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City of Birmingham.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1930

BIRMINGHAM:
TEMPLAR PRINTING WORKS, EDMUND STREET.
1931.

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PUBLIC HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
BIRMINGHAM.

July 1st, 1931.

TO THE CHAIRMAN AND MEMBERS OF THE PUBLIC HEALTH AND MATERNITY AND CHILD WELFARE COMMITTEES.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

The Report here presented on the health of the City for the year 1930 follows the general lines laid down by the Ministry of Health, and in accordance with the Ministry's detailed requirements is amplified to deal with problems arising out of the application of the Local Government Act, 1929, and the Housing Act, 1930.

The health of the City maintained a satisfactory level during the year, and was disturbed by no great wave of grave infectious disease. At the same time there was considerable prevalence of some of the more common infectious diseases, in particular of scarlet fever and of diphtheria, so that the accommodation available at present at Little Bromwich Fever Hospital was subjected to some strain.

The death-rate of 10.8 per 1,000 of the population was the lowest hitherto recorded for Birmingham, while the infant mortality of 60 per 1,000 births was also a record for the City, the previous lowest figure being 65 in 1928.

The year has been one of activity in every branch of Public Health work. In particular, however, the energies of the Department were directed towards rendering effective the City Council's allocation to the Public Health Committee of two large hospitals, an infirmary, and two convalescent homes, and to the Maternity and Child Welfare Committee of a residential home for destitute infants, transferred from the late Board of Guardians. While the transfer has involved a great deal of detailed work by all the members of the Committees and by the staff, the extent of the labour involved was minimised both by the admirably efficient state of these institutions on transfer, and the willing spirit of co-operation on the part of the staff both of these transferred institutions and of the Public Assistance Department.

The transfer of two large municipal hospitals to the City Council has brought the latter into intimate relation with the question of general hospital accommodation in the City. Particulars as to the scope and amount of such accommodation are set out in the body of the Report.

The Housing Act, 1930, did not come into effect until the early Autumn, so that its influence on the conditions of housing in the City will be a matter for subsequent reports. It is, however, appropriate to say that Section 17 of the Act dealing with the repair of properties was brought vigorously into effect during the Autumn, and associated with this the powers given under the Birmingham Corporation (General Powers) Act, 1929, dealing with repairs, painting and papering or distempering with washable distemper to prevent dilapidation, were applied on a steadily extending scale.

During the year the bye-laws regarding offensive trades were subjected to revision and adopted in their revised form in July. They were subsequently applied to each of the premises dealing with offensive trades in the City.

The transfer from the Board of Guardians of duties under Part 1 of the Children Act, 1908, dealing with infant life protection, has involved an extension of the Department's activities, as has also the taking over of the administration of the Vaccination Acts. Reference to these will be found in the Report.

The work of the Maternity and Child Welfare Committee has continued to grow at a phenomenal rate, and it will be evident from the pages of the Report that the work covers a very large and vitally important section of preventive medicine.

I would draw attention to the summaries of valuable research work with a practical outcome carried on at Little Bromwich Fever Hospital; and I am glad to feel that they are evidence of a keenness of interest which can justly be claimed to pervade all sections of the staff under your Committees.

I am,

Your obedient servant,

H. P. NEWSHOLME,

Medical Officer of Health.

CITY OF BIRMINGHAM.

REPORT OF THE MEDICAL OFFICER OF HEALTH
For the year 1930.

SUMMARY OF STATISTICS.

Area (in acres), 46,687.

Population (Census 1921), 919,444.

Estimated by Medical Officer, 1930, 982,000.

Estimated by Registrar-General, 1930, Not yet available.

Number of inhabited houses (1921), 190,459.

Total number of houses at April 1st 1930 according to rate books, 232,751.

Number of families or separate occupiers (1921), 203,813.

Rateable value, £6,015,513.

Sum represented by a penny rate, £23,151.

Extracts from vital statistics of the year 1930:—

Births—Legitimate, 16,794.
Illegitimate, 623. } Birth Rate, 17.7

Still Births, 688. Rate per 1,000 total births, 40.

Deaths, 10,613. Death Rate, 10.8.

Percentage of deaths occurring in public institutions—47%.

Number of women dying in, or in consequence of childbirth. { From sepsis, 27 / From other causes, 32.

Deaths of Infants under one year of age per 1,000 live births:—

Legitimate, 58. Illegitimate, 117. Total, 60.

Deaths from Measles (all ages), 58.

Deaths from Whooping Cough (all ages), 110.

Deaths from Diarrhœa (under two years of age), 132.

I. POPULATION AND MORTALITY STATISTICS.

POPULATION.

There is considerable difficulty in forming a satisfactory estimate of the population of the City at the present time. It is nine years since the last Census was taken and during that period there has been a great decline in the birth-rate, and in 1929 there was an unusually heavy mortality so that the natural increase is less than it was in the previous intercensal period. On the other hand the housing situation has almost certainly affected the usual flow of population to and from the City. After taking these factors into consideration, the population has been estimated for the year 1930 at 982,000. The official estimate of the Registrar General had not been published up to the time of sending this report to be printed.

BIRTHS.

See page 93.

DEATHS.

Eight hundred and ninety-three deaths occurred in Birmingham last year which did not belong to the City, the place of residence being elsewhere. On the other hand 402 Birmingham residents died while away from home. This brings the number of deaths of Birmingham residents to 10,613, as compared with 13,232 in 1929, when an exceptionally high mortality was recorded.

The deaths correspond to a death-rate of 10.8 per 1,000, which is the lowest death-rate ever recorded in Birmingham. The movements in the death-rate during the 60 years for which statistics are available are shown below:—

DEATH-RATES IN BIRMINGHAM AND ENGLAND AND WALES.

	Birmingham.	England and Wales.
1871-1875 (Old City)	25.2	22.0
1876-1880 ,,	22.8	20.8
1881-1885 ,,	20.7	19.4
1886-1890 ,,	20.2	18.9
1891-1895 ,,	20.3	18.7
1896-1900 ,,	20.5	17.7
1901-1905 (Present Area)	16.5	16.0
1906-1910 ,,	15.0	14.7
1911-1915 ,,	14.6	14.3
1916-1920 ,,	13.4	14.5
1921-1925 ,,	11.5	12.2
1926-1930 ,,	11.6	12.1
1920 ,,	12.6	12.4
1921 ,,	11.3	12.1
1922 ,,	12.1	12.8
1923 ,,	11.0	11.6
1924 ,,	11.6	12.2
1925 ,,	11.7	12.2
1926 ,,	11.3	11.6
1927 ,,	11.6	12.3
1928 ,,	10.9	11.7
1929 ,,	13.5	13.4
1930 ,,	10.8	11.4

It is interesting to notice that while in the earlier part of the period covered by the above table, the Birmingham deathrate was above that of England and Wales, in later years the position has become reversed. Thus last year the Birmingham figure was 10.8 while that for England and Wales was 11.4.

Birmingham's mortality rate compares favourably with that recorded in most of the other great towns. This can be seen from the statement below:—

COMPARATIVE DEATH-RATES IN NINE LARGEST TOWNS.

(Registrar General's Figures.)

London	11.4 per 1,000
Glasgow	14.2 ,,
Birmingham	10.8 ,,
Liverpool	12.7 ,,
Manchester	12.8 ,,
Sheffield	10.6 ,,
Leeds	12.2 ,,
Edinburgh	14.1 ,,
Bristol	11.2 ,,

MORTALITY BY AGE AND SEX.

As usual the mortality among males was notably higher than that among females, the number of deaths being 5,515 against 5,098.

The distribution of the deaths over the various age groups is shown in the next table :—

	Males.		Females.		Both Sexes.	
	No. of Deaths.	Percentage of total.	No. of Deaths.	Percentage of total.	No. of Deaths.	Percentage of total.
Under 1 year	599	10.9	447	8.8	1,046	9.9
1 and under 2	83	1.5	87	1.7	170	1.6
2 and under 5	87	1.6	90	1.7	177	1.7
5 and under 15	149	2.7	138	2.7	287	2.7
15 and under 25	241	4.4	219	4.3	460	4.3
25 and under 45	597	10.8	623	12.2	1,220	11.5
45 and under 65	1,761	31.9	1,220	24.0	2,981	28.1
65 and under 75	1,157	21.0	1,071	21.0	2,228	21.0
75 and upwards	841	15.2	1,203	23.6	2,044	19.2
	5,515	100.0	5,098	100.0	10,613	100.0

It may perhaps be felt that deaths at ages over 65 years occur in the natural order of things and do not afford much ground for dissatisfaction. But more than half the deaths occurred last year at ages below 65 years, while considerably more than a quarter occurred before the age of 45. There appears therefore still to be much scope for improvement in our mortality figures.

The mortality among infants and young children is dealt with in more detail in the Maternity and Child Welfare Section of this report. At ages 5 to 15,—that is, broadly speaking, among school children—the principal causes of the mortality were accidents 51, diphtheria 35, and rheumatic fever 27.

Among young people between 15 and 25, by far the most serious cause of death was tuberculosis, which accounted for 179 deaths or 39% of the total number. Next in order at this age period came accidents with 50 deaths, and heart disease with 40 deaths.

It should be observed that no less than 1,220 deaths occurred between the ages of 25 and 45. Most of these deaths, apart from their personal aspect, represent a very grave waste of effort in the education and training which have not adequately found fruition. These deaths were caused principally by tuberculosis with 361 deaths, pneumonia with 126 deaths and heart disease with 102 deaths.

At ages between 45 and 65 it is found that heart disease was the greatest cause of death, with 484 deaths, followed by tuberculosis with 315 deaths, and pneumonia with 254 deaths.

Fuller details of the causes of death at different age periods and in the two sexes are given in Table II at the end of this report.

INFANT MORTALITY.

(See page 97).

MORTALITY IN WARDS.

There is still considerable disparity in the mortality in the various wards of the City although for a good many years the death-rates in the central areas have been approximating more nearly to those in the outer districts.

At the moment there is considerable doubt as to the correctness of the estimates of population in the different wards, a doubt which will be removed when the results of the Census are available; but assuming the populations to be correct, the death-rates during the past three years have been as follows:—

Death-Rates in Wards.

		Death-rate		
		1930.	1929.	1928.
Central Wards	St. Paul's	12.9	17.3	14.7
	St. Mary's	14.9	18.1	17.5
	Duddeston and Nechells	12.2	16.8	12.3
	St. Bartholomew's	12.5	16.0	12.9
	St. Martin's and Deritend	14.4	18.7	14.1
	Market Hall	14.0	16.7	13.3
	Ladywood	12.5	15.3	12.9
Middle Ring	Lozells	11.8	15.7	12.5
	Aston	12.2	15.4	11.6
	Washwood Heath	9.0	12.1	9.7
	Saltley	7.8	10.3	9.3
	Small Heath	9.0	10.5	9.9
	Sparkbrook	11.3	14.0	11.7
	Balsall Heath	12.6	15.1	12.2
	Edgbaston	12.7	13.9	9.7
	Rotton Park	11.1	15.1	10.7
	All Saints'	10.9	14.4	10.5
Outer Ring	Soho	11.2	14.8	10.7
	Sandwell	10.9	11.8	9.3
	Handsworth	10.4	13.0	9.8
	Perry Barr	5.0	6.8	3.2
	Erdington North	7.6	10.0	8.2
	Erdington South	9.1	10.2	9.2
	Yardley	8.8	9.7	7.8
	Acocks Green	8.0	9.5	8.3
	Sparkhill	8.9	10.6	7.8
	Moseley and King's Heath	10.6	11.8	9.5
	Selly Oak	8.3	10.8	9.1
	King's Norton	8.2	9.8	9.7
	Northfield	7.8	10.3	10.2
	Harborne	10.2	11.8	8.7

St. Mary's had the highest death-rate (14.9) last year, followed by St. Martin's (14.4), Market Hall (14.0) and St. Paul's (12.9). The lowest death-rates were in Perry Barr (5.0), Erdington North (7.6), Northfield (7.8) and Saltley (7.8).

The mean death-rates in the three groups of wards have been as follows:—

	Central Wards.	Middle Ring.	Outer Ring.
1926	14.1	10.9	9.2
1927	14.3	11.1	9.7
1928	14.0	10.8	8.7
1929	17.0	13.6	10.8
1930	13.3	10.8	8.9

It should be borne in mind that the seven central wards, which cover roughly the area within 1 to 1½ miles of the Town Hall, contain at the present time about 48,900 houses and an estimated population of 220,900. If, therefore, the death-rate in them could be reduced to the level of the outer ring, a saving of 972 lives would be effected.

