10	12	14	27	141
Diphtheria ... ..	6	22	10	5	17	6	5	71
Erysipelas ... ..	9	6	4	2	5	6	1	33
Pneumonia Primary ...	15	15	7	2	3	5	3	50
Influenzal Pneumonia ...	—	1	—	1	—	—	1	3
Non-notifiable Pneumonia...	—	—	1	—	—	—	—	1
Cerebro-Spinal Fever ...	—	3	4	—	—	—	1	8
Dysentery ... ..	—	—	—	—	—	—	—	—
Malaria ... ..	—	—	—	—	—	1	—	1
Continued Fever ... ..	—	—	1	—	—	—	—	1
Typhoid Fever ... ..	—	—	—	—	—	—	—	—
Para-Typhoid B ... ..	—	—	—	—	—	—	—	—
Infective Jaundice ... ..	—	—	—	—	—	—	—	—
Anterior Poliomyelitis ...	—	—	—	—	—	—	—	—
Excephalitis Lethargica ...	—	—	—	—	—	—	—	—
Smallpox ... ..	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	—	1	2	1	—	—	1	5
Puerperal Fever ... ..	—	—	—	2	1	—	—	3
Puerperal Pyrexia ... ..	1	1	—	—	1	—	—	3
Totals ... ..	84	72	31	23	39	32	39	320

*Housing.*—The position with regard to housing is much the same in this Burgh as elsewhere. There is a definite need of houses to counteract sub-letting and overcrowding, to replace unfit dwellings and to meet the general needs of the population. There are meantime 2,193 inhabited houses and it is estimated that 545 houses will be required. A start has already been made to build houses ; 76 Arcon and 55 Aluminium houses on the golf course site are under construction, and 42 permanent brick houses and 30 Swedish houses at Lumphinnans Road site.

*Water Supply.*—The Burgh water supply at Lochornie is insufficient for the community needs but by agreement with Fife County Council under the Dunfermline District Water Confirmation Act, 1918, Lochgelly Burgh can draw 10,000,000 gallons per annum at an upstanding cost of £312 10s. Additional water can also be obtained from Cowdenbeath (Loch Glow Reservoir) to the extent of 25,000,000 gallons if required. All water derived from Lochornie is passed through mechanical filters and also chlorinated.

*Sewage Disposal.*—All the Burgh sewage, along with that from Lumphinnans Special Drainage District, is conveyed direct to the



River Ore in one outfall sewer without any previous treatment, thus adding greatly to the grossly polluted state of this river. All sewers and drains were maintained in efficient working order.

*Vital Events.*—The following table shows the number of births, marriages and deaths, also infant deaths under 1 year, and the infant mortality rate during the years 1939-45 :—

Year.	No. of Births.	No. of Marriages.	No. of Deaths.	Infant Deaths Under 1 Year.	Infant Mortality Rate.
1939	147	77	91	8	54.4
1940	149	133	114	12	80.5
1941	123	112	97	11	89.4
1942	155	118	114	9	58.0
1943	191	115	118	6	31.4
1944	195	103	97	11	56.0
1945	158	119	85	3	25.3

#### (11) Burgh of Anstruther.

*Water Supply.*—During the war years the water supply throughout the United Burgh proved ample and no restrictions of any kind were necessary. The three reservoirs, Carnbee, Balmonth, and Ovenstone, provide 50,000,000, 5,000,000 and 7,500,000 gallons respectively. All the filtering area in each supply was regularly cleaned and attended to. Scouring of the main distributing pipes has been carried out periodically, at least once a year. Samples have been taken at intervals for examination.

*Drainage.*—The drainage system and sewer outfalls continued to work satisfactorily and caused little trouble or expense. All the principal sections of the sewers were regularly flushed by the Automatic Flushing System and all man holes in the roadways are reconstructed to form access or inspection chambers properly sealed down with concrete slabs. Main ventilating columns or shafts are placed at the head of all main sections of the system.

*Factories and Workshops.*—The last return made showed 82 factories on the Register. Visits were made to most of the premises during the war years by the Sanitary Inspector and causes of complaint were remedied without difficulty in all cases. A revised register will require to be made as a considerable number of new applications have been received.

*Housing.*—Little improvement was possible during the war years in the Burgh as elsewhere. Altogether only 3 plans were passed by the Dean of Guild Court for new houses of the bungalow type and 5 plans for alterations to houses other than building.

*Cleansing and Refuse Disposal.*—The motor freighter now enables the work to be carried out efficiently. The method of disposal is still controlled tipping at a disused quarry two miles from the Burgh.



*Milk Supply.*—There are in all five producers of milk in the Burgh two of whom have designated licences, and three are producers of ordinary milk. In addition there are two “dry dairies” which obtain their supplies from outwith the Burgh. Four producers also retail undesignated milk within the Burgh.

*Slaughter-House.*—Up to 1940, in addition to slaughtering at Anstruther, private slaughter-houses at Upper Largo, Crail and Colinsburgh were also in operation. In January, 1940, all slaughtering was centralised at Anstruther Public Slaughter-house. This procedure greatly facilitated proper and adequate meat inspection. The following table shows the total number of animals slaughtered and the weight of meat and offals condemned during the years 1939-1945.

Year	Animals Slaughtered				Weight (in lbs.) Condemned Meat and Offals
	Cattle	Sheep	Pigs	Calves	
1939	838	1,385	429	—	16,031
1940	795	2,237	271	59	24,606
1941	789	3,172	105	90	15,113
1942	756	4,455	44	182	16,985
1943	783	4,435	43	218	17,584
1944	817	3,869	42	273	17,964
1945	768	4,253	357	28	20,960

*Infectious Diseases.*—The following table shows the incidence of infectious disease in the Burgh during the years 1939-45. During 1943 there was the unusually large number of 20 cases of scarlet fever, and during 1942 and again in 1945 there was a small outbreak of Enteric (Paratyphoid) Fever.

	1939	1940	1941	1942	1943	1944	1945	Totals
Undulant Fever ...	—	—	—	1	1	—	1	3
Diphtheria ...	2	3	1	4	—	1	1	12
Dysentery ...	—	—	1	—	—	—	—	1
Erysipelas ...	—	1	—	—	—	1	2	4
Acute Primary Pneumonia	—	—	—	—	2	—	1	3
Puerperal Pyrexia ...	—	—	—	—	1	—	—	1
Scarlet Fever ...	2	—	—	7	20	1	3	33
Pulmonary Tuberculosis ...	2	2	—	—	1	1	1	7
Non-Pulmonary Tuberculosis	—	1	—	—	1	1	1	4
Cerebro-Spinal Fever ...	—	1	—	—	—	—	—	1
Enteric Fevers ...	—	—	—	10	2	—	15	27
Totals ...	6	8	2	22	28	5	25	96

#### Vital Statistics.

##### Estimated Population, 1939—3328.

Year	Births	Marriages	Deaths	Infant Mortality
				Rate
1939	35	38	38	28.5
1940	24	42	47	83.3
1941	41	37	47	73.1
1942	52	30	57	57.7
1943	47	24	48	—
1944	54	23	50	37.0
1945	20	30	42	150.0



(12) **Burgh of Crail.**

*Water Supply.*—The reserve supply from the deep Ribbonfield Bore continued to give good service. Samples of this water were taken at intervals and also of the filtered supply for bacteriological and chemical examination. The two reservoirs provide approximately 10,000,000 gallons storage. In dry weather this is insufficient to provide for the needs of the Burgh, and the supply requires augmentation from the bore. The filters were regularly cleaned. A considerable extra demand for water arose from the Royal Naval Air Station situated about a mile east of the Burgh. This demand was met during the war years. Scouring of the main distributing pipes was carried out at intervals.