There is, of course, a definite movement of the population going on from the central to the outer wards, a movement which has been enormously expedited by the development of the Corporation Estates. In 1921 the population of the seven central wards was 243,700: it is now probably in the neighbourhood of 220,900, a decrease of 22,800.

The next statement indicates the mortality rate from all the more prominent causes of death in the three groups of wards:—

DEATH-RATES IN GROUPS OF WARDS.

	Central Wards	Middle Ring	Outer Ring	City
Measles	.17	.04	.02	.06
Whooping Cough	.22	.10	.06	.11
Diphtheria	.13	.08	.07	.09
Influenza	.11	.14	.12	.13
Tuberculosis of Respiratory System	1.28	.89	.67	.90
Other forms of Tuberculosis	.21	.09	.11	.13
Cancer, Malignant Disease	1.54	1.49	1.27	1.43
Diseases of Nervous System and Sense Organs	.97	.93	.73	.88
Diseases of Heart	2.34	1.88	1.51	1.87
Other Diseases of Circulatory System	.64	.66	.74	.70
Bronchitis	.56	.44	.21	.38
Pneumonia (all forms)	1.23	.78	.65	.84
Other Diseases of Respiratory System	.10	.10	.10	.10
Diarrhoea and Enteritis	.34	.10	.11	.16
Other Diseases of Digestive System	.50	.46	.37	.44
Non-Venereal Disease of Genito-urinary System	.55	.47	.32	.44
Premature Birth and Diseases of Early Infancy	.71	.53	.46	.56
Old Age	.24	.25	.21	.24
Violence (all forms)	.54	.57	.52	.55
Other Causes	.91	.78	.75	.81
TOTAL	13.3	10.8	8.9	10.8

The above figures show that in nearly all instances the mortality is higher in the central than in the outer wards, the disparity being much more marked in some diseases than in others. Tuberculosis for example had twice as high a deathrate, and so had pneumonia, while bronchitis had a rate nearly three times as high. On the other hand there was little difference in the rates for influenza, cancer or violence (accidents and suicides).

The central wards have an excessive number of deaths amongst males, as is indicated in the proportions given below:—

	Deaths of males to every 100 deaths of females.
Central Wards	117
Middle Ring	110
Outer Ring	98
Whole City	108

It would appear from the above figures that there is some influence at work in the Central Wards which affects the male mortality more than the female.

There is also a marked difference in the ages at death in the central wards as contrasted with the figures for the other areas. Last year the proportion of deaths at ages under 15 years was 20 per cent. in the Central Wards as compared with 15 per cent. in the Outer Ring. On the other hand only 35 per cent. of the persons who died in the Central Wards had reached the age of 65 or over, while in the Outer Ring the percentage was 43.

It is clear from these figures that a considerable number of lives are lost prematurely in the Central Wards. The actual percentage of mortality at each age period for males and females was as follows :—

	Males.			Females.			Persons.		
	Central Wards.	Middle Ring.	Outer Ring.	Central Wards.	Middle Ring.	Outer Ring.	Central Wards.	Middle Ring.	Outer Ring.
Under 1 year	12.9	9.7	10.5	12.7	7.4	7.0	12.8	8.6	8.7
1 and under 2 years	2.7	1.2	0.9	2.3	1.3	1.7	2.5	1.3	1.3
2 ,, 5 ,,	1.8	1.3	1.7	2.7	1.3	1.5	2.2	1.3	1.6
5 ,, 15 ,,	2.5	2.7	2.9	3.3	2.2	2.8	2.9	2.5	2.9
15 ,, 25 ,,	4.0	4.0	5.2	4.8	4.5	3.8	4.4	4.2	4.5
25 ,, 45 ,,	10.0	11.5	11.0	12.3	11.9	12.6	11.1	11.7	11.8
45 ,, 65 ,,	32.7	33.0	30.2	24.3	24.4	23.3	28.8	28.9	26.7
65 ,, 75 ,,	20.8	21.8	20.0	20.0	22.5	20.4	20.4	22.1	20.2
75 and over	12.6	14.8	17.6	17.6	24.5	26.9	14.9	19.4	22.3
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The most striking points in the above figures are (1) the high proportion of deaths among males at the age period 45 to 65 years as compared with those among females at the same age period. This high proportion exists in all the three groups of wards as shown below :—

DEATHS AT AGE PERIOD 45-65 YEARS (percentage of total deaths).

	Males.	Females.
Central Wards	32.7	24.3
Middle Ring	33.0	24.4
Outer Ring	30.2	23.3

(2) the high proportion of women as compared with men who attain the age of 75 and over. In this, the middle and outer wards have a great advantage over the central wards, the figures being as follows :—

DEATHS AT AGES OVER 75 YEARS (percentage of total deaths).

	Males.	Females.
Central Wards	12.6	17.6
Middle Ring	14.8	24.5
Outer Ring	17.6	26.9

PRINCIPAL CAUSES OF DEATH.

The following statement shows the number of deaths arising from each of the main causes of death, and the relative mortality under each heading :—

	No. of deaths in 1930.	Percentage of total deaths.
Measles	58	0.5
Whooping Cough	110	1.1
Diphtheria	88	0.8
Influenza	123	1.2
Tuberculosis of respiratory system ...	884	8.3
Other forms of tuberculosis	124	1.2
Cancer—Malignant Disease	1,409	13.3
Diseases of nervous system and sense organs	862	8.1
Diseases of the heart	1,834	17.3
Other diseases of circulatory system ...	690	6.5
Bronchitis	374	3.5
Pneumonia (all forms)	825	7.8

Other diseases of respiratory system ...	96	0.9
Diarrhœa and enteritis	157	1.5
Other diseases of digestive system ...	434	4.1
Non-venereal diseases of genito-urinary system	429	4.0
Premature birth and diseases of early infancy	547	5.1
Old age	233	2.2
Violence (all forms)	537	5.1
Other causes	799	7.5
Total	10,613	100.0

The largest causes of death in the above list are heart and circulatory diseases (2,524 deaths), cancer (1,409 deaths), respiratory diseases (1,295 deaths), and tuberculosis (1,008 deaths). The mortality from tuberculosis is dealt with in greater detail at page 75.

CANCER.

After being stationary for several years the mortality from cancer again shows some increase. The deaths numbered 1,409 against 1,314 in 1929, 1,321 in 1928, and 1,313 in 1927. Compared with the previous year the deaths from cancer (showing the part of the body first affected) have been as follows :—

	1930	1929
Lip, tongue, palate, jaw	84	64
Pharynx, æsophagus, stomach, liver	383	415
Peritoneum, intestine, rectum	337	279
Female organs of reproduction	138	155
Breast	138	119
Skin	9	14
Other parts	320	268

In previous years the death-rate from cancer in Birmingham and in the country as a whole has been as follows :—

Death-Rate per 1,000 from Cancer.

	Birmingham.	England and Wales.
1921	1.12	1.21
1922	1.18	1.23
1923	1.17	1.27
1924	1.30	1.30
1925	1.27	1.34
1926	1.26	1.36
1927	1.36	1.38
1928	1.35	1.42
1929	1.34	1.44
1930	1.43	—

In considering the increase in mortality two factors need always to be borne in mind. One is that improved diagnosis causes a good many deaths to be allocated to cancer which previously would have been set down to some other cause. The other is that cancer is a disease of advancing years, and as the proportion of people at advanced ages is undoubtedly increasing an increase in the deaths from cancer is a natural sequel.

In the statement below will be found the cancer death-rates in the municipal wards :—

Cancer Death-Rates in Wards.

	Ward.	Death-rate 1930.	
Central Wards ...	St. Paul's	1.53	Average 1.56
	St. Mary's	1.79	
	Duddeston and Nechells	1.38	
	St. Bartholomew's	1.27	
	St. Martin's and Deritend	1.78	
	Market Hall	1.74	
	Ladywood	1.43	

Middle Ring	Lozells	1.56	
	Aston	1.65	
	Washwood Heath	1.43	
	Saltley	1.34	
	Small Heath	1.50	Average 1.50
	Sparkbrook	1.68	
	Balsall Heath	1.41	
	Edgbaston	2.04	
	Rotton Park	1.24	
	All Saints	1.14	
Outer Ring	Soho	1.42	
	Sandwell	2.12	
	Handsworth	1.39	
	Perry Barr	0.19	
	Erdington North	1.04	
	Erdington South	0.92	
	Yardley	0.88	Average 1.27
	Acocks Green	0.99	
	Sparkhill	1.29	
	Moseley and King's Heath	1.80	
	Selly Oak	1.04	
	King's Norton	1.36	
	Northfield	1.23	
	Harborne	2.05	

There is but little in the above figures to indicate that cancer is more prevalent in the older and less healthy districts than in the rest of the town. As a matter of fact the two highest ward death-rates occurred in the outer ring. In some of the wards in the outer ring, in which there are large Corporation estates, it is probable that the true cancer death-rate is understated owing to the proportion of elderly persons being below the average.

DISEASES OF THE HEART AND BLOOD VESSELS.

There were 2,524 deaths from diseases of the heart and circulatory system as compared with 2,707 in 1929. The death-rates during the past 10 years have been as follows :—

	Birmingham.	England and Wales.
1921	1.64	1.80
1922	1.85	2.00
1923	1.71	1.93
1924	1.91	2.04
1925	2.12	2.16
1926	2.12	2.18
1927	2.28	2.49
1928	2.41	2.67
1929	2.76	3.03
1930	2.57	—

The mortality in the central areas was considerably higher than in the suburban districts although the difference is not so great as in some other diseases. This can be seen from the ward death-rates given below :—

DEATH-RATES FROM DISEASES OF HEART AND BLOOD VESSELS.

	Ward.	Death-rate 1930	
Central Wards	St. Paul's	2.64	
	St. Mary's	2.92	
	Duddeston and Nechells	3.05	
	St. Bartholomew's	2.84	Average 3.00
	St. Martin's and Deritend	3.27	
	Market Hall	3.54	
	Ladywood	2.72	

Middle Ring	Lozells	3.08		
	Aston	3.25		
	Washwood Heath	1.51		
	Saltley	1.69		
	Small Heath	1.65	Average 2.56	
	Sparkbrook	2.57		
	Balsall Heath	3.33		
	Edgbaston	2.89		
	Rotton Park	2.72		
	All Saints	2.88		
Outer Ring	Soho	2.92		
	Sandwell	2.56		
	Handsworth	2.92		
	Perry Barr	0.68		
	Erdington North	2.00		
	Erdington South	2.46		
	Yardley	2.38	Average 2.25	
	Acocks Green	1.53		
	Sparkhill	1.97		
	Moseley and King's Heath	2.63		
	Selly Oak	2.25		
	King's Norton	2.59		
	Northfield	1.60		
	Harborne	2.97		

BRONCHITIS, PNEUMONIA AND OTHER RESPIRATORY DISEASES.

In 1929, when influenza was prevalent and a severe winter was experienced, there were no less than 2,218 deaths from these respiratory diseases. Last year the number dropped to 1,295. The death-rates in recent years have been as follows :—

	Birmingham.	England & Wales.
1921	2.02	1.96
1922	2.38	2.31
1923	1.98	1.87
1924	2.15	2.13
1925	1.97	2.00
1926	1.88	1.74
1927	1.89	1.93
1928	1.56	1.51
1929	2.26	2.10
1930	1.32	—

It will be noted that the death-rate from these respiratory diseases is slightly higher in Birmingham than in England and Wales. This is not the case in regard to either cancer or heart disease. A considerable part of the mortality moreover occurs in the early years of life, again in contrast to cancer and heart disease. This is shewn in the figures given below :—

	Deaths from :		
	Respiratory Diseases.	Cancer.	Heart Disease.
Under 1 year	165 or 12.7%	0 —	2 or 0.1%
1 and under 2 years	47 ,, 3.6%	0 —	2 ,, 0.1%
2 ,, 5 ,,	27 ,, 2.1%	4 or .3%	2 ,, 0.1%
5 ,, 15 ,,	18 ,, 1.4%	6 ,, .4%	15 ,, 0.6%
15 ,, 25 ,,	30 ,, 2.3%	9 ,, .6%	40 ,, 1.6%
25 ,, 45 ,,	151 ,, 11.7%	114 ,, 8.1%	118 ,, 4.6%
45 ,, 65 ,,	368 ,, 28.4%	660 ,, 46.8%	678 ,, 26.9%
65 ,, 75 ,,	256 ,, 19.8%	405 ,, 28.8%	788 ,, 31.2%
75 and over	233 ,, 18.0%	211 ,, 15.0%	879 ,, 34.8%
All Ages	1,295 ,, 100%	1,409 ,, 100%	2,524 ,, 100%

Thus 33.8% of the deaths from respiratory diseases occurred before the age of 45. In the case of cancer the percentage is only 9.4 and in the case of heart disease only 7.1 Any condition which finds a large proportion of its victims at the earlier ages must be regarded as particularly disastrous to the life of the community, and judged by this standard, mortality from respiratory diseases is of particular significance. It has to be remembered, in this connection, that the greater part of this mortality could probably be prevented by better surroundings, a purer atmosphere, and a wiser manner of life.

The local distribution of the mortality from respiratory diseases as shown in the statement below would appear to agree with such a conclusion:—

DEATH-RATE PER 1,000 FROM RESPIRATORY DISEASES.

	Ward.	Death-rate 1930.	
Central Wards	St. Paul's	1.84	Average 1.87
	St. Mary's	2.29	
	Duddeston and Nechells	1.82	
	St. Bartholomew's	1.43	
	St. Martin's and Deritend	2.33	
	Market Hall	1.74	
	Ladywood	1.65	
Middle Ring	Lozells	1.56	Average 1.32
	Aston	1.41	
	Washwood Heath	1.46	
	Saltley	0.71	
	Small Heath	0.91	
	Sparkbrook	1.50	
	Balsall Heath	1.53	
	Edgbaston	1.42	
	Rotton Park	1.17	
	All Saints'	1.54	
Outer Ring	Soho	1.04	Average 0.97
	Sandwell	1.28	
	Handsworth	1.25	
	Perry Barr	1.07	
	Erdington North	0.84	
	Erdington South	0.99	
	Yardley	0.78	
	Acocks Green	0.97	
	Sparkhill	1.08	
	Moseley and King's Heath	0.78	
	Selly Oak	0.87	
	King's Norton	1.11	
	Northfield	0.64	
	Harborne	0.87	

It will be seen that the mortality in the central wards is nearly twice as high as in the outer ring. Moreover in St. Martin's Ward—the worst—the death-rate was nearly four times as high as in Northfield—the best. If the mortality in the Central and Middle Ring could be reduced to that of the Outer Ring about 340 deaths out of the total of 1,295 would be prevented.

II. GENERAL PROVISION OF HEALTH SERVICES.

(1) PUBLIC HEALTH OFFICERS.

Medical Officer of Health	1
Medical Staff, whole-time, for general purposes	2
General Clerical and Financial Staff	28

Sanitary Department

Staff of Sanitary Inspectors	50
Disinfectors	10
Cleansing Staff	11
Clerical Staff	9

Maternity and Child Welfare Department

Medical Staff (whole-time)	11
Medical Staff (part-time)	21
Health Visitors	104
Instructors	10
Caretakers and Cleaners	42
Porters and Gardeners	15
Nursing Staff (Hospitals and Homes)	68
Domestic and Laundry Staff	41
Clerical Staff	9
Others	8

Tuberculosis Department

Medical Staff	10
Nursing Staff (Sanatoria)	118
Domestic Staff	89
Porters, Gardeners, Stokers, Drivers	51
Tuberculosis Visitors	10
Clerical Staff	15
Others	14

Infectious Diseases Hospital

Medical Staff	6
Nursing Staff	135
Domestic Staff	79
Porters, Gardeners, Stokers, Drivers	49
Others	9

General Hospitals and Convalescent Homes

Medical Staff	26
Nursing Staff	499
Domestic Staff	409
Porters, Gardeners, Stokers, Drivers	165
Clerical Staff	39
Workmen	12

Works Department

Manager, Workmen and Clerks	42

Bacteriological Department

Medical Staff	2
Assistants and Staff	13

Analytical Department

City Analyst and Deputy	2
Assistants and Staff	5

Public Vaccination

Public Vaccinators (part-time)	17
Vaccination Officers (whole-time)	6

Inspection of Cowsheds and Dairies and of Meat and other Foods is carried out by the Veterinary Department on behalf of the Public Health Committee.

(2) NURSING IN THE HOME. This is undertaken by the City of Birmingham Nursing Association and local Associations. For cases of measles, whooping cough, pneumonia and puerperal pyrexia, a grant of 20/- per case is paid by the City Council to the Associations. During 1930, 75 cases of measles, 20 of whooping cough, 679 of pneumonia, 14 of puerperal pyrexia and 1 of puerperal sepsis were nursed on behalf of the City Council under this arrangement.

(3) MIDWIVES. The number of Midwives practising in the City was 233, two of whom received a small subsidy from the City Council (See page 116).

(4) NATIONAL HEALTH INSURANCE. The principal point at which the work of the Public Health Department touches National Health Insurance is in connection with the Tuberculosis Scheme. (See page 79). The number of insured persons on the Dispensary Register at the end of the year was 3,106, and periodic reports in a considerable proportion of these are received from their panel doctors.

At the two general hospitals taken over from the Board of Guardians under the Local Government Act a large proportion of patients are persons of the insured class and their dependants. Reports on these hospitals will be found on page 23.

(5) POOR LAW MEDICAL OUT-RELIEF. For this work the City is divided into 15 districts. In 5 districts, chiefly in the Central areas, whole-time Medical Officers are engaged; in the other 10 districts the work is performed by part-time Medical Officers. Cases requiring hospital treatment are sent into Dudley Road and Selly Oak Hospitals. Medical out-relief is under the control of the Public Assistance Committee. The work of the district medical officers comes under the general supervision of the Chief Medical Officer to the Public Assistance Committee, who, as Medical Superintendent of Dudley Road is also a Senior Medical Officer in the service of the Public Health Committee.

(6) LABORATORY FACILITIES. (a) At the City Bacteriological Laboratory facilities are available for the examination of clinical and other material. The following statement gives an outline of the work done last year :—

	Total.
Diphtheria Swabs—	
(a) For Practitioners	7,060
(b) For Fever Hospitals	7,766
(c) For virulence tests	2,288
Fæces	537
Milks	483
Milks for Tuberculosis	1,818
Shell Fish	42
Sputum for Tuberculosis	2,526
Vaccines	6
Venereal Diseases—	
Blood for Wassermann Reaction	10,057
Cerebro Spinal Fluid—	
(a) For Wassermann Reaction	472
(b) For Cell Count	151
Films for Gonorrhœa	7,088
Gonococcal Fixation Tests	1,113
Serum for Spirochætes	10
Urine Examinations—	
(a) Microscopic	291
(b) Chemical	3,139
Cultures prepared	5,775
Vaccines prepared	430
Miscellaneous prepared	29
Van den Berghs Tests	2,938
Waters	429
Widal's Reaction	1,481
Miscellaneous	4,058
	Total 59,987

(b) In addition, fully equipped laboratories for bacteriological, histological and bio-chemical work are provided at Dudley Road and Selly Oak Hospitals. A small laboratory is attached also to the ward at the Carnegie Institute for children suffering from nutritional diseases.

(c) An analytical laboratory is also maintained mainly for chemical and physical examinations in relation to the Food and Drugs Acts. The work done at this laboratory was as follows :—

	1929	1930
Food and drug samples	4,838	4,912
Soot gauge samples	23	24
Fertilisers and feeding stuffs	17	22
Miscellaneous samples	577	784
	5,455	5,742
Food and Drugs Acts—		
Samples adulterated with preservatives only	9	30
Samples adulterated in other ways	249	158
Unmarked or improperly marked margarine	7	6
Improperly labelled cream, etc.	2	1
False labels	7	15
Number of vendors of incorrect samples	136	112
Number of prosecutions	49	18
Number of fines	49	17
Amount of fines and costs	£328/10/0	£26/5/0
Number of cautions	82	77

(7) LEGISLATION IN FORCE. The following is a list of the Local Acts, Special Orders, General Adoptive Acts, and Bye-Laws, relating to the public health, in force in the City.

ADOPTIVE ACTS.

	Dates at which provisions came into operation.
Public Health Amendment Act, 1890 (Part III. adopted) ...	9th March, 1891
Public Health Acts Amendment Act, 1907. Sections 36, 44, 46, 51, 53, 55, 58, 62, 65	1st June, 1916
Section 64	25th October, 1922
Section 95	24th February, 1925
Infectious Disease (Prevention) Act, 1890	9th March, 1891
Public Health Act, 1925. Sections 13-15, 17, 19, 21-28, 30, 31, 35, 37, 39, 41-51, 53-55	15th March, 1926
Section 20	1st December, 1926

LOCAL ACTS.

Birmingham Corporation (Consolidation) Act, 1883	1st January, 1884
Birmingham Corporation Act, 1903	11th August, 1903
Birmingham Corporation Act, 1914	31st July, 1914
Birmingham Corporation Act, 1919	15th August, 1919
Birmingham Corporation Act, 1922	4th August, 1922
Birmingham Corporation Act, 1924	1st August, 1924
Birmingham Corporation (General Powers) Act, 1929	20th December, 1929

BYE-LAWS.

Lime Kilns, 1864	1st October, 1864
Dairies, Cowsheds and Milkshops, 1901	1st April, 1901
Common Lodging Houses, 1909	1st October, 1909
Nuisances, 1909	1st October, 1909
Tents, Vans, etc. (used for human habitation), 1909	1st October, 1909
Public Slaughter Houses, 1909	26th November, 1909
Private Slaughter Houses, 1909	26th November, 1909
Knackers Yards, 1909	26th November, 1909
Private Slaughter Houses, 1910 (Sunday Slaughter)	15th July, 1910
Rag, Bone and Skin Merchants, 1909	1st October, 1909
Good Rule and Government, 1914 (Offensive Offal through streets, Bye-law No. 8)	18th August, 1914
Underground Rooms, 1915	3rd June, 1915
House Refuse (Collection), 1921	29th June, 1921
Covering Meat in transit through Streets, 1923	14th October, 1923
Maternity Homes, 1927	23rd May, 1927
Public Wash-houses, 1928	5th October, 1928
Nursing Homes, 1928	5th November, 1928
Houses let in Lodgings, 1929	15th May, 1929
Emission of Smoke, 1929	7th December, 1929
Fish Frying, 1930	17th June, 1930
Offensive Trades, 1930	29th September, 1930

(8) HOSPITALS. With the coming into force of the Local Government Act, 1929, two large general hospitals, three infirmaries (in which there was provision for venereal cases, for the chronic sick, and for a large nondescript group of mental cases), and one large institution for mental defectives, were transferred from the Board of Guardians to the City Council.

The following is a list of the hospitals now maintained by the City Council. The list does not include institutions such as Quinton Hall, Witton Hall, etc., which scarcely come within the meaning of the term hospital :—

	No. of Institutions.	No. of Beds
General Hospitals	2	1,391
Babies Hospitals	2	59
Sanatoria (Tuberculosis)	4	629
Infectious Diseases Hospital	1	466
Smallpox Hospital	1	100
Infirmaries	3	2,693
Mental Hospitals	2	2,256
Mental Deficiency Colonies	2	1,506
Total	17	9,100

The beds in these institutions may be roughly classified as follows, it being understood that there must be a considerable amount of overlapping in the headings :—

General Medical	520
General Surgical	399
Children	311
Maternity	68
Venereal Disease	50
Tuberculosis	629
Infectious Disease	466
Smallpox	100
Chronic Sickness	1,414
Mental Disorders	3,225
Mental Deficiency	1,667
Orthopaedic	40
Ear, Nose and Throat	12
Gynaecological	100
Skin	99

If the beds provided for chronic sickness, mental disorders and mental deficiency are excluded, there are left 2,800 beds for the treatment of acute physical illness.

In addition to the above, the City Council have the use of some 160 beds in Hallam Hospital and Hallam House, West Bromwich, and some 40 beds in Great Barr Colony. On the other hand, some 360 patients from Smethwick are still received at institutions maintained by the City Council. Smethwick was, of course, until April 1st, 1930, a part of the Birmingham Union; while Handsworth, a part of Birmingham, was until the same date a part of the West Bromwich Union, served by the West Bromwich institutions. The necessary adjustments to deal with the difficulties arising out of this anomaly are in process of consideration and application.

The Voluntary Hospitals of the City number 13 and provide 1,933 beds. Six are general hospitals, with 1,225 beds; the other seven comprise the Cripples' Hospital (290 beds), Women's (116), Eye (114), Maternity (65), Ear and Throat (64), Nerve (37) and Skin (22).

The allocation of beds in the Voluntary Hospitals and in the Municipal Hospitals are set out in the following tables. With the Municipal Hospitals it has been found convenient to include the Ministry of Pensions Hospital, and the Hallam Hospital, West Bromwich, which receives large numbers of Birmingham patients. The figures are necessarily subject to some degree of variation from time to time.

BEDS IN VOLUNTARY HOSPITALS, 1930.