*Drainage and Sewage Disposal.*—There is nothing new to report regarding drainage and sewage disposal and all the main sewer outfalls continued to operate satisfactorily. Practically no complaints were received regarding pollution of the foreshore as the outfalls now discharge into the sea at low water mark. The automatic flushing tanks were in regular use. Records of all alterations to drainage in the Burgh have been maintained, and the works inspected before being put into use.

*Housing.*—The operation of the Housing Acts was almost in abeyance during the war years, and very few alterations or improvements to houses were carried out. No surveys of houses as regards fitness or habitability were carried out, and this work will require to be taken up where it was of necessity left off in 1939.

*Factories and Workshops.*—Thirty-three Factories and Workshops appeared on the register at the commencement of 1939. During the year 1942 a revised register was prepared including Factories, Workshops and Workplaces, the total being forty-one. Several inspections were made of certain of these premises and in some cases written notices calling for improvement were served on the owner.

*Milk Supply.*—There is one producer of a designated milk in the Burgh and one retailer of undesignated milk.

*Infectious Disease.*—The following table shows the incidence of infectious disease in the Burgh during the years 1939-1945. The incidence has been uniformly low and the figures call for no special comment.

	1939	1940	1941	1942	1943	1944	1945	Totals
Undulant Fever ... ..	—	—	—	—	—	—	1	1
Diphtheria ... ..	4	—	1	2	2	1	—	10
Erysipelas ... ..	—	—	—	—	—	—	2	2
Acute Influenzal Pneumonia	—	—	—	—	—	—	1	1
Acute Primary Pneumonia	—	3	—	—	2	1	1	7
Puerperal Fever ... ..	—	—	—	1	—	—	—	1
Scarlet Fever ... ..	—	—	—	2	3	—	2	7
Pulmonary Tuberculosis ...	—	—	1	1	—	2	—	4
Non-Pulmonary Tuberculosis	—	3	—	—	1	—	3	7
Other... ..	—	—	—	—	—	—	—	—
Totals ... ..	4	6	2	6	8	4	10	40



## Vital Statistics.

## Estimated Population, 1939—1012.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	9	7	17	0.0
1940	10	19	23	0.0
1941	32	34	16	0.0
1942	30	21	15	66.6
1943	43	14	25	23.2
1944	29	7	21	34.4
1945	4	11	18	0.0

## (13) Burgh of Elie and Earlsferry.

*Water Supply.*—Practically no complaints were received throughout the war years regarding the quality of the water and no restrictions in the amount of the supply had to be enforced. The two reservoirs at Gillingshill with a total capacity of 33,000,000 gallons continued to supply the Burgh. An additional supply at Belliston from a Bore is available and is capable of supplying 220,000 gallons per day.

Scouring of the main distribution pipes takes place at intervals each year. At various times samples were taken from household taps to ascertain the quality of the water supplied.

*Drainage.*—All the main sewer outfalls discharge into the sea near low water mark and very few complaints were received regarding pollution of the foreshore. The system continued to work efficiently and little outlay was incurred on upkeep. Since the introduction of the Automatic Flushing System at the head of the main sewers regular flushing of these sewers has been in operation.

*Housing.*—During the years under review very few alterations or improvements were carried out in the Burgh. There are still a number of old properties which were scheduled as unfit in previous reports, but which have not been renovated or demolished. The exact position as regards the present condition of houses in the Burgh in the absence of a fresh survey is uncertain, but previous to 1939 a considerable amount of this work was undertaken, in preparation for further housing, and it will be necessary to revise and continue this after the inevitable interruption.

*Factories and Workshops.*—At the date of the last report nine Factories, thirty-one Workshops, and fifty-eight Workplaces were on the Register, a total of ninety-eight working premises within the Burgh. Visits were made to most of these places during the war years, and any complaints were remedied without the necessity of recourse to official action.

*Milk Supply.*—No dairy farms are situated within the Burgh. There is one "dry dairy" retailing undesignated and certified milk. A supply of designated milk is also available from three other retailers from outside the Burgh.



*Infectious Disease.*—The following table shows the incidence of notified cases of infectious disease within the Burgh during the years 1939-45. The total incidence was low and the figures do not call for any special comment.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	1	—	—	1	1	—	—	3
Erysipelas ... ..	—	1	1	2	—	—	1	5
Acute Influenzal Pneumonia	1	—	1	—	1	—	1	4
Acute Primary Pneumonia	—	—	1	1	1	1	—	4
Scarlet Fever ... ..	3	1	2	5	7	1	1	20
Pulmonary Tuberculosis ...	—	—	—	—	—	1	—	1
Non-Pulmonary Tuberculosis	—	—	—	—	—	—	2	2
Cerebro-Spinal Fever ...	1	—	2	—	1	—	—	4
Totals ... ..	6	2	7	9	11	3	5	43

#### Vital Statistics.

##### Estimated Population, 1939—935.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	6	6	24	0.0
1940	9	8	14	111.1
1941	11	7	21	0.0
1942	25	5	17	0.0
1943	15	5	29	0.0
1944	17	10	18	58.8
1945	5	9	27	200.0

#### (14) Burgh of Pittenweem.

*Water Supply.*—No complaints were received regarding the quality of the water. The pressure and volume was ample to meet all needs, and no shortage was experienced.

*Drainage.*—The public sewers are in good order and function satisfactorily.

*Refuse Disposal.*—The method of collecting household refuse was changed from horse and cart to motor lorry, the refuse being collected four times weekly and taken to the controlled dump at the Burgh boundary about half a mile from the town.

*Nuisances.*—No complaints or cause for action arose.

*Housing.*—Conditions as regards housing remain the same, and the Local Authority were unable to do anything to improve matters during the war years. In many cases younger people who have married have either to stay with their parents or go into houses in many cases already overcrowded.

*Factories and Workshops.*—Conditions were satisfactory and call for no special comment.

*Milk Supply.*—There are two registered milk producers in the Burgh, one of which produces Standard Milk and the other undesignated milk. In addition, three other producers in the landward area retail milk in the Burgh, two of which deal in designated milk.



*Infectious Disease.*—The following table shows the incidence of infectious disease during the years 1939-1945, and calls for no special comment. The incidence was almost uniformly low, except for an outbreak of 13 cases of Dysentery in the year 1941.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	1	3	1	—	1	—	—	6
Dysentery ... ..	—	—	13	—	—	—	—	13
Erysipelas ... ..	1	—	—	—	—	1	2	4
Acute Influenzal Pneumonia	—	2	—	—	—	—	—	2
Acute Primary Pneumonia	—	—	1	—	1	—	2	4
Puerperal Pyrexia ... ..	—	—	—	2	—	—	—	2
Scarlet Fever ... ..	—	2	6	5	3	2	1	19
Pulmonary Tuberculosis ...	—	3	—	1	—	2	—	6
Non-Pulmonary Tuberculosis	1	2	—	—	—	—	1	4
Cerebro-Spinal Fever ...	—	2	—	—	—	1	—	3
Other ... ..	—	—	—	—	—	—	1	1
Totals ... ..	3	14	21	8	5	6	7	64

#### Vital Statistics.

##### Estimated Population, 1939—1672.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	26	12	33	76.9
1940	18	14	30	0.0
1941	31	13	25	64.5
1942	25	15	27	160.0
1943	28	9	25	0.0
1944	25	8	29	80.0
1945	16	18	13	125.0

#### (15) Burgh of St Monance.

*Water Supply.*—The supply was ample in quantity, and no complaints were received as regards quality.