Hospital.	Type of Institution	General Medical.	General Surgical.	Children.	Maternity.	Venereal.	Tuberculosis.	Infectious Disease.	Small Pox.	Chronic Sick.	Mental	Mental Deficiency.	Orthopaedic.	Ear, Nose, and Throat.	Puerperal Fever and Pyrexia.	Ophthalmia.	Eye.	Gynaecological.	Radium.	Recovery and Observation.	Dental.	Skin.	Nerve.	Total Beds. Male.	Female.	Children.	Total	Special Departments. X Ray.	Dental	Ophthalmic.	Massage.	Radium.	Beds used by patients not resident in B'ham (estimated).
General	General	124	256	22	—	11	—	—	—	—	—	—	—	19	4	—	3	22	13	8	—	—	—	287	195	—	482	X	—	X	X	X	94
Jaffray	,,	30	31	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32	33	—	65	—	—	—	X	—	13
Queens	,,	103	134	30	10	—	—	—	—	—	—	—	—	16	4	—	12	19	—	—	2	—	—	134	166	30	330	X	X	X	X	X	60
Children's	Children	—	—	232	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	232	232	X	X	X	X	—	80
Moseley Hall	,,	—	—	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	70	70	—	—	—	—	—	20
Midland	General	17	18	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	23	11	46	—	X	—	X	—	?
Maternity	Maternity	—	—	—	65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65	—	65	X	X	—	—	X	?
Cripples	Orthopaedic	—	—	—	—	—	—	—	—	—	—	—	290	—	—	—	—	—	—	—	—	—	—	140	150	—	290	X	—	—	X	—	150
Ear and Throat	Ear and Throat	—	—	—	—	—	—	—	—	—	—	—	—	64	—	—	—	—	—	—	—	—	—	26	18	20	64	X	—	—	—	X	8
Women's	Women	—	—	—	—	—	—	—	—	—	—	—	—	—	20	—	—	96	(19 beds at Convalescent home, adjoining).					116	116	—	116	X	—	—	—	X	?
Eye	Eye	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	109	—					—	53	34	27	114	X	X	—	—	—	24
Skin	Skin	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	22	—	11	11	—	22	X	—	—	—	X	7
Nerve	Nerve	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37	8	22	7	37	—	—	—	X	—	8
Total Beds in Voluntary Hospitals		274	439	369	75	11	—	—	—	—	—	—	290	99	28	5	124	137	13	8	2	22	37	—	—	—	1933	—	—	—	—	—	500

BEDS IN CITY, PENSIONS, AND WEST BROMWICH HOSPITALS, 1930.

Hospital.	Type of Institution.	General Medical.	General Surgical.	Children.	Maternity.	Venereal.	Tuberculosis.	Infectious Disease.	Small Pox.	Chronic Sick.	Mental	Mental Deficiency.	Orthopaedic.	Ear, Nose, and Throat.	Puerperal Fever and Pyrexia.	Ophthalmia.	Eye.	Gynaecological.	Radium.	Recovery and Observation.	Dental.	Skin.	Nerve.	Total Beds. Male.	Female.	Children.	Total.	Special Departments. X Ray.	Dental	Ophthalmic.	Massage.	Radium.	Beds us'd by patients not resident in B'ham (estimat'd).
Dudley Road	General	308	252	198	34	*	(*See Gynaecological)								*			58						280	372	198	850	X	X	—	X	X	120
Selly Oak	"	212	147	54	34	—	—	—	—	—	—	—	—	—	—	—	—	42	—	—	—	—	—	206	281	54	541	X	X	—	X	—	6
Babies	Babies	—	—	50	—	—	—	—	—	—	—	—	40	12	—	—	—	—	—	—	—	—	—	—	—	50	50	—	—	—	—	—	—
Carnegie Observation	"	—	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9	9	X	X	—	—	—	—
Yardley Road	Tuberculosis	—	—	—	—	—	325	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	154	52	119	325	—	—	—	—	—	—
West Heath	"	—	—	—	—	—	116	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24	92	—	116	—	—	—	—	—	—
Romsley Hill	"	—	—	—	—	—	120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	75	45	—	120	—	—	—	—	—	32
Salterley Grange	"	—	—	—	—	—	68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	38	30	—	68	—	—	—	—	—	—
Little Bromwich	Infectious Disease	—	—	—	—	—	—	466	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	466	—	—	—	—	—	10
Witton	" "	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	—	—	—	—	—	—
Selly Oak Infirmary	Chronic Sick	—	—	—	—	—	—	—	—	562	—	—	—	—	—	—	—	—	—	—	—	—	—	286	276	—	562	—	—	—	—	—	—
Western House	" "	—	—	—	—	50	—	—	—	589	—	—	—	—	—	—	—	—	—	—	—	99	—	294	444	—	738	—	—	—	—	—	70
Erdington	Mental	—	—	—	—	—	—	—	—	263	969	161	—	—	—	—	—	—	—	—	—	—	—	625	690	78	1393	—	—	—	—	—	120
Winson Green	"	—	—	—	—	—	—	—	—	—	755	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	755	}	X	X	—	—	—
Rubery	"	—	—	—	—	—	—	—	—	—	857	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	857	} X	X	X	—	—	—
Holly Moor	"	—	—	—	—	—	—	—	—	—	644	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	644	}	X	X	—	—	—
Monyhull	Mental Deficiency	—	—	—	—	—	—	—	—	—	—	1206	—	—	—	—	—	—	—	—	—	—	—	576	630	—	1206	X	X	X	—	—	110
Coleshill Hall	" "	—	—	—	—	—	—	—	—	—	—	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	300	—	—	—	—	—	—
Total Beds in City Hospitals		520	399	311	68	50	629	466	100	1414	3225	1667	40	12	—	—	—	100	—	—	—	99	—	—	—	—	9100	—	—	—	—	—	—
Pensions		30	30	—	—	—	—	—	—	—	—	—	84	—	—	—	—	—	—	—	—	—	—	144	—	—	144	X	—	—	X	—	108
Hallam		108	122	60	26	—	—	—	—	120	—	—	—	12	—	—	—	—	—	—	—	—	—	216	232	—	448	X	X	X	X	X	350

It is estimated that about 500 beds in the Voluntary Hospitals are used by persons who live outside the City.

The City Council has entered into agreements with a number of the Voluntary Hospitals to undertake certain specified work on their behalf. Thus grants are made to the Maternity Hospital for puerperal fever and pyrexia; to the Children's Hospital for treatment of tonsils and adenoids; to the General Hospital and Children's Hospital for venereal diseases; to the Eye Hospital for ophthalmia neonatorum; and to the Cripples' Hospital and Children's Hospital for surgical tuberculosis.

The extensive use made of the Hospitals and kindred institutions may be gathered from the fact that 4,984 deaths occurred in them last year out of a total of 10,613 for the City as a whole. The deaths in the larger institutions were as follows:—

Dudley Road Hospital	1,024
Selly Oak Hospital	702
General Hospital	397
Queen's Hospital	245
Children's Hospital	141
Women's Hospital and Taylor Home	55
Maternity Hospital	61
City Fever Hospitals, Babies Hospital and Maternity Homes	176
City Mental Hospitals	129
City Sanatoria	294
Western Road House	476
Selly Oak House	256
Erdington House	567
Private Hospitals	189
Institutions outside the City	272

Some idea of the extent to which the hospitals are used for certain diseases can be obtained from the following:—

	No. of Deaths.	Percentage of Total Deaths from this cause.
Measles	35	60%
Whooping Cough	48	44%
Diphtheria	81	92%
Influenza	10	8%
Tuberculosis of Respiratory System	413	47%
Other forms of Tuberculosis	95	77%
Cancer	589	42%
Diseases of Nervous System, etc.,	431	50%
Diseases of Heart and Circulatory System	979	39%
Bronchitis	113	30%
Pneumonia	432	52%
Other Respiratory Diseases	38	40%
Diseases of Digestive System	408	69%
Genito-urinary System	225	52%
Premature Birth, etc.	247	45%
Old Age	45	19%
Violence	315	59%
Other causes	480	60%
Total	4,984	

A report on the Babies' Hospital will be found on page 112 the Sanatoria on page 85, and the Infectious Diseases Hospitals on page 63.

CITY GENERAL HOSPITALS.

Between April 1st and December 31st, the period during which these institutions were under the charge of the City Council, there were 10,061 patients admitted to Dudley Road Hospital, and 5,759 to Selly Oak Hospital. Some idea of the amount and character of the work done at these hospitals can be obtained from the following statement.

IN-PATIENTS. (April 1st to December 31st).

	Dudley Road Hospital.	Selly Oak Hospital.
Total number of admissions	10,061	5,759
Number admitted to Maternity Wards	1,121	603
Total number of deaths	845	478
Number of patients discharged	9,207	5,755
Classification of patients discharged or died :		
(*a*) Acute infectious diseases	168	145
(*b*) Influenza	59	20
(*c*) Tuberculosis :		
Pulmonary	92	60
Non-pulmonary	82	34
(*d*) Malignant disease	296	141
(*e*) Rheumatism :		
(1) Acute rheumatism (rheumatic fever), together with sub-acute rheumatism and chorea	268	99
(2) Non-articular manifestations of so-called " rheumatism " (muscular rheumatism, fibrositis, lumbago, and sciatica)	29	16
(3) Chronic arthritis	20	76
(*f*) Venereal disease	26	33
(*g*) Puerperal pyrexia	5	7
(*h*) Puerperal fever	7	0
(*i*) Other diseases and accidents connected with child-bearing	469	345
(*j*) Mental diseases	42	6
(*k*) Senile decay	2	26
(*l*) Violence (4th quarter only ; included previously under part affected)	374	239
In respect of cases not included above :—		
(*m*) Diseases of the nervous system and sense organs	293	176
(*n*) " " respiratory system	1,023	625
(*o*) " " circulatory "	403	260
(*p*) " " digestive "	2,210	1,740
(*q*) " " genito-urinary	713	358
(*r*) " " skin	626	165
(*s*) Other diseases	826	848
Maternity cases (mothers and babies)	2,019	814

REPORT ON DUDLEY ROAD HOSPITAL

(By Dr. F. W. ELLIS, MEDICAL SUPERINTENDENT).

The past year has been an uneventful one on the whole as regards admissions to the Hospital, there being no sudden inrush of patients from epidemic or other causes such as marked the Spring of 1929. Had anything comparable to the influenza epidemic of 1929 been encountered indeed, it is not too much to say that the hospital could not have stood again the severe strain to which it was subjected at that time. A serious epidemic of measles in the town bore heavily on the children's section in the spring of this year, but the anticipated provision of extra beds at Little Bromwich Hospital will go far to remove such pressure in the future.

The returns for the past year would indicate that in the number of admissions the Hospital has reached a point approaching stability, and the length of stay remains the same as for the previous two years, viz. 20 days, so that without an increase of accommodation in the wards it is unlikely that the figures of the last three years will be greatly exceeded unless a change takes place in the character of the work done. An increase in accommodation can only take place when the addition to the Nurses Home (which was begun in March, 1930) is ready for occupation.

This will not only give some increased accommodation in wards by their return to their proper function, but will also give housing for the necessary nursing staff to carry out the increased work.

It is interesting, however, to notice the increase in the Bio-chemical and Pathological Departments, in spite of the fact that but a short time ago these Departments were also responsible for Selly Oak Hospital, which is now completely autonomous in both respects. The explanation lies in the ever increasing call for bio-chemical and pathological research in modern diagnosis.

A substantial increase is to be noted in the Casualty and Out-patient Departments. These Departments have already grown so far beyond their reasonable output that consideration of their extension cannot be much longer delayed. They must, however, await completion of the Nurses' Home; they also depend on the building of a theatre suite which is one of the most urgent needs of the hospital.

A fall in the number of admissions by Relieving Officer's Orders is noted this year, but such decline has been taking place for several years and is due to the practitioners sending their cases direct to the hospital instead of by the alternative route. As this method leads to closer contact between the hospital and the private practitioner it is undoubtedly of advantage to the patient.

The number of births and still-births in the Maternity Department (1,356) is the highest ever recorded. This may be looked upon as a very high maximum for the small number of beds available. The number of maternal deaths was 4, none of them being due to septic causes.

The Deep Therapy Department is being completely re-organised and a Stabilivolt machine installed in addition to the air-cooled and water-cooled machines formerly employed. Two separate engine rooms and a small workshop attached are being built.

In one of the present theatres the Stabilivolt machine will be erected, and the alternating current from the street main at 5,000 volts will be brought into a local transformer just inside the grounds and will be transformed down to 220, this being the standard from which all transformers are built up. The voltage is raised to 200,000 by the high tension transformer in the engine house. This power is used solely for the Stabilivolt apparatus which works with an air-cooled tube. The length of exposure for this machine is approximately one quarter of the old one, moreover its penetration is much greater for depth dose.

The other theatre will be fitted with the original air-cooled and water-cooled machines. It is intended at present to work by the d.c. until the standard of the new machine is established. Later, both these machines will go on to the alternating current because of the desirability of building up a still higher voltage. It is considered that there is more certainty in the a.c. because of the elimination of all local variations and also because all new apparatus is being built for a.c.

As well as the building operations which are proceeding at the Nurses' Home, and the provision of a new sewing room in the Nurses' grounds, the re-conditioning of two floors in the Children's Block is taking place, on the completion of which certain structural alterations will be carried out in the rest of this hospital. Some considerable time must elapse, however, before any of these buildings can be brought into requisition.

A possibility of providing a suitable recreation ground for the nursing staff in connection with the Home has been established by the agreement come to between the Public Assistance Committee and the Public Health Committee for the taking over of the old tramps' wards and adjoining grounds.

The laying out of these much needed grounds will greatly increase the amenities of the Home. The class rooms in connection with the nurses' teaching quarters have been opened and are much appreciated. A new pantry has been formed in connection with the mess room.

During the year the ceilings of three wards cracked so badly that they had to be entirely renewed. Fortunately it occurred during the summer months and it was possible to accommodate the patients in other wards. These three wards, together with some others, and the main corridor, have been painted during the year.

Wassell Grove Convalescent Home has now been purchased by the Public Health Committee and has been attached to this hospital as the parent institution. The purchase of a considerable amount of land surrounding the Home and the laying out of walks through the fields will doubtless add to the amenities of an attractively situated home.

REPORT ON SELLY OAK HOSPITAL.

(By Dr. R. P. S. KELMAN, Medical Superintendent).

The figures for the year again show an increase in the work of the Hospital generally and in the work done by all departments, even though there has been no increase in the accommodation available. The increased turnover in the Hospital has been made possible by a further reduction in the average duration of stay of patients in the Hospital—(19.34 days based on patient days and 20.34 days based on maintenance days during the last three months). The main factors producing this excellent result are firstly, the better facilities provided during the year in some of the special departments, viz., Radiological, Dental, Bio-chemical and Splint, leading to greater rapidity in diagnosis and more efficiency in treatment, secondly the continued policy of maintaining on both the surgical and the medical sides, an experienced senior staff possessing senior degrees and senior diplomas, and thirdly the improved facilities for out-patient treatment leading to earlier discharge of in-patients.

The general Medical Staff has been increased by one additional senior Surgical Officer during the year and, but for the fact that Lordswood Nursery, which deals with artificially fed infants, was handed over to the Maternity and Child Welfare Department on April 1st last, the increasing work in the adjoining institution, Selly Oak Infirmary, which deals with the chronic sick of all ages, and in the Hospital Casualty and Out-patient Departments, another Medical Officer would have been required to deal with the increased calls on the hospital and infirmary during the autumn and winter.

I am glad to report that the strain placed on the nursing staff by the rapid development of the hospital during the last few years, has been lessened by the fact that the increased number of Probationers then engaged have now become more senior and, consequently, the nursing staff a stronger one, with a more even distribution of seniors and juniors of our own training. Increased facilities for the training of the nursing staff have been provided in the class rooms, in the way of equipment and also by access of the staff to all Special Departments. However, the lack of a separate teaching unit, with practical class and demonstration rooms large enough to accommodate the increased staff, presents a serious difficulty.

The need for the additional Operating Theatre Suite has been fully demonstrated during the year. However, it is anticipated that the new unit will be available soon. The Pathological and Bio-chemical Departments have outgrown themselves and likewise have justified the Committee's decision to proceed, subject to the Ministry's sanction, with the erection of a new Mortuary and Pathological Block.

As in the previous year, the continued development of the adjoining Infirmary into a hospital for dealing with the chronic sick, has been a great help to the hospital. It has been the increased usefulness of the infirmary only which has enabled the hospital to deal in rush periods with the oncoming admissions which, apart altogether from Infirmary admissions, have reached as many as 50 in 24 hours. Fortunately there have been no great epidemics this year, otherwise, without a reserve in the accommodation such as it was possible to provide in the hospital and infirmary during the last Influenza epidemic, I dread to think of the consequences.

Likewise the Convalescent Homes, "The Tower House" for sick staff, "Wassell Grove" for women and "Oaklands" for men, have been utilised to the full. A Convalescent Home for children is now the only Convalescent Home to be provided.

Unusual difficulty has been experienced during the year in arranging for provision outside the hospital for sick infants, who have recovered from their illnesses and whose parents for various reasons, have been unable to take them away from the hospital. This difficulty has been overcome partly by the provision of additional temporary nurseries in the neighbouring infirmary.

The problem of the destitute healthy infant has still to be faced.

This last summer provided an easier period than usual for the hospital and I am pleased to report that the full programme of ward re-decorations has been successfully carried out. In these re-decorations particular attention has been paid to the various colour schemes, since pleasing surroundings help considerably in the treatment of patients.

It is interesting to note that less than 25% of admissions have come through Relieving Officers. In other words, the outside medical practitioners are dealing still more directly with the hospital. This has been made possible by the fact that an efficient Almoner's Department, dealing with all in-patients and out-patients is established in the hospital. This continued policy is greatly to the advantage of the patients concerned in that one knows more about the patients before admission and urgent cases are admitted with no delay. Furthermore, from an administrative point of view the number of beds to be provided at any time during the day is known with certainty before the patients actually arrive. Another point of interest with regard to admissions is the extraordinary increase in the number of cases admitted who are members of the Birmingham Hospitals Contributory Scheme. The percentage of such admissions has, during the last seven years, increased from 27.6% to 82.3% of the total admissions for the year.

During the year the hospital wards have been further divided up into units dealing with special groups of diseases. The following is the present grouping of the wards :—

General Medical Wards	Fracture Wards
General Surgical Wards	Gynaecological Ward
General Children's Wards	Ear, Nose, Throat Wards
Children's Enteritis Ward	Staff Sick Bay
Male Urological Ward	Maternity Department

The setting aside of special wards for fracture and urological cases has been a new departure and has proved a great success, leading to an improvement in results.

GENERAL CONVALESCENT HOMES.

At Wassell Grove Convalescent Home 586 women and children were admitted during the year. Fourteen of these patients had to be sent into hospital. Of the remainder 216 women were reported on discharge to be fit for their usual duties, 9 were much improved, and 104 were improved. The 229 children all appeared to be quite well when discharged. A small number of cases left before completing their expected stay. Amongst the cases admitted were 45 on account of pneumonia, 59 on account of some form of rheumatism, 38 on account of chorea, 113 for general debility, 26 for anaemia, and 48 for heart trouble.

At "The Oaklands" the number of cases admitted was 513, the admissions including a large number on account of pneumonia, rheumatism, gastric ulcer, appendicitis, general debility and bronchitis. Fourteen patients were transferred to hospital, 173 were reported as quite fit for work, and the remainder were greatly improved. Sixteen left without completing their stay. In practically all the cases a gain in weight was recorded.

(9) MATERNITY AND NURSING HOMES
(See page 117).

(10) MATERNAL MORTALITY
(See page 119).

(11) INSTITUTIONAL PROVISION FOR UNMARRIED MOTHERS, ILLEGITIMATE INFANTS AND HOMELESS CHILDREN
(See page 94).

(12) INSTITUTIONAL PROVISION FOR MENTAL DEFECTIVES. Accommodation for mental defectives has been provided under the Mental Deficiency Acts Committee at Coleshill Hall, near Birmingham, where there is now provision for some 300 cases. It is intended to increase this number eventually to 1,000.

The Monyhull Hall Colony and Residential School was founded by the Birmingham Board of Guardians, and handed over to the City Council on April 1st, 1930. It has accommodation for some 1,200 cases.

(13) AMBULANCE FACILITIES. (A) The Public Health Department has four ambulances for acute infectious diseases and two for tuberculosis. (B) The Public Health Department has five ambulances for the use of Dudley Road Hospital, and two for Selly Oak Hospital. (C) The City Police have eight for accidents and other casualties. (D) The Order of St. John and British Red Cross have five ambulances available on payment of a hiring fee. (E) There are also ambulances at certain of the large hospitals and works.

(14) CLINICS AND TREATMENT CENTRES. The following are provided by the Public Health and Maternity and Child Welfare Committees:—

Hospital Out-patient Clinics	2
Maternity and Child Welfare Centres (including Ante-natal Clinics	28
Other Ante-natal Clinics	4
Central Tuberculosis Dispensary	1
Venereal Disease Treatment Centres	3

15 LOCAL GOVERNMENT ACT, 1929. The following transfers of function from the Board of Guardians to Committees of the City Council were brought about immediately on the coming into effect of the Local Government Act, 1929, on April 1st, 1930:—

(*a*) The two general hospitals under the Board of Guardians—Dudley Road and Selly Oak Hospitals—were appropriated under the Public Health Acts as places for the reception of the sick and of pregnant women, and placed under the Public Health Committee.

(*b*) The two convalescent homes—Wassell Grove for women and girls, and "Oaklands" for men and boys—were similarly appropriated under the Public Health Acts and placed under the Public Health Committee.

(*c*) Lordswood Nursery was appropriated under the Maternity and Child Welfare Act, 1918, as an institution for the reception of children without a satisfactory home, and placed under the Maternity and Child Welfare Committee.

(*d*) Selly Oak Infirmary, an institution largely for the chronic sick, was placed under the Public Health Committee, subject to the general direction and control of the Public Assistance Committee.

(*e*) The administration of the cottage homes, viz., Marston Green, Erdington and Shenley Fields Cottage Homes, the Working Boys' Home and the Girls' Hostel, and the maintenance and education of poor children therein, were transfered to the Education Committee, subject to the general direction and control of the Public Assistance Committee.

(*g*) The boarding out of children in suitable cases was placed in the hands of the Education Committee.

(*h*) The duties under the Vaccination Acts, and the control of the Vaccination Officers and Public Vaccinators were transferred to the Public Health Committee. Subsequently the City Council considered a report dealing with adjustments necessary for transferring the Monyhull Mental Deficiency Colony, and they resolved:—

(*i*) To transfer Monyhull Colony to the care of the Mental Deficiency Acts Committee, appropriating the institution as from April 1st, 1931, for the purpose of the Mental Deficiency Acts.

At the time of preparation of this Report, a further report has been presented to the General Purposes Committee of the City Council dealing with adjustments and possible transfers in relation to other Public Assistance Institutions.

The administration of domiciliary medical relief, and the control of the staff of District Medical Officers, remains in the hands of the Public Assistance Committee.

Section 13 of the Local Government Act, 1929 lays down the duty of consultation in respect of hospital accommodation with such body as the City Council regard as representing the governing bodies and medical and surgical staffs of the Voluntary hospitals; and for that purpose the views of the Birmingham Hospitals' Council were obtained.

BLIND PERSONS ACT, 1920.

The City Council is responsible for the administration of the Blind Persons Act, 1920; and is able to give effect to the various duties laid down therein by appropriate subsidy of the facilities for workshop training, instruction of home workers, general care and supervision of the blind afforded by the Birmingham Royal Institution for the Blind as well as by augmentation of the earnings of blind home workers.

The following table gives particulars of blind persons in Birmingham. It will be seen that there were 1,432 registered at the end of the year, 331 of these were over 70 years of age.

	Males.	Females.	Total
Babies in Sunshine Home	1	2	3
Babies at home	2	3	5
Babies in Public Assistance Institutions	2	2	4
Children at School—Resident	13	20	33
Children at School—Day	14	13	27
Children of school age at home	6	1	7
Children of school age in Public Assistance Institutions	1	—	1
Adult pupils—Resident	4	7	11
Adult pupils—Day	5	14	19
Adults awaiting training	3	1	4
Workshop workers recognised	126	62	188
Other blind employees	18	9	27
Trained home workers	10	11	21
Unemployables at home	401	547	948
Unemployables in Public Assistance Institutions	45	73	118
Unemployables in Cowley Home	—	16	16
	651	781	1,432

Number receiving Old Age Pension—637

Total number of Blind Persons provided with certificates for wireless licenses—1,016.

REMOVAL OF INFIRM AND DISEASED PERSONS.

When the Birmingham Corporation Act, 1929, came into force, Section 38, which refers to the above, was delegated to the Public Health Committee, and during the year 28 cases were investigated. Most of them were brought to the notice of the Department by the Relieving Officers, whose co-operation in the matter was most welcome.

The number of cases was relatively high, but this may be regarded as temporary, consequent upon the coming into force of this Section. Most of the cases were subsequently admitted to an institution, others were found to be unsuitable, and in no case during the year was it found necessary to invoke legal action.

III. SANITARY CIRCUMSTANCES.

WATER SUPPLY.