*Drainage.*—A new length of 12-in. sewer was laid in Station Road, from the junction of East and West Street. The West Shore sewer is sluggish and the installation of a new sewer at an early date is suggested.

*Refuse Disposal.*—The method of collection was changed from horse and cart to motor lorry. Three men are employed by the Burgh, and the greater part of their time is occupied by street cleansing and attention to the controlled dump on the Common.

*Nuisances.*—There is nothing of a serious nature to report. The fish sheds were well kept.

*Housing.*—The position is largely unchanged. Some condemned houses were brought into use again to help the shortage, proprietors having undertaken repairs to the satisfaction of the Local Authority. The need of more houses is urgent, young couples being compelled to stay with their parents or to occupy overcrowded rooms.

*Factories and Workshops.*—Conditions were satisfactory and call for no special comment.



*Milk Supply.*—There are no producers in the Burgh. Five retailers supply milk from outwith the Burgh. Two of those have a licence to retail designated milk.

*Infectious Disease.*—The following table shows the incidence of infectious disease in the Burgh during the years 1939-45. The incidence was generally low and calls for no special comment.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	2	1	—	—	2	1	2	8
Dysentery ... ..	—	2	6	—	—	—	—	8
Erysipelas ... ..	—	—	—	1	1	—	—	2
Acute Influenzal Pneumonia	1	—	—	—	—	—	—	1
Acute Primary Pneumonia...	1	—	1	—	—	—	—	2
Scarlet Fever ... ..	1	3	—	1	1	1	—	7
Pulmonary Tuberculosis ...	—	—	—	—	—	—	3	3
Non-Pulmonary Tuberculosis	—	—	—	1	—	—	—	1
Cerebro-Spinal Fever ...	—	1	1	—	—	—	—	2
Other ... ..	—	—	—	—	1	—	—	1
Totals ... ..	5	7	8	3	5	2	5	35

#### Vital Statistics.

##### Estimated Population, 1939—1694.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	23	8	34	43.4
1940	17	5	16	117.6
1941	75	12	36	13.3
1942	19	9	17	105.2
1943	32	5	27	62.5
1944	30	4	29	66.6
1945	10	7	20	0.0

#### (16) Burgh of St Andrews.

*Water Supply.*—The following table shows the average consumption of water in gallons per head per day :—

1939	1940	1941	1942	1943	1944	1945
77.44	78.55	86.11	85.61	81.63	82.00	77.52

No change in the source or method of supply of water to the Burgh was made, and no shortage occurred.

In 1939 observations on the leak in the embankment of the reservoir at Lambielesham were continued, and in 1940, the water level was reduced to 31 feet to stop this leak. In that year also, arrangements were made to chlorinate the filtered supply to the Burgh and this has been continued, the average dosage being 0.3 parts per million of chlorine. In 1942, a power driven weed-cutting launch with boathouse, &c., was installed. In 1943 one filter at Pipeland was completely emptied, cleaned and chlorinated and refilled with new drainage pipes and filtering media, and in 1944 a secondary filter was similarly dealt with.

Samples of water were submitted regularly for bacteriological examination, and these showed that a high quality was maintained.



*Drainage.*—No radical changes in the sewerage system of the Burgh was made, and the system continued to work satisfactorily. In 1942, a section of 9-in. fireclay sewer in Park Street was damaged by a bomb, but was quickly relaid with connections to four houses. Repair and replacement of the 12-in. sewer crossing Queen's Terrace at the south end of Queen's Gardens were found to be necessary and were undertaken. In 1944 a sewer extension was carried out through the garden of a house at Lade Braes and improvements made in the arrangements for surface water drainage in Argyle Street to obviate flooding.

*Nuisances.*—The following table shows the number of complaints received, verbal and written :—

	1939	1940	1941	1942	1943	1944	1945
Complaints received ...	33	17	10	17	12	11	22
Intimations issued under the Act ...	9	1	2	3	4	3	7

In no case was it necessary to serve a "Notice" under the Public Health (Scotland) Act, 1897.

*Housing.*—As in other places, little or no action was possible towards improving housing conditions in the Burgh.

In 1939, 94 municipal and 45 "private enterprise" houses were completed, four houses were demolished, one demolished and rebuilt, two separate properties were reconstructed to form four houses and a garage, and four other houses were renovated following action under the Housing Acts. 38 families comprising 144 units were displaced from unfit to Local Authority houses.

In 1940 reconstruction work resulted in the provision of 12 houses or flats and two shops. Six families comprising 15 units were displaced from unfit to Local Authority houses. In 1941, one house was reconstructed to form three flats.

During the years 1941-44, no official action was taken as regards slum clearance or overcrowding, but in 1942, minor repairs to three houses were carried out to enable them to be occupied. No accurate estimate of the extent of overcrowding and the number of unfit houses is possible without a further survey which will become necessary with more normal conditions, but there is no need in this report to emphasise the urgency of the housing problem in the Burgh, as the facts are only too obvious.

*Refuse Disposal.*—In 1939 a three days per week collection of refuse and in 1942 a twice weekly collection of salvage had to be inaugurated. This resulted in considerable unauthorised dumping, particularly of garden refuse, on vacant spaces in the Burgh, and one successful prosecution was instituted by the Police.

Salvage collection was commenced soon after the outbreak of war and the following table shows the amounts to the nearest ton which have been collected :—



1939	1940	1941	1942	1943	1944	1945
240		227	363	253	156	150

*Factories and Workshops Act.*—The following numbers of visits were paid to factory premises by the Sanitary Inspector :—

1939	1940	1941	1942	1943	1944	1945
33	17	21	18	31	24	28

In no case was action under the Acts found to be necessary.

*Milk Supply.*—The premises of one producer of Certified Milk are within the Burgh. Two producers of Certified Milk and four producers of T. T., whose premises are in the County area, supply milk to the Burgh. One firm supplies Pasteurised Milk and two retailers supply ordinary milk. Apart from the small quantity of milk available during the war years, complaints were received at various times and from various sources about the quality of the milk with special reference to its keeping quality. These complaints were investigated and such steps taken as were possible in the abnormal conditions governing the production and distribution of milk during the war. The results were not always satisfactory, but improvement was usually affected. The early return of the day when a customer can choose his own supplier would be of material assistance to the Authorities in their endeavours to improve the quality of the supply of milk.

*Meat Supply.*—The following table gives the number of animals slaughtered at St Andrews Slaughter-House during the years 1939-1945 :—

Year	No. of Animals Slaughtered (Cattle, Sheep, Pigs, and Calves)	Wholly Condemned	Partially Condemned	Weight in lbs. of Condemned Meat and Offal
1939	5484	17	43	9,234
1940	2440	25	70	11,459
1941	6380	38	62	16,533
1942	6110	26	32	11,043½
1943	5783	16	52	7,983½
1944	5370	19	38	14,609
1945	6064	42	48	19,522

As from 15th January, 1940, the premises were put at the disposal of the Ministry of Food, the Town Council acting as slaughter-house contractors. In 1943 staff changes at the slaughter-house resulted in some difficulties, and during 1944 a visit was made to the slaughter-house by Dr Keddie of the Department of Health for Scotland who submitted an adverse report on the condition of the premises. His visit coincided with a period during which there had been numerous changes of staff and conditions had not been satisfactory. With the appointment of a new Superintendent, matters complained of were quickly remedied. At this time the floor of the main passage was lifted and relaid.