I am informed by Mr. Broadley, Secretary of the Water Department, that about 12 miles of leading mains of 12 to 30 inches diameter were provided during the year in addition to about 70 miles of 4 to 6 inches distribution mains. The work of laying an additional 60 inches main from the Elan Aqueduct has gone on continuously throughout the year. No special action has been necessary with regard to contamination and there has been no restriction of supply.

Periodical examinations, both chemical and bacteriological, were made and showed that the high standard of purity had been maintained.

WELLS.

There are still at least 230 wells within the City area, most of which are shallow wells on the outskirts of the City, while there are a few artesian wells in the Centre of the City of a very satisfactory character. The shallow wells are in a large proportion of the cases of a character rendering them liable to sudden gross pollution, but unfortunately many of the properties are still a considerable distance from the Corporation supply. Special attention has been given to shallow wells connected with dairies on farms, and 61 samples were taken of various wells for chemical and bacteriological analysis during the year, a special survey being made of the well-supply to houses in the vicinity of Lodge Hill Cemetery.

RIVERS AND STREAMS.

The followng extracts, taken from the annual report of the Tame Basin Joint Committee indicate that considerable improvement has taken place:—

Hydrographical Survey of the River Trent.

Your Committee has continued to actively participate in this survey, organised by the standing Committee on River Pollution, Ministry of Agriculture and Fisheries and a report upon the result of the survey has been circulated amongst the Constituent Authorities.

The steadily maintained improvement in the condition of the River Tame has again been proved by these observations. During the progress of the survey, small live fish have been observed in one of the principal tributaries of the River at a point where in the early days of your Committee's existence the stream was frequently found to be totally devoid of dissolved oxygen.

In connection with these surveys, the improvement in the condition of the River Tame is well illustrated in the following record of the average percentage of dissolved oxygen saturation of the river water since the year 1925:—

1925 — 33%
1926 — 41%
1927 — 49%
1928 — 55%
1929 — 66%
1930 — 75%

Sewage Disposal.

A large amount of excellent work has been undertaken during the past year by a number of the Local Authorities for the construction of new sewage disposal works, and for increasing the capacity of existing plant.

The Birmingham Tame and Rea District Drainage Board has added a further unit of sewage purification by the bio-aeration process, having a capacity of ten million gallons per day. The effect of this addition is to permit a largely increased volume of sewage to receive more effective purification in the bacterial filters.

The bacterial method of purification in artificial percolating filters has been adopted in the construction of new sewage disposal works for the Dudley Corporation and the Wednesfield Urban District Council. The old-standing source of pollution of the stream by the discharge of the very imperfectly treated sewage from the superseded Wednesfield Outfall Works, has now been removed and it is anticipated the drainage from the Guest Hospital will be diverted to the new works of the Dudley Corporation in the near future.

The Bilston Urban District Council have remedied defects at their sewage disposal works which have been the cause of intermittent polluting discharges to the stream.

The Darlaston Urban District Council has very promptly given consideration to the report containing suggested improvements in their sewage disposal arrangements, which was submitted to them by your Committee in July. The improvements suggested by your Committee have been fully confirmed by Consulting Engineers and the Local Authority has submitted the scheme for the consideration of the Unemployment Grants Committee.

A new sewage pumping station has recently been brought into operation to deal with the rapidly developing Herbert's Park Estate.

The Upper Stour Valley Main Sewerage Board has superseded obsolete pumping plant at their Titford sewage pumping station by the erection of new plant of increased capacity.

The West Bromwich Corporation is proceeding with the preparation of a scheme for providing new sewage disposal works and, in the meantime, minor improvements have been made in the treatment process at the existing Friar Park Sewage Works.

The authority has also constructed temporary treatment works to deal with the drainage from a new housing scheme at Hamstead.

A commendable instance of long sighted policy on the part of the Surveyor to the Brownhills Urban District Council, who, in a desire to obviate pollution of the stream, anticipated the necessity for making some substantial alteration in the sewage disposal arrangements, will be brought to a highly satisfactory termination in the near future.

Several years ago this officer realised that the result of purification of the sewage by broad irrigation over an extensive area of farm land was deteriorating, in addition to the method being difficult to control. Work for totally superseding this method of sewage purification by the installation of the bacterial method was therefore immediately undertaken, and this work has steadily progressed in the meantime, as the necessary labour and materials became available. By spreading this work over a number of years the Surveyor has been able to employ his staff upon the new sewage disposal process during periods when the conditions would not permit other work being undertaken. Local materials have also been used in the work and the result will be that very shortly the Local Authority will be the possessors of an up-to-date sewage purification installation, consisting of sedimentation tanks, bacterial filters fitted with travelling distributors and humus tanks and the cost of the work will have been almost negligible.

Direct Sewage Discharges.

Numerous instances have occurred of pollution of the streams by the irregular discharge of crude sewage from storm water overflows situated upon the sewerage systems of the Local Authorities. This serious form of pollution of the streams is fortunately of a temporary character and is usually found to be due to accumulated silt or other obstructing material causing a reduction in the capacity of the sewers. Remedial measures have been undertaken by the responsible officers immediately their attention has been called to defects of this description.

Liquid Trade Refuse.

The large number of industrial premises producing waste liquids in the manufacturing processes have been kept under constant observation and it is satisfactory to be able to state that there has been a pronounced diminution in the pollution caused by the discharge of these liquids to the stream.

Complaints.

A number of complaints of the pollution of the streams have been received and investigated. The increase in the number of these during recent years is accepted as an indication that closer observation of the water courses is being exercised by the public generally, with the result that any unusual condition is immediately reported to the responsible authority.

SEWERAGE.

Mr. Humphries, City Engineer and Surveyor, informs me that the following sewers were constructed during the year :—

	Miles.
Baldwins Lane and Scribers Lane	1.25
Lickey Road F.W.S.	0.18
Longbridge Lane and Coombes Lane	0.60
Church Hill, Northfield	0.27
Church Road and Bunbury Road, Northfield	1.00
Perry Barr Sewerage, Section 1	0.35
Perry Barr Sewerage, Section 3, Part 1	0.30
Kingstanding Estate	0.60
Drews Lane Sewerage Housing Estate	2.25
Botha Road Housing Estate	0.31
Bushmore Farm Housing Estate	3.85
Marsh Lane	0.78
Moor End Lane	0.50
Kingstanding Road	1.00
Colmers Estate	0.50
Bristol Road South	0.30
Croft Road, Yardley	0.25
Oxhill Road	0.30
Holyhead Road	0.25
	14.84

In addition to the foregoing, work has been commenced on the improvement of portions of the River Tame between Sweetmore Bridge, Water Orton and the City Boundary at Castle Bromwich under the provisions of the Birmingham Corporation (Rivers Improvement) Act, 1929.

CLOSET ACCOMMODATION AND SCAVENGING AND REFUSE DISPOSAL.

(By Mr. James Jackson, General Manager of the Salvage Department).

Disposal of Refuse.

The Salvage Department continues to develop the policy of the City Council to abolish the tipping of crude house refuse inside and outside of the city, and in this connection have at present in hand the re-building of the Rotton Park Street Disposal Depot, at a cost of £110,000. The work is proceeding satisfactorily and it is anticipated will be completed before the end of the present year. All the latest devices for the economical and scientific treatment of house refuse are being embodied in these works, and they will undoubtedly be the most up to date works of their kind in this country.

During the past eight years, the Salvage Department have built two new Salvage Works and modernised a further one at a total capital cost of £230,000, and there now remains the extension and modernisation of the main works at Montague Street in order to completely eliminate the tipping of crude house refuse.

The scheme for the rebuilding of Montague Street Depot, at an estimated cost of £200,000 has been approved by the City Council, as one which can be suitably accelerated as a Government Unemployment Grant Aided Scheme, and an application has been made to the appropriate Government Department in respect of same.

Collection of Refuse.

During the past twelve months, further developments have been made in the effort to obtain dustless loading, and the Department has purchased five electric vehicles with special covers of a greatly improved type.

Voluntary Dust Bin Hire Scheme.

This scheme continues to receive the support of property owners in the city, and the following table shews the number of owners and dustbins installed since its inception :—

	No. of Owners.	No. of bins. Large.	Small.	Total.
1/4/23 to 31/3/24	940	5,465	-	5,465
1/4/24 to 31/3/25	931	6,889	-	6,889
1/4/25 to 31/3/26	1,066	8,414	-	8,414
1/4/26 to 31/3/27	967	6,911	-	6,911
1/4/27 to 31/3/28	745	5,696	786	6,482
1/4/28 to 31/3/29	732	1,912	3,909	5,821
1/4/29 to 31/3/30	752	2,379	5,468	7,847
1/4/30 to 30/11/30	461	1,972	5,487	7,459
December	43	229	575	804
Total to Dec. 31/30	6,637	39,867	16,225	56,092

Cesspools.

The number of cesspools receiving regular service is 477, and during the past twelve months 75 cesspools have been connected to the sewers. Set off against this reduction however, the Department is giving service to 69 new cesspools belonging to houses built in the outlying parts of the city. There are only two cesspools situated in populous areas of the city, and one of these is for waste water only.

Sanitary Pans.

There are 449 sanitary pans in the city and during the past twelve months, 15 have been converted to the w.c. system. None of these pans are situated in populous parts of the city.

Privy Middens.

The Department is giving regular service to 187 privy middens, of which 12 are situated in populous areas of the city. During the past twelve months 14 have been converted to the w.c. system.

Dry Ashpits.

The conversion of dry ashpits into the standard dustbin system, for the temporary storage of house refuse continues to progress satisfactorily, and during the past twelve months 254 ashpits have been abolished and standard dustbins substituted in their place.

SANITARY INSPECTION.

The visits paid to various types of premises by the general staff of Sanitary Inspectors were as follows :—

	Visits	Revisits
For systematic house inspection	11,033	40,447
For housing complaints	18,102	54,199
For infectious diseases	6,769	2,800
For inspection of courts	2,859	3,525
For inspection of manure receptacles	211	250
For inspection of drainage (construction or repair)	1,108	2,564
For drain tests (smoke or water)	466	189
To common lodging houses	348	43
To houses let in lodgings	2,757	3,387
To tents, vans and sheds	390	44
To offensive trades' premises	120	50
To workshops and factories	3,803	78
Under the Rats Order	1,835	629
	6,983	
To milkshops and stores		267
To food premises		
To ice cream vendors	1,182	216
For miscellaneous complaints	2,238	741
To see owners or agents	5,379	299
For other purposes	3,050	465
Unsuccessful visits	5,441	3,157
Total visits and re-visits	187,424	

The next statement gives a general idea of the unsatisfactory conditions reported and dealt with as a result of these visits.

Houses to be disinfected	3,073
Repairs to houses	177,212
Houses to be cleansed by owner	9,528
Houses to be cleansed by tenant	162
Houses to have better ventilation	1,125
Houses to have separate water supply	4,098
Houses to be provided with damp course	397
Water or filth to be removed from cellars	331
Spouting to be put in order	6,854
Water closets to be repaired or re-constructed	7,240
Water closets to be cleansed	3,826
Additional water closets to be provided	308
Ashplaces to be repaired or limewashed	347
Soilpipes to be repaired or removed	300
Defective drains	3,495
Additional drains needed	2,938
Sanitary sinks to be provided	4,108
Sink bend pipes to be repaired or affixed	4,031
Yards to be paved or repaired	3,226
Wash houses to be repaired or limewashed	6,350
Accumulations of rubbish, manure, etc., to be removed	393

It will be seen from the above table that some 177,000 individual items were dealt with under the heading "Repairs to houses." These repairs comprised such matters as leaky roofs, defective walls and broken floors.

In 9,500 instances the landlord was required to carry out cleansing of the premises. In 1,100 houses better ventilation was provided.

Over 4,000 houses were provided with a water supply inside the house, under the powers given under the Corporation Act, 1929, under which the Corporation is responsible for half the approved cost of the work.

In 7,240 instances the water closet was repaired or re-constructed, while in 3,826 cases obstructed or dirty closets were put in order.

A large amount of work was also done in improving the drainage and yard paving. Some 3,500 defective drains were put in order, 2,900 additional drains were provided, 3,200 yards were paved or repaired, and 4,108 new sanitary sinks were provided, following on notices from the Department, many of these being related to the provision of an internal water supply. In 4,031 other cases notice was served for the improvement of drainage from existing sinks and 6,350 wash-houses were repaired or cleansed following on notices.

The total number of houses inspected was 24,405, of which 21,118 required improvement in one way or another.

In order to get the defects remedied, 20,075 informal notices were sent. In about one half of these the informal notices were complied with, recourse to a statutory notice being unnecessary. In 337 cases a summons was issued because of failure to comply with a statutory notice.