*Infectious Disease.*—The following table shows the incidence of infectious disease in the Burgh during the years 1939-45. In the years 1939 and 1943 there was an increased incidence of Scarlet fever, and in 1940 and 1942 the numbers of cases of Dysentery were much above normal. The increase in the numbers of cases of Pulmonary Tuberculosis will be noted. A similar increase generally was experienced during the 1914-1918 war and with a return to improved and more normal conditions, the incidence should decrease. In the year 1944 and again in 1945 there was only one case of diphtheria, a satisfactory condition of affairs.

	1939	1940	1941	1942	1943	1944	1945	Totals
Undulant Fever ... ..	1	—	—	—	—	—	—	1
Diphtheria ... ..	2	3	3	14	6	1	1	30
Dysentery ... ..	1	67	—	43	1	—	—	112
Erysipelas ... ..	3	1	4	3	2	2	1	16
Acute Influenzal Pneumonia	4	2	6	2	11	4	10	39
Acute Primary Pneumonia	2	9	13	8	7	5	9	53
Puerperal Fever ... ..	1	—	1	2	—	1	1	6
Puerperal Pyrexia ... ..	1	—	2	1	3	—	1	8
Scarlet Fever ... ..	27	7	6	12	37	4	2	95
Pulmonary Tuberculosis ...	5	5	12	15	14	20	20	91
Non-Pulmonary Tuberculosis	5	1	3	4	4	6	6	29
Cerebro Spinal Fever ...	—	2	2	6	1	1	—	12
Encephalitis Lethargica ...	—	—	1	—	—	—	—	1
Acute Anterior Poliomyelitis	—	—	—	—	1	2	—	3
Other ... ..	1	5	1	—	4	2	7	20
Totals ... ..	53	102	54	110	91	48	58	516

#### Vital Statistics.

Estimated Population, 1939—8454 (includes St Leonards School—500).

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	107	72	114	111.1
1940	119	89	110	42.0
1941	124	92	124	56.4
1942	149	77	110	53.7
1943	152	67	109	52.6
1944	148	71	119	20.2
1945	326	120	128	21.4

#### ARSENICAL POISONING OUTBREAK, 1943—ST ANDREWS.

On January 15th and 16th, there was an outbreak of acute arsenical poisoning following the consumption of sausages, resulting in at least 150 cases of illness and two deaths.

The sausages were made in a butcher's shop, the ingredients being meat and fat, pork, biscuit meal, seasoning, sulphur dioxide preservative and water. None of the workers in the shop would admit to the possibility of the addition of any other ingredient or of interference by an outside person.

The mixture was sold as sausage meat and as sausages to the general public and to a students' hostel where the first cases occurred



and approximately 90 men were affected. Later on the same day and on the following morning cases occurred throughout the town and the attention of the Public Health Department was drawn to the occurrence on the afternoon of January 16th. The symptoms presented were the usual symptoms of arsenic poisoning and were of all degrees of severity. In mild cases the illness cleared up in 3-4 days, but severe cases did not completely recover for six weeks.

Two cases, a man aged 52 years and a woman aged 48 years died in 17 and 12 hours respectively after ingestion of the contaminated food. Examination of the sausage meat failed to show any bacterial cause for the illnesses produced, but it was soon shown that contamination with arsenic had been heavy. Investigation showed that one-half pound of pure white arsenic had been added to the sausage meat. The meat had been made in three batches, the first being by far the most heavily contaminated, and the cause of the most serious cases.

From the relative proportions of arsenic found in the three batches, it was thought that the arsenic had been added to the first batch only and that successive batches were affected by the carry-over of the residue from one batch to the next.

All the materials used in the making of the sausages were examined with negative results. These included seasoning, preservative, biscuit meal, salt and skins, contents of all tins, packaging bottles, bags, &c., found in the shop and dust from the workers' pockets. The meat had been cut from a large portion of a carcass otherwise consumed without ill-effects. Investigation was later continued by the Police, but no evidence was unearthed as to the source of the arsenic, or as to its mode of addition to the sausage meat.

#### (17) **Burgh of Tayport.**

*Water Supply.*—The Burgh is supplied with water by Dundee Corporation and an excellent and abundant supply is maintained. In 1944 the pipes conveying the water over the Tay Bridge became frozen, but this was quickly remedied. The Dundee Corporation have a small auxiliary supply at Wormit to meet such an emergency.

*Refuse Disposal.*—Previous to 1943 all refuse collection was carried out within the Burgh by means of a horse-drawn vehicle. This is now done by an up-to-date motor vehicle. It is worth recording that no bins are allowed to be placed on the pavement. The cleansing staff go into each house, collect, empty and return the bin. This is an advantage to the townspeople as well as a prevention of untidiness on the street.

*Nuisances.*—Apart from minor complaints, nothing requires to be noted.

*Housing.*—During the war years, with the close proximity of Leuchars Aerodrome and the R. A. F. Marine Section, the population



the Burgh increased considerably, and a heavy additional burden is placed on housing accommodation. Prior to the war no sub-letting of Council Houses was permitted, but permission was given to the Town Council for additional occupants, provided no gross overcrowding occurred.

*Factories and Workshops.*—Inspection was regularly carried out and except on a few occasions due to shortage of labour, conditions were satisfactory.

*Milk Supply.*—There is one producer-retailer of ordinary milk in the Burgh. Two other retailers in the Burgh supply ordinary milk and one firm supplies Pasteurised Milk. No serious complaints were received regarding the quality of the milk during the war years, but difficulty was experienced on occasion on account of poor keeping quality.

*Infectious Diseases.*—The following table shows the number of cases of infectious disease notified during the years 1939-45. In 1940 there was an increase in the number of cases of Diphtheria. The largest total number of cases occurred in 1941, due mainly to an increase in the number of cases of Scarlet Fever and Dysentery. In 1944 a small localised outbreak of Enteric Fever (Typhoid) occurred.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	1	18	2	3	4	4	1	33
Dysentery ... ..	—	2	11	—	—	2	—	15
Erysipelas ... ..	1	4	4	—	2	3	—	14
Acute Influenzal Pneumonia	2	—	—	—	—	—	—	2
Acute Primary Pneumonia	2	8	8	8	4	5	6	41
Erythral Fever ... ..	1	—	—	—	—	—	—	1
Erythral Pyrexia ... ..	—	—	—	2	—	1	1	4
Scarlet Fever ... ..	8	7	20	3	1	4	10	53
Pulmonary Tuberculosis ...	8	1	4	4	1	4	6	28
Non-Pulmonary Tuberculosis	2	2	3	8	4	2	1	22
Cerebro-Spinal Fever ... ..	—	2	—	1	—	—	—	3
Enteric Fever ... ..	—	—	—	—	—	7	—	7
Other ... ..	—	—	3	—	3	—	—	6
Totals ... ..	25	44	55	29	19	32	25	229

#### Vital Statistics.

Estimated Population, 1939—3287.

Year	Births	Deaths	Marriages	Infant Mortality Rate
1939	47	32	40	0.0
1940	53	33	54	18.8
1941	54	37	51	74.0
1942	71	27	48	42.2
1943	66	14	54	0.0
1944	74	20	54	67.5
1945	41	26	26	24.3



(18) **Burgh of Newport.**

*Water Supply and Drainage.*—No change took place except that the water supply, in conformity with war-time requirements applicable to all water undertakings, was chlorinated.

*Nuisances.*—None of a serious nature occurred. All minor complaints received were dealt with by the Sanitary Inspector without recourse to official action.