During the year the Public Health Department undertook the carrying out of the necessary work at 15 properties on which notices had been served under the Housing Acts, 1925 and 1930, and the Public Health Act. The number of houses involved was 140 and the total cost was £4,996 2s. 6d., to be repaid to the Public Health Committee, with interest, in instalments as allowed by the Act.

Further particulars as to the work done in connection with Housing will be found on page 39.

Court Cleansing Staff.

This staff is engaged on the periodical cleansing of some of the worst courts in the city, subject to an agreed charge to the owners. The number of courts which are regularly cleansed in this way is 233. The total number of cleansings effected last year was 12,073. The cleansing of the court includes attention to the water closets, ashplaces and drain traps.

FACTORIES AND WORKSHOPS.

The visits paid under the Factory and Workshops Acts numbered 3,845. As a result of these visits notices were served as follows:—

Want of cleanliness	273
Want of ventilation	7
Overcrowding	0
Want of drainage of floors	0
Other nuisances	81
Insufficient sanitary accommodation	36
Unsuitable or defective sanitary accommodation ...	75
Sanitary accommodation not separate for the sexes ...	10
Illegal occupation of underground bakehouse	0

Arrangements are in force co-ordinating the work of the Public Health Department in some directions with that of the office of H.M. Superintending Inspector of Factories for the Midland area. This has related chiefly to insufficient or defective sanitary accommodation, or to the investigation of nuisances arising in factories and affecting neighbouring premises. Fourteen visits were paid during the year to factories jointly by H.M. Superintending Inspector or his deputy and one of the medical officers of the Department. This form of co-operation has continued to prove of great value, preventing overlapping, duplication of action or on the other hand failure to take action, and at the same time removing risks of misunderstanding between two public departments engaged on closely kindred work.

SMOKE ABATEMENT.

Observations for excessive emissions of smoke from chimneys are carried out by two inspectors working under the various Acts dealing with this subject, viz :—

Public Health Act, 1875.
The Birmingham Corporation (Consolidation) Act, 1883.
Birmingham Corporation Act, 1922.
Public Health (Smoke Abatement) Act, 1926.

Under the latter Act bye-laws controlling the emission of black smoke came into effect in December, 1929, under which the emission of black smoke for a period of three minutes in the aggregate within any continuous period of thirty minutes is declared to be an offence liable to penalty.

During the year under review the Midlands Joint Advisory Council for Smoke Abatement has had the willing co-operation of the Committee of the Birmingham Central Technical College in establishing a training course in smoke prevention for stokers and engineers. The first course, given during the spring of 1931, consisted of a series of five lectures and four demonstrations. It was well attended and proved a marked success. It is proposed to provide a similar but somewhat more detailed course during the coming autumn.

The following table sets out particulars of observations on chimneys other than those of private dwelling-houses. There are in the City some 1,133 such chimneys, 411 being in connection with muffles.

	1930	1929	1928
Total number of observations	4,883	4,668	4,857
Excessive Smoke—			
From Boiler Fires	102	95	99
From Boilers and Furnaces	14	13	16
From Metallurgical Furnaces	43	51	35
Total number of excessive emissions	159	159	157
Number of prosecutions	39	53	61
Convictions obtained	38	51	60
Total amount of fines	£52/10/0	£71	£114
Average per case	£1/7/8	£1/7/10	£1/18/0
Cautions given	113	94	83

Additional observations are carried out each month on the atmospheric impurities carried down in the rainfall. These observations are carried out on lines comparable with those for a number of other towns. The records are obtained by means of two gauges, one in the centre of the City and one in the southern outskirts. The results obtained indicate that the soot deposit in the centre of the City is some six times greater than in the outskirts. The results are fully recorded in the Annual Report of the City Analyst.

OFFENSIVE TRADES.

The bye-laws under Section 112, Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, were subjected to revision and adopted in the amended form in September, 1930. The Offensive trades of the City are distributed as follows :—

Blood boiler	1
Bone boiler	1
Fell monger	5
Tanner	1
Soap boiler	3
Fat extractor	2
Tripe boiler	35
Gut scraper	4
Rag and bone dealer	22
Total	74

These firms in general are conducting their business with the production of little or no nuisance. Many minor defects were remedied without notice after the new bye-laws came into force. The total number of visits paid by the sanitary inspectors to places where offensive trades were carried on was 170 and 18 informal notices, and 1 statutory notice were served. No prosecutions were necessary. One firm transferred their business elsewhere after notices had been served. No new licences were issued during the year. One temporary licence was given temporary renewal pending the approval of the new bye-laws. The trade of fish-frying was declared to be an offensive trade on March 24th, 1930, but the enforcement of the bye-laws in respect of this particular trade was delegated to the Markets and Fairs Committee.

COMMON LODGING HOUSES.

At the end of the year there were 27 registered Common Lodging Houses in the City, affording accommodation for 1,948 males and 68 females.

It is satisfactory to note that the unusually high standard of cleanliness and sanitation established in these premises in Birmingham continues to be maintained.

It was not found necessary to resort to legal proceedings to remedy any of the contraventions which were found.

No. of houses on register (for males only)	25
No. of houses on register (for females only)	2
No. of lodgers allowed	2,016
Houses registered during the year	—
Houses closed during year	3
No. of day visits	332
No. of night visits	59
Notices served	45
No. of summonses	—

HOUSES LET IN LODGINGS.

These premises are among the most unsatisfactory in the City. The revised bye-laws which came into operation in the autumn of 1929 have been applied with strictness. This has resulted, directly or indirectly, in the closure of 281 of the most unsatisfactory houses let in lodgings, while it has produced a marked change for the better in the remainder, poor though many of them continue to be in any ordinary standard of housing.

One great difficulty affecting in particular this class of property, to which attention has frequently been drawn, is the grinding down of the poorest class of tenants by the exorbitant rents charged by landlords, who, in many cases are themselves tenants, earning a handsome income by the process of profiteering by sub-letting to their less fortunate fellows. That evil, with all its consequences of loss of heart and of carelessness in the use of property on the part of the sub-tenant and of irresponsibility on the part of the tenant who is also landlord is a vital factor in the more urgent housing question of the slum dweller; and no more important steps could be taken nationally than to make such exorbitant rentals illegal.

The following particulars relate to houses let in lodgings in the City:

Number of houses on register	288
Number of rooms let as single rooms	821
Number let two or more rooms together	322
Certified accommodation	3,299
Number of visits	6,144
Repairs ordered	10,183
Overcrowding	11
Cleansing required	515
Provision for cooking	762
Fire extinguishers needed	612
Lighting on stairs	537
Water supply	517
Other defects	1,825
Summonses issued for non-compliance with Bye-laws	14

CANAL BOATS.

During the year 1930 the number of boats inspected on the canals within the City area was 1,189.

The 1,189 boats inspected were registered for the accommodation of 3,787 persons and when inspected were found to be carrying 1,446 men, 895 women, and 850 children, a total of 3,191 persons, represented in terms of adults as 2,766.

The following table shows the number of boats inspected during the last five years, giving the number of persons whom the boats were registered to accommodate and the actual number of occupants at the time of inspection:—

Year.	No. of boats inspected.	Registered to carry (adults).	Actually occupied by: Men.	Women.	Children.	Total occupying	Equivalent to adults.
1926	1,081	3,464	1,216	797	888	2,901	2,457
1927	986	3,165	1,087	808	856	2,751	2,323
1928	1,194	3,906	1,420	970	1,132	3,522	2,956
1929	1,155	3,603	1,442	860	932	3,234	2,768
1930	1,189	3,787	1,446	895	850	3,191	2,766

Of the 1,189 boats inspected during the year it was found that 1,121 or 94 per cent. were in good condition and conforming with the Acts and Regulations, while in 68 or 6 per cent. of the total various contraventions were found. These are classified thus :—

Boats with one contravention each	...	12 making total contraventions	12
Boats with two contraventions each	...	44 making total contraventions	88
Boats with three contraventions each		3 making total contraventions	9
Boats with four contraventions each	...	7 making total contraventions	28
Boats with five contraventions each	...	2 making total contraventions	10
	Totals	68	147

Complaint notes were duly served on the owners in all cases.

During the year certificates were returned by owners signed by the various Canal Boat Inspectors, showing that 155 complaints had been remedied.

The following table shows the number and character of contraventions found and remedied during the year :—

Contraventions referring to :—	Outstanding and brought forward from 1929	Found during 1930	Remedied during 1930	Carried forward to 1931
Cabins requiring painting ...	13	46	49	10
Cabins requiring repairs	6	16	18	4
Requiring lettering	11	49	51	9
Cabins leaking	6	14	17	3
Registration	—	10	6	4
Not producing certificates	—	—	—	—
Dirty cabins	—	—	—	—
Overcrowding	—	6	6	—
Separation of sexes	2	4	6	—
Water vessels	—	—	—	—
Pumps	—	—	—	—
Ventilation	—	—	—	—
No certificate identifying owner of boat	—	—	—	—
Cabins not habitable	—	2	2	—
	—	—	—	—
Totals	38	147	155	30
	—	—	—	—

It has not been necessary during the year to take any legal proceedings under the Acts or Regulations.

No cases of infectious disease have occurred in canal boats during the year 1930.

There was a net increase of 3 boats registered at Birmingham during the year, thus bringing the total up to 567.

The 567 boats on the register are classified as follows. It will be noticed that steam boats continue to remain at three :—

Ordinary Boats	... ...	488
Steam Boats	... ...	3
Motor Boats	... ...	76
	Total	567

SHOPS ACTS 1912—1928.

The number of visits and investigations made during 1930 was 8,028. The following contraventions of the Acts were reported :—

1. In 297 shops notices giving day of closing for weekly half-holiday were not exhibited.
2. Notices declaring exempted goods were not displayed in 276 shops, which had remained open after closing hour on weekly half-holiday for the sale of such goods.
3. No provision of seating accommodation for female assistants had been arranged for in 12 cases.

4. In 226 instances the employers had failed to provide the prescribed form relating to the assistants weekly half-holiday.

5. In 21 cases it was found that the assistants were not having such intervals for meals as are laid down in the Act.

6. In 89 shops where young persons were employed, the employers had failed to exhibit the notice referring to the specific provisions of the Act.

7. In 211 cases shops were found not to be closing at the statutory time.

Proceeding were taken against 97 shopkeepers for contraventions of the Acts and Closing Orders with the following results:—

(a) *Under the Butchers Closing Order*, 1921. (*Shops Act*, 1912).

4 Defendants were fined £2 each.
8 Defendants were fined £1 each.
1 Defendant was fined 15/-
2 Defendants were fined 10/- each.
1 Summons not served. (Defendant in Hospital).

(b) *Under the Shops (Hours of Closing) Act*, 1928. *Serving after the specified closing hour.*

1 Defendant was fined £3.
1 Defendant was fined £2.
32 Defendants were fined £1 each.
3 Defendants were fined 15/- each.
28 Defendants were fined 10/- each.
10 Defendants were fined 5/- each.
1 Summons not served. (Defendant left address).

(c) *Under the Shops Act*, 1912.

1 Defendant was fined £3.
1 Defendant was fined £2.
2 Defendants were fined 10/- each.
1 Defendant was fined 5/-.

IV. HOUSING.

I am informed by the City Engineer and Surveyor that the total number of new houses built in the City last year was 8,453, of which number 6,715 were built by the Municipality and 1,738 by private enterprise.

The following table shows the number built during each year since 1920:—

	No. of houses erected by private enterprise.	Corporation houses.	Total.
1920	244	553	797
1921	426	970	1,396
1922	382	810	1,192
1923	556	1,621	2,177
1924	1,201	1,992	3,193
1925	1,774	3,215	4,989
1926	1,775	5,159	6,934
1927	2,445	4,007	6,452
1928	1,487	3,505	4,992
1929	2,456	4,359	6,815
1930	1,738	6,715	8,453
Total ...	14,484	32,906	47,390

The wards in which new houses have been built since 1920 are indicated below:—

	Ward.	Houses erected by private enterprise.	Corporation Houses	Total
Central Wards.	St. Paul's	2	—	2
	St. Mary's	4	—	4
	Duddeston and Nechells	—	—	—
	St. Bartholomew's	2	196	198
	St. Martin's and Deritend	—	—	—
	Market Hall	—	—	—
	Ladywood	1	—	1
	Total Central Wards	9	196	205
Middle Ring.	Lozells	6	—	6
	Aston	91	—	91
	Washwood Heath	561	1,121	1,682
	Saltley	176	2,534	2,710
	Small Heath	126	1,260	1,386
	Sparkbrook	2	—	2
	Balsall Heath	9	—	9
	Edgbaston	573	—	573
	Rotton Park	122	—	122
	All Saints'	20	—	20
	Total Middle Ring	1,686	4,915	6,601
Outer Ring.	Soho	153	—	153
	Sandwell	628	277	905
	Handsworth	693	110	803
	Perry Barr	226	3,615	3,841
	Erdington North	1,182	4,786	5,968
	Erdington South	504	1,797	2,301
	Yardley	886	2,526	3,412
	Acocks Green	1,291	6,235	7,526
	Sparkhill	2,367	2,858	5,225
	Moseley and King's Heath	1,124	2,055	3,179
	Selly Oak	702	—	702
	King's Norton	354	560	914
	Northfield	1,615	2,223	3,838
	Harborne	1,064	753	1,817
	Total Outer Ring	12,789	27,795	40,584
	Grand Total	14,484	32,906	47,390

The following information is submitted in the form required by the Ministry of Health.