*Housing.*—In the report for 1938, it was mentioned that application had been made to the Department of Health for Scotland, for the fixing of an "Appointed Day" after which date overcrowding would become a legal offence within the Burgh. This "Appointed Day" was fixed as 1/7/39, and at that date no overcrowding existed. Following war-time conditions it is not surprising that this condition no longer holds. A certain amount of overcrowding now exists but its extent without an accurate survey cannot be stated.

As regards the provision of houses by the Local Authority, the last were completed on 10/11/38 and none have been completed since, but at the end of 1945, sixteen temporary houses were in course of erection and offers for eight permanent houses had been accepted and negotiations were in progress for the acquisition of 7 acres of land for the provision of 70-80 houses.

In spite of the satisfactory housing position at the end of 1938 the demand for additional housing in the Burgh is considerable. Of 163 applications received, half were from persons residing in the Burgh who do not have houses of their own, *e.g.*, sub-tenant. The present position as regards fitness of houses in default of a survey is not known. It is probable that some houses which were on the borderline when the survey in 1935-36 was undertaken, may have deteriorated sufficiently for action to be appropriate under the Housing (Scotland) Act, 1930. It is clear, however, that unfit houses are not a major problem in the Burgh. No new houses were erected by private enterprise during the war years, but a total of 5 houses were sub-divided so as to form 10 houses.

*Factories and Workshops Acts.*—Periodical inspections were carried out by the Sanitary Inspector, who reports that conditions were generally satisfactory and that no action under the Acts was necessary.

*Milk Supply.*—There is no producer of ordinary milk within the Burgh but two just outside. In addition to ordinary milk, supplies of T. T. milk and of Pasteurised milk are available to the public from retailers in the Burgh. Desirable improvements to dairymen's premises were difficult to obtain during the war, but arrears will require to be made up with the return of normal conditions.

*Meat Supply.*—The only private slaughter-house in the Burgh was closed down during 1940, in pursuance of the war-time policy of the Ministry of Food, designed to secure greater centralisation



laughtering. This policy had the advantage of simplifying proper Heat Inspection.

*Infectious Disease.*—The following table shows the incidence of infectious disease during the years 1939-45. It will be seen that the total cases varied little from year to year and that no epidemic of a serious nature was encountered.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	6	5	2	5	1	3	5	27
Dysentery ... ..	—	7	—	—	1	—	3	11
Erysipelas ... ..	3	1	2	1	4	2	1	14
Acute Influenzal Pneumonia	—	—	3	4	3	1	3	14
Acute Primary Pneumonia	2	3	—	2	3	2	1	13
Puerperal Fever ... ..	—	—	2	—	—	—	—	2
Puerperal Pyrexia ... ..	—	—	—	1	—	—	—	1
Scarlet Fever ... ..	8	8	9	17	12	8	1	63
Pulmonary Tuberculosis ...	2	3	5	2	3	2	5	22
Non-Pulmonary Tuberculosis	—	3	2	5	5	2	3	20
Cerebro-Spinal Fever ...	—	—	1	—	—	—	—	1
Other ... ..	1	—	3	—	1	—	1	6
Totals ... ..	22	30	29	37	33	20	23	194

#### Vital Statistics.

##### Estimated Population, 1939—3053.

##### Newport.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	23	14	51	130.4
1940	27	22	59	74.0
1941	37	22	52	135.1
1942	40	16	51	25.0
1943	33	14	58	—
1944	57	13	63	70.2
1945	16	22	30	62.5

##### (19) Burgh of Auchtermuchty.

*Water Supply.*—The supply to the Burgh is obtained from three sources. The principal one is the Glassarts Burn, the drainage area above the point of intake being 980 acres. The other sources are from a spring and field drains capable of giving approximately 1000 and 7,000 gallons per day respectively. The Glassarts Burn drainage area of 980 acres is capable of giving a minimum yield of 8000 gallons per day which in itself is a little in excess of the estimated requirements of 70,000 gallons based on a population of 10.

The water from the Glassarts Burn is passed through two 8 feet diameter Bell filters and the water from Leckiebank is filtered through a Mather and Platt conical filter.

While the quantity of water available at these sources is ample to meet the needs of the Burgh there has been experienced in several parts of the town a water shortage. This is principally due to distribution.



The outlet mains from the filters at Glassarts is 6-in. in diameter for a distance of approximately 60 yds. It is then reduced to 4-in. in diameter for a distance of 880 yds. and is finally increased to 5-in. in diameter. This 5-in. pipe is carried to the fringe of the Burgh where it joins with another 5-in. pipe from the Leckiebank supply. From this point a 4-in. pipe is carried into the Town with mains leading from it of 2½-in. to 1-in. in diameter. It is evident, therefore, that with the unbalanced change in pipe diameters, the pressure in certain parts must be affected. Consideration has been given to these factors and to overcome the difficulties it has been agreed to enlarge firstly certain of the trunk mains and secondly the distribution mains.

During the period under review the filters were on one occasion completely overhauled. This arose through discolouration and sediment in the water, and on investigation it was evident that they were not functioning properly and that chemicals were being withheld.

The water from all these sources, particularly the Leckiebank source, cannot in the light of to-day's standards be judged as good. They are principally land waters from cultivated ground, and in view of this it is essential that they must be carefully filtered and constantly chlorinated. The chlorination plant at Glassarts is of modern design and is capable of giving good results, provided it is carefully maintained.

*Drainage and Sewage Disposal.*—There is a modern system throughout the Burgh and sewage purification works. The method of treating the sewage is by sedimentation tanks and automatic circular filters. Complaints have been received regarding the effluent which is discharged into the 'Mughty Burn' but on investigation it was found that the cause was due to unauthorised persons interfering with valves. The plant if properly maintained and worked should be capable of giving a reasonably good effluent.

Difficulty is experienced in obtaining labour to clean the sedimentation tanks but in order to minimise the frequency of cleaning properly constructed sludge lagoons might be incorporated in the plant.

*Nuisances.*—Nothing of an outstanding nature falls to be noted.

*Housing.*—Considerable lee-way has to be made up in connection with housing in the Burgh. In the years prior to the war 80 houses were represented as unfit for human habitation or not in a reasonable state of repair. While a percentage of these has been reconditioned and the occupants of others re-housed, there is still a considerable programme to undertake. One unfortunate feature in the past has been the wholesale condemning of houses within the Burgh and the meagre provision of new houses to replace these. In addition the powers given to Local Authorities under the Housing Act, 1930, have



not been rigorously applied with the result that there are areas with empty and derelict properties. Proposals have been under consideration to deal with these areas and in all probability by the ensuing year a definite scheme will have been agreed.

To date the total houses built within the Burgh since 1919 are as follows :—

Stratheden Place	...	...	...	28 houses
Pitmedden Wynd	...	...	...	8 houses
Lochybank Place	...	...	...	16 houses

Ground has been acquired at Lochybank for a development of 3 houses. The general layout has been approved, also type plans for houses. For the first instalment the Brochure type plans prepared by the Incorporation of Scottish Architects and issued by the Department of Health were used. These plans were adopted in order to save time in obtaining approvals. While this may be so, their adoption has revealed many difficulties which has retarded progress. One very unfortunate feature is that the detail plans and schedule of quantities do not coincide in many respects. In addition, in instances sizes given on plans are incorrect which has resulted in difficulties when setting out. A further point which has retarded progress is the elaborate pre-cast work forming external features. It is unfortunate that the points instanced should arise. The primary object for issuing approved type plans was to speed up erection but they have to some extent added to difficulties of labour and materials.

An allocation of 15 temporary houses was made to the Burgh. In view, however, of their price and the delay in delivery it has now been decided to accept in their place 10 Cruden houses. Site servicing for these houses is well in hand.

*Slaughter-Houses.*—There are two licensed slaughter-houses within the Burgh but since the distribution of meat supplies came under the control of the Ministry of Food in 1940 no slaughtering has been carried out and the licences have therefore lapsed.

The centralising of slaughtering has added advantages and should be maintained. The slaughter-houses within the Burgh cannot be regarded entirely suitable for the purpose and should not be re-licensed without considerable alterations being carried out.

*Milk Supply.*—There are no dairy farms within the Burgh, all milk retailed in the town being from farms situated in the landward part of the County. These farms are under the supervision of County Council Officials. Within the Burgh there is one milk tailor's premises.

*Infectious Disease.*—The following table shows the incidence of infectious disease in the Burgh during the years 1939-45. The only feature of note is the unusually large number of cases of Dysentery (7) notified during 1942. The complete absence of cases of diphtheria during the years 1942-45 is gratifying.



	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	1	6	2	—	—	—	—	9
Dysentery ... ..	—	1	—	27	—	—	2	30
Erysipelas ... ..	—	3	2	—	—	—	—	5
Acute Influenzal Pneumonia	—	—	3	—	2	—	—	5
Acute Primary Pneumonia	1	1	2	3	2	2	—	11
Scarlet Fever ... ..	4	1	9	—	—	—	4	18
Pulmonary Tuberculosis ...	2	1	5	—	—	3	1	12
Non-Pulmonary Tuberculosis	2	1	2	1	1	—	—	7
Cerebro-Spinal Fever ...	—	1	1	—	—	—	—	2
Other ... ..	1	—	3	—	—	—	—	4
Totals ... ..	11	15	29	31	5	5	7	103

## Vital Statistics.

Year	Estimated Population, 1939—1935.			Infant Mortality Rate
	Births	Deaths	Marriages	
1939	16	9	24	62.5
1940	16	17	16	0
1941	23	8	23	0
1942	23	9	25	173.9
1943	19	10	31	105.2
1944	28	7	28	71.4
1945	8	9	15	0

## (20) Burgh of Cupar (Transferred Services).

**Infectious Diseases.**—During the years 1939-1945 a total of 28 cases of infectious disease were notified. Cases of Scarlet Fever and Pneumonia form the largest proportion. Cases of Diphtheria were few and no major epidemic occurred.

The following table shows the incidence in each year.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	6	4	1	1	1	3	1	17
Dysentery ... ..	—	—	1	—	5	—	1	7
Erysipelas ... ..	4	3	3	4	4	6	6	30
Acute Influenzal Pneumonia	—	1	3	2	4	2	—	12
Acute Primary Pneumonia	7	16	13	13	5	4	7	65
Puerperal Pyrexia ... ..	—	—	—	—	1	—	1	2
Scarlet Fever ... ..	13	10	1	18	15	6	21	84
Pulmonary Tuberculosis ...	—	7	5	4	6	4	3	29
Non-Pulmonary Tuberculosis	1	5	5	4	5	4	6	30
Cerebro-Spinal Fever ...	—	1	—	2	—	—	—	3
Encephalitis Lethargica ...	—	—	—	—	—	—	1	1
Other... ..	1	1	4	—	2	—	—	8
Totals ... ..	32	48	36	48	48	29	47	288

## Vital Statistics.

Year	Estimated Population, 1939—5012.			Infant Mortality Rate
	Births	Marriages	Deaths	
1939	82	54	48	—
1940	79	53	83	75.9
1941	98	65	79	71.4
1942	104	60	91	76.9
1943	88	39	70	22.7
1944	97	45	71	30.9
1945	70	57	76	28.5



(21) **Burgh of Falkland (Transferred Services).**

*Infectious Disease.*—The following table shows the incidence of infectious disease during the years 1939-1945. Apart from some increase in the year 1940, cases were few. The absence of Diphtheria from 1942 to 1945 will be noted.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	—	2	1	—	—	—	—	3
Erysipelas ... ..	1	2	3	—	—	—	1	7
Acute Influenzal Pneumonia	—	5	—	—	—	—	—	5
Puerperal Pyrexia ... ..	—	—	1	—	—	—	1	2
Scarlet Fever ... ..	2	5	—	—	2	—	—	9
Pulmonary Tuberculosis ...	—	1	—	2	—	1	2	6
Non-Pulmonary Tuberculosis	—	—	—	—	—	1	1	2
Cerebro-Spinal Fever ...	—	—	1	—	—	—	—	1
Encephalitis Lethargica ...	1	—	—	—	—	—	—	1
Other... ..	1	—	—	—	—	—	—	1
Totals ... ..	5	15	6	2	2	2	5	37

**Vital Statistics.****Estimated Population, 1939—883.****Infant Mortality**

Year	Births	Marriages	Deaths	Rate
1939	7	12	17	142.8
1940	6	16	14	—
1941	17	19	10	176.4
1942	7	12	12	142.8
1943	16	14	7	62.5
1944	15	1	14	—
1945	6	8	6	166.6

(22) **Burgh of Ladybank (Transferred Services).**

*Infectious Disease.*—A total of 25 cases of infectious disease, as shown in the following table, were notified during the years 1939-1945. The incidence was in general low and the table calls for no special comment.

	1939	1940	1941	1942	1943	1944	1945	Totals
Erysipelas ... ..	2	—	—	—	1	—	—	3
Acute Influenzal Pneumonia	1	—	—	—	—	—	—	1
Acute Primary Pneumonia	1	—	—	—	—	1	—	2
Scarlet Fever ... ..	5	1	—	—	3	—	1	10
Pulmonary Tuberculosis ...	—	1	—	1	—	2	—	4
Non-Pulmonary Tuberculosis	2	1	—	2	—	—	—	5
Totals ... ..	11	3	—	3	4	3	1	25

**Vital Statistics.****Estimated Population, 1939—1193.****Infant Mortality**

Year	Births	Marriages	Deaths	Rate
1939	12	6	18	—
1940	14	11	13	—
1941	17	13	18	176.4
1942	20	15	11	—
1943	16	10	22	—
1944	12	9	22	—
1945	12	10	12	—



## (23) Burgh of Newburgh (Transferred Services).

*Infectious Disease.*—During the years 1939-1945 a total of 165 cases of infectious disease were notified. There was an increase in the number of cases during 1940 mainly due to the occurrence of 18 cases of Diphtheria. The low incidence of this disease, however during the subsequent years 1942-1945 was satisfactory.

	1939	1940	1941	1942	1943	1944	1945	Totals
Diphtheria ... ..	2	18	6	—	—	4	—	30
Dysentery ... ..	—	—	—	—	—	—	14	14
Erysipelas ... ..	5	3	4	3	—	3	3	21
Acute Influenzal Pneumonia	2	1	1	—	2	1	2	9
Acute Primary Pneumonia	—	2	3	2	1	6	2	16
Puerperal Fever ... ..	1	—	—	—	—	—	—	1
Scarlet Fever ... ..	9	8	2	2	—	9	—	30
Pulmonary Tuberculosis ...	—	4	1	1	4	2	2	14
Non-Pulmonary Tuberculosis	7	3	3	2	2	1	4	22
Cerebro-Spinal Fever ...	2	2	1	—	1	—	—	6
Encephalitis Lethargica ...	—	—	1	—	—	—	—	1
Other... ..	—	—	1	—	—	—	—	1
Totals ... ..	28	41	23	10	10	26	27	165

## Vital Statistics.

## Estimated Population, 1939—2319.

Year	Births	Marriages	Deaths	Infant Mortality Rate
1939	38	11	32	79.0
1940	28	15	29	0.0
1941	29	13	44	0.0
1942	33	11	26	60.6
1943	34	11	19	29.4
1944	32	13	30	31.2
1945	11	18	18	0.0



**PUBLIC HEALTH DEPARTMENT—  
PUBLICATIONS 1939-45.**

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**1. Water Supply—Safety and Adequacy.**

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.

*Transactions of Royal Sanitary Association of  
Scotland*, 1939.

**2. Outbreak of Smallpox in Fife.**

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.

*Health Bulletin*. Department of Health for  
Scotland.

February, 1943.

April, 1943.

**3. Outbreak of Acute Arsenical Poisoning.**

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.

B. W. ANDERSON, M.D., D.P.H.

*The Lancet*. Nov. 13, 1943.

**4. Encephalomyelitis following Vaccination in Fife.**

G. MATTHEW FYFE, M.B., Ch.B., D.P.H.

J. B. FLEMING, M.D.

*The British Medical Journal*. Nov. 27, 1943.

**5. Mothercraft : Teaching Experiment in Fife.**

R. A. KRAUSE, M.D., D.Sc., D.P.H.

*Health Bulletin*. Department of Health for  
Scotland.

October, 1944.

**6. Orthoptic Scheme in Fife.**

R. A. KRAUSE, M.D., D.Sc., D.P.H.

*Health Bulletin*. Department of Health for  
Scotland.

November, 1945.



PUBLIC HEALTH DEPARTMENT

PUBLICATIONS 1939-45

Water Supply - Safety and Adequacy.

G. MATTHEW TYRE, M.B., Ch.B., D.P.H.

Transactions of Royal Society of Medicine

Scotland, 1939.

Outbreak of Smallpox in Fife.

G. MATTHEW TYRE, M.B., Ch.B., D.P.H.

Health Bulletin, Department of Health for

Scotland.

February, 1942.

April, 1942.

Outbreak of Acute Arterial Poisoning.

G. MATTHEW TYRE, M.B., Ch.B., D.P.H.

H. W. CAMPBELL, M.D., D.P.H.

1942-1943, No. 19-20.

Streptococcal following Vaccination in Fife.

G. MATTHEW TYRE, M.B., Ch.B., D.P.H.

J. B. FRANK, M.D.

The British Medical Journal, Nov. 27, 1943.

Outbreak of Typhoid in Fife.

R. A. KRAUSE, M.D., D.Sc., D.P.H.

Health Bulletin, Department of Health for

Scotland.

October, 1944.

Outbreak of Typhoid in Fife.

R. A. KRAUSE, M.D., D.Sc., D.P.H.

Health Bulletin, Department of Health for

Scotland.

November, 1945.







TABLE 1.  
D ACCORDING TO AGE GROUPS.

25-35 YEARS								35-45 YEARS								45-55 YEARS								55-65 YEARS								65-75 YEARS								75-85 YEARS								85 YEARS AND OVER								
1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		1939	1940	1941	1942	1943	1944	1945		
27	25	23	20	24	18	22		19	23	14	14	19	14	18		16	26	10	24	23	14	20		13	23	15	15	16	12	9		10	20	11	9	21	6	7		10	9	8	7	12	5	4		1	6	4	1	4		3		
2	4	2	6	6	3	1		22	12	20	14	18	15	11		38	33	42	45	52	51	33		61	68	93	57	75	85	71		92	93	109	101	112	92	124		59	65	54	42	65	62	54		6	6	12	6	2	12	10		
—	—	—	1	1	—	1		—	—	1	—	5	1	2		—	—	3	2	1	1	2		—	—	1	3	1	4	2		—	—	—	1	—	1	1		—	—	1	2	1	2	1		—	—	—	1	1	—			
—	—	1	1	—	—	2		—	—	1	—	—	—	—		—	—	—	—	—	—	1		—	—	1	—	2	—			—	—	—	1	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—			
1	—	1	2	3	1	1		1	2	2	1	1	1	—		1	2	2	2	3	3	1		10	8	8	5	8	6	31		15	14	10	8	5	10	10		4	10	7	1	8	5	5		2	—	1	—	—	—	—		
4	4	2	2	3	1	—		6	5	2	2	5	3	2		12	5	9	6	6	5	7		11	13	11	7	10	11	7		10	7	9	12	6	10	13		8	6	4	7	8	5	6		1	—	2	1	—	—	—	2	
6	1	9	8	4	3	4		12	8	6	8	11	12	15		25	28	28	16	17	19	20		49	50	60	67	60	49	57		103	116	124	134	99	124	166		105	123	106	100	87	109	108		25	22	22	25	21	12	21		
9	18	10	10	11	4	9		19	16	20	31	20	17	23		37	36	51	42	39	49	51		88	97	102	108	120	101	88		212	208	195	198	180	242	236		219	225	220	208	243	232	230		55	80	78	55	88	65	97		
2	2	3	3	7	3	5		9	16	12	10	13	8	4		15	18	21	16	29	26	18		27	47	52	33	26	30	37		45	45	45	44	47	22	41		36	57	48	42	48	44	27		10	22	15	12	26	18	12		
4	8	3	6	3	6	7		8	8	9	6	12	10	13		12	15	8	13	14	9	14		17	25	17	14	21	20	19		28	28	26	16	25	20	19		12	21	8	22	29	14	14		—	2	2	2	2	2	6		
2	3	5	8	6	10	2		6	14	2	7	10	5	6		13	10	17	5	14	10	9		16	18	21	14	10	21	16		32	34	20	31	28	35	31		24	23	29	23	23	22	21		5	1	4	10	5	2	7		
8	8	12	8	11	8	5		3	6	7	5	2	5	3		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—			
—	1	2	—	—	—	—		—	1	1	—	—	—	—		2	—	3	2	—	2	—		1	2	3	2	3	2	1		4	3	2	3	1	2	2		2	2	—	1	1	4	—	—	1	—	—	4	1				
—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—			
—	—	—	—	—	1	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—	—		—	—	—	—	—	—			
2	3	—	1	—	—	—		3	1	3	2	3	1	4		2	7	1	1	4	2	3		2	4	3	2	3	3	1		—	4	5	1	—	1	3		—	—	—	—	—	1	1		—	—	—	1	—	—			
—	—	1	1	1	1	1		—	—	2	4	1	3	3		—	—	4	2	3	7	5		—	—	6	1	2	1	3		—	—	6	2	1	7	—	—	—	3	3	—	1	1		—	—	—	—	—	—				
27	8	17	8	7	2	4		21	16	9	15	10	5	7		23	20	14	8	11	8	5		18	9	10	11	5	11	1		20	14	9	15	10	12	8		14	23	11	7	21	17	10		5	4	5	6	2	11	6		
—	—	1	—	1	1	1		1	—	4	1	1	2	1		1	4	2	4	4	4	1		4	8	4	11	2	7	7		12	15	10	12	13	13	4		4	3	8	3	2	6	7		1	3	1	2	1	1	—		
94	85	92	85	88	62	65		130	126	115	120	131	102	113		197	204	215	188	220	201	190		317	372	387	333	364	364	330		597	613	598	575	570	601	612		535	612	548	533	593	594	525		143	176	177	142	154	153	158		



## APPENDIX—TABLE 2.

### INFECTIOUS DISEASES WEST FIFE, 1939-45.

DISEASE.	TOTAL CASES.							BURGH.							LANDWARD.							REMOVED TO HOSPITAL.							TREATED AT HOME.								
	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945		
Scarlet Fever	564	359	214	401	373	241	402	310	173	109	178	143	100	180	254	186	105	223	230	141	222	552	351	205	388	372	239	392	12	8	9	13	1	2	10		
Diphtheria	259	388	281	223	184	168	138	62	115	104	85	86	105	71	197	273	177	138	98	63	67	259	387	279	221	184	167	138	—	1	2	2	—	1	—		
Erysipelas	108	119	103	75	120	96	82	55	50	33	32	55	50	37	53	69	70	43	65	46	45	26	25	28	14	23	23	82	94	75	61	97	73	59			
Pneumonia (Primary)	273	400	329	336	312	270	283	103	154	149	95	127	110	124	170	246	180	241	185	160	159	205	296	256	282	249	218	228	68	104	73	54	63	52	55		
Influenza Pneumonia	75	104	59	36	75	28	18	31	48	27	18	31	8	5	44	66	32	18	44	20	13	58	82	52	30	31	22	16	17	22	7	6	24	6	2		
Non-infectious Pneumonia	6	17	7	2	22	8	7	2	7	1	1	7	1	3	4	10	6	1	15	7	4	6	17	6	2	20	8	7	—	—	—	—	—	—	—		
Cerebro-Spinal Fever	11	54	59	37	15	12	12	2	26	27	14	5	5	4	9	28	32	23	10	7	8	11	54	59	37	15	12	12	—	—	—	—	—	—	—		
Dysentery	17	19	12	14	31	50	22	—	8	9	28	35	7	7	17	19	4	5	3	15	15	4	4	3	3	3	7	3	13	15	9	11	28	43	19		
Malaria	—	1	—	—	—	1	4	—	—	1	2	1	1	3	—	—	—	—	—	—	—	—	1	—	—	2	1	—	—	—	—	—	—	—	—	—	
Continued Fever	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	
Typhoid Fever	2	1	—	—	—	2	4	2	—	—	—	—	2	4	—	1	—	—	—	—	—	2	1	—	—	—	2	4	—	—	—	—	—	—	—	—	
Para-Typhoid B	9	8	5	4	1	1	—	6	5	2	—	1	—	—	3	3	3	4	—	1	—	9	8	5	4	1	1	4	—	—	—	—	—	—	—	—	
Infective Jaundice	—	3	—	2	—	—	—	—	—	—	1	—	—	—	—	3	—	1	—	—	—	—	3	2	—	—	—	—	—	—	—	—	—	—	—	—	
Anterior Poliomyelitis	1	1	7	3	—	5	—	—	1	4	2	—	1	—	1	—	3	1	—	4	—	1	1	5	3	—	4	—	—	—	—	—	—	—	—	—	
Epidemic Parotitis	1	—	2	14	2	1	—	1	—	1	7	1	1	—	—	—	—	—	—	—	—	1	—	2	14	2	1	—	—	—	—	—	—	—	—	—	—
Scarlet	—	—	—	29	—	—	—	—	—	—	2	—	—	—	—	—	—	27	—	—	—	—	—	—	29	—	—	—	—	—	—	—	—	—	—	—	
Opticidemia Neonatorum	57	90	59	49	92	94	76	19	38	29	26	43	44	43	38	52	30	23	49	50	33	6	9	9	9	26	22	18	51	81	50	40	66	72	58		
Peripneumonia	16	18	17	20	31	14	24	5	7	4	6	9	5	6	11	11	13	14	22	9	18	12	16	14	17	25	12	22	4	2	3	3	6	2	2		
Peripneumonia	7	6	3	7	7	10	4	5	2	2	3	4	3	1	2	4	1	4	3	7	3	5	4	3	6	6	8	4	2	2	—	1	1	2	—	—	
Totals	1406	1588	1158	1254	1266	1001	1076	603	627	501	481	541	471	488	803	901	657	773	725	530	588	1157	1259	927	1063	978	746	868	249	329	231	191	288	255	208		

## TABLE 3.

### INFECTIOUS DISEASES EAST FIFE, 1939-45.

DISEASE.	TOTAL CASES.							BURGH.							LANDWARD.							REMOVED TO HOSPITAL.							TREATED AT HOME.							
	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	1939	1940	1941	1942	1943	1944	1945	
Scarlet Fever	154	80	67	91	151	63	83	82	53	48	72	105	37	46	72	27	19	19	46	26	37	144	71	66	88	146	62	81	10	9	1	3	5	1	2	
Diphtheria	70	87	62	36	38	35	16	28	63	29	30	17	21	11	42	24	33	6	21	14	5	68	87	48	36	38	35	16	2	—	14	—	—	—		
Erysipelas	32	34	30	29	22	29	29	20	19	23	14	14	18	19	12	15	7	15	8	11	10	9	7	5	4	7	2	8	23	27	25	25	15	27	21	
Influenza Pneumonia	31	19	18	12	38	14	21	11	11	17	8	22	8	17	20	8	1	4	16	6	4	7	6	6	2	15	9	17	24	13	12	10	23	5	4	
Pneumonia (Other forms including Primary)	24	58	71	56	50	37	45	18	40	40	35	33	23	27	6	18	33	19	17	14	18	4	14	16	10	18	17	18	20	44	55	46	32	20	27	
Cerebro-Spinal Fever	1	18	13	12	5	2	4	1	10	8	9	2	2	2	—	8	5	3	3	—	2	1	17	11	12	5	1	3	—	1	2	—	—	—	—	
Typhoid Fever	2	2	—	—	1	8	1	1	2	—	—	—	7	—	1	—	—	—	1	1	1	2	1	—	—	—	—	—	—	—	1	—	—	—	1	
Para-Typhoid B	—	—	—	10	2	1	17	—	—	—	10	2	—	17	—	—	—	—	—	—	—	—	—	—	10	2	1	17	—	—	—	—	—	—	—	1
Jaundice	3	79	37	78	28	2	27	1	79	32	45	7	2	20	2	—	5	33	21	—	7	—	10	6	—	22	2	5	3	69	31	78	7	—	21	
Malaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Poliomyelitis	—	1	2	—	1	1	—	—	—	1	—	1	—	—	—	1	—	—	—	—	—	—	1	2	—	1	—	—	—	—	—	—	—	—	—	
Paratyphoid Fever	6	1	4	4	2	3	2	3	1	3	4	—	1	1	3	—	1	—	2	2	1	4	1	2	4	2	3	2	2	—	2	—	—	—	1	
Paratyphoid A	2	4	3	8	7	3	4	1	1	3	7	5	1	4	1	3	—	1	2	2	—	2	4	2	3	6	1	2	—	—	1	5	1	2	2	
Opticidemia Neonatorum	5	14	12	13	17	16	6	2	6	7	5	11	11	1	3	8	5	8	6	5	5	5	4	6	8	12	5	1	—	10	6	5	5	61	5	
Totals	330	397	319	349	362	214	255	168	285	211	239	219	131	165	162	112	110	108	143	83	90	246	223	170	177	275	145	171	84	174	149	172	88	69	83	



ALL A

1941 1942

177 162

333 303

10 10

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31 32

46 42

374 362

690 690

201 200

118 100

102 102

18 23

18 19

142 136

73 83

12 13

29 36

92 92

34 34

1939 2404