(A) HOUSING STATISTICS.

Number of new houses erected during the year.

(*a*)	Total (including numbers given separately under (*b*)	8,453
	(i) By the Local Authority	6,715
	(ii) By other Local Authorities	—
	(iii) By other bodies or persons	1,738
(*b*)	With State assistance under the Housing Acts :	
	(i) By the Local Authority	6,500
	(*a*) For the purpose of Part II. of the Act of 1925	—
	(*b*) For the purpose of Part III. of the Act of 1925	6,500
	(*c*) For other purposes	—
	(ii) By other bodies or persons	27

1. INSPECTION OF DWELLING HOUSES DURING THE YEAR :—

(1)	Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts)	24,405
(2)	Number of dwelling houses included under sub-head (1) above, which were inspected and recorded under the Housing (Consolidated) Regulations, 1925	8,922
(3)	Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	8
(4)	Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	21,118

2. REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES :—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers — 13,877

3. ACTION UNDER STATUTORY POWERS :—

(A.)	Proceedings under Section 3 of the Housing Act, 1925, and Section 17 of Housing Act, 1930 :—	
(1)	Number of dwelling-houses in respect of which notices were served requiring repairs	905
(2)	Number of dwelling-houses which were rendered fit after service of formal notices :—	
	(*a*) By owners	170
	(*b*) By Local Authority in default of owners	12
(3)	Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	11
(B.)	Proceedings under Public Health Acts.	
(1)	Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	8,082
(2)	Number of dwelling-houses in which defects were remedied after service of formal notices :—	
	(*a*) By owners	7,055
	(*b*) By Local Authority in default of owners	11
(C.)	Proceedings under Sections 11, 14, 15 of the Housing Act, 1925 and Sections 19, 21 of the Housing Act, 1930.	
(1)	Number of representations made with a view to the making of a Closing Order	8
(2)	Number of dwelling-houses in respect to which Closing Orders were made	16
(3)	Number of dwelling-houses in respect to which Closing Orders were determined :—	
	(*a*) Demolition having been carried out	12
	(*b*) An undertaking having been given that the house would not be used for human habitation	5
	(*c*) The house having been rendered fit for human habitation	1
(4)	Number of dwelling houses in respect of which Demolition Orders were made	2
(5)	Number of dwelling-houses demolished in pursuance of Demolition Orders	15

4. NUMBER OF HOUSES OWNED BY THE LOCAL AUTHORITY :—

Total number of houses owned by the Local Authority at 31st March, 1930 — 25,236

Number built in the last two years and held under Part III. of Housing Act of 1925 :—

(*a*)	By the erection of dwelling-houses (two years ended 31st March, 1930)	8,388
(*c*)	By acquiring houses suitable for the purpose (2 years ended 31st March, 1930)	141
	Under Part II. of the Housing Act, 1925	Nil.
	Under other powers	Nil.

(B) HOUSING CONDITIONS.

(1) GENERAL OBSERVATIONS.

The total number of houses in Birmingham in 1930 was 230,000, the estimated number of various sizes being roughly as follows :—

Houses of 3 rooms	40,000
Houses of 4 and 5 rooms	110,000
Houses of 6 rooms or more	80,000

There are no large blocks of tenement dwellings, but an increasing number of the larger houses are being let off in tenements. The great majority of the older houses are three-roomed cottages, built back-to-back, and situated largely in courts and terraces. Most of these were erected between 50 and 100 years ago, and a certain number of them are let off as houses let in lodgings. These back-to-back houses are, to a large extent, situated in courts. Many are deficient in light and ventilation not only because they have windows and doors on one side only, but also because the open space within the court is often quite inadequate for the houses abutting on it. Few of these houses have separate waterclosets, and large numbers have no supply of water inside the house.

During the 30 years prior to the War a large number of rather larger working-class houses were erected, of a "through-ventilation" type, and provided with an internal water supply and a watercloset in a small private yard. Since the War the City Council has erected more than 35,000 houses under the Housing Acts. It may be said that, speaking generally, the back-to-back houses predominate in the Central Wards, the older type of through-ventilation house is most common in the Middle Ring, while the modern Corporation houses are mostly in the wards comprised in the Outer Ring. Vital statistics relating to these three groups of wards will be found in various sections of this Report.

(2) SUFFICIENCY OF SUPPLY OF HOUSES.

For some years prior to the War there had been a falling off in the number of new houses built. From 1914 to 1918 building was at a standstill so that at the close of the War a serious deficiency existed, and overcrowding was common. The large number of houses erected during the last ten years under the Housing Acts has substantially relieved this shortage. Even now, however, it is not easy to find an unoccupied but habitable working-class dwelling anywhere in the City, and there is great demand for the houses which are being erected by the Corporation. This shortage of houses makes it difficult for a tenant to move from one house to another, a difficulty accentuated by the question of "decontrol" under the Rent Restriction Acts.

One effect of the building of so large a number of Corporation houses has been a considerable change in the distribution of the population. Compared with ten years ago the figures for the three groups of wards are as follows :—

	Approximate population.		Increase or Decrease.
	1921	1930	
Central Wards	243,700	220,900	—22,800
Middle Ring	372,400	362,600	—9,800
Outer Ring	289,500	407,100	+117,600

This is a striking change to have taken place within a period of ten years.

(3) OVERCROWDING.

A large number of cases of overcrowding are constantly being discovered by the Sanitary Inspectors and Health Visitors, and these are brought to the notice of the Estates Department with a view to a Corporation house being obtained if possible. In a good many instances, however, this cannot be done owing to inability to pay the higher rent.

During the year 385 cases of households who needed more accommodation were referred by the Public Health Department to the Estates Department, after a preliminary strict weeding out of cases which for financial or other reasons obviously could not comply with the requirements for a Corporation house.

During the year in response to applications through this Department 77 families were allotted a Corporation house. In 98 other cases the applicant was recommended for a larger privately-owned house, and in 65 cases an exchange into a larger house was arranged or suggested. In 103 instances the application was refused either because the applicant did not seem likely to make a desirable tenant or because his income was too small, or because he had not registered for a long enough period.

From time to time efforts have been made to estimate the degree of overcrowding, the method adopted being to investigate the conditions in 1,000 houses in which scarlet fever has occurred, the cases being taken consecutively and being therefore widely distributed both geographically and socially. The result of the investigation made in 1930 was as follows.

Of the 1,000 houses 825 were occupied by members of one family only. In 82 other instances there were lodgers in addition to the tenant and his family, while in 93 cases, or roughly 10 per cent. the house was occupied by two or more families. The figures for 1930 are contrasted with those for 1925 in the statement below :—

	1930	1925
Houses with one family only	825	656
Houses with one family and lodgers	82	128
Houses with two families	82	200
Houses with three or more families	11	16
Average number of persons per house	5.38	6.15

It is clear from these figures that, as regards overcrowding, a marked improvement has taken place in the last five years. At the same time the fact (assuming these figures to be representative) that about one family in every ten has to share a house with another family shows that much remains to be done to bring the housing accommodation up to a satisfactory level.

(4) FITNESS OF HOUSES.

(a) No noteworthy difficulties have been experienced during the year in regard to action under the Public Health Acts. While the Housing Act, 1930, has introduced novel problems, it has been in use for too short a period for its scope as yet to be tested out thoroughly.

(b) The City Council adopted a five-year programme for dealing with unhealthy and insanitary property, involving the demolition of 4,700 houses during the ensuing five years, as follows :—

HOUSING ACT, 1930 (SECTION 25 (2)).

(QUINQUENNIAL STATEMENT).

	Population (estimated figure for middle of 1929)	981,000
	Number of inhabited houses (according to rate books)	228,269
A.	Estimated production of houses by the local authority during the next five years	30,000
B.	Estimated production of new houses of working class type by private enterprise during the next five years :	
	(i) With subsidy under the Act of 1924	100
	(ii) Under arrangements made under Section 29 of the Act of 1930	*Impossible to estimate.*
	(iii) Otherwise	1,000
	TOTAL	31,100
C.	Estimated number of new houses to be allocated by the local authority during the next five years to the purposes of the Housing Act, 1930, *i.e.*, the purposes mentioned in E and F)	7,000
D.	Estimated number of new houses to be allocated by the local authority during the next five years to the purposes of the Act of 1924 (*i.e.*, new housing)	23,000
	TOTAL	30,000
E.	Estimated number of houses to be demolished during the next five years :	
	(i) In clearance areas	4,700
	(ii) In improvement areas :	
	(*a*) For opening the area	
	(*b*) As unfit houses	
	(iii) Individual houses outside clearance and improvement areas	
	TOTAL	4,700
F.	Estimated number of persons to be displaced during the next five years :	
	(i) By any of the processes mentioned in E	24,000
	(ii) To abate overcrowding in improvement areas	3,500
	TOTAL	27,500
G.	Estimated number of houses to be repaired under Part II of the Housing Act, 1930, during the next five years	10,000

(c) Internal Water Supply. While the great majority of houses having a scullery have been provided with an internal water supply under the Corporation Act of 1914, there still remained large numbers of houses which had neither scullery nor internal water supply, in regard to which official power of action was lacking. Under the additional powers given, however, by the Corporation Act of 1929, large numbers of these houses are now being provided with a separate internal water supply, as distinct from the common supply from a tap or taps in the court shared with a number of other houses.

(d) Water Closet Accommodation. As mentioned earlier, the great majority of the older houses, of back-to-back type, have no separate water closet. In nearly all cases one water closet is used in common by the occupants of two houses. This is not, of course, true of the more recent class of property, where there is separate water closet accommodation for each house.

(5) UNHEALTHY AREAS.

One considerable area, the Lower Tower Street, etc., Area, represented in 1926 by Sir John Robertson is at present under renewed consideration by the Estates Committee in relation to the provisions of the Housing Act, 1930.

The five-year programme proposed by the City Council includes a considerable number of improvement and of clearance areas of various sizes, with which it will be possible to proceed immediately when a decision has been reached and made effective as to the alternative accommodation to be provided for displaced families. Under the Housing Act, 1930, such alternative accommodation must be available and ear-marked before demolition can be proceeded with.

(6) HOUSING BYE-LAWS.

The bye-laws for houses let in lodgings, revised in 1929, have as stated earlier proved valuable in raising the general standard of accommodation in houses let in lodgings, and in leading to the closure of the least satisfactory among these generally unsatisfactory premises.

The bye-laws in regard to tents, vans and sheds have been but little used, by reason of the implication that compliance with a notice served under the bye-laws may lead to an assumption that the van or shed is recognised and approved as a dwelling. It has been felt desirable rather to refer particulars as to such occupied premises to the City Surveyor for more drastic action under the powers of prohibition given by Section 35 of the Birmingham Corporation (General Powers) Act, 1929.

V. INSPECTION AND SUPERVISION OF FOOD.

FOOD SHOPS.

The supervision of the smaller retail food premises is carried out by the sanitary inspectors of the Public Health Department, while the larger wholesale premises are inspected by the Veterinary Department. Reference to the latter group will be found elsewhere in the Report. In regard to the smaller premises and foodshops each is reviewed in the light of Section 72 of the Public Health Act, 1925, and particular attention is paid to general cleanliness and to immediate removal of refuse.

In the early summer each year a special tour of inspection is made of all known ice-cream premises. National legislation has not yet enforced the registration of these premises, and in the absence of registration premises may readily escape inspection. While there has been a great improvement in the standard of general cleanliness, largely from the stimulus of competition between the increasing number of large firms, there is still far too much ice-cream manufactured in private houses under unsatisfactory conditions. The latter trade is at present principally confined to the week-ends, and is, therefore, difficult to supervise.

MILK SUPPLY.

The area from which the City milk supply is drawn remains approximately the same, although each year less milk is produced within the City boundary.

Bacteriological Examination.

The total number of samples taken for bacteriological examination during the year was 467.

There were 94 samples of raw ungraded milk submitted for bacteriological examination, and the improvement in the bacteriological standard noted in 1929 has been more than maintained. Of these samples only 9 contained over 200,000 bacteria per c.c. and an additional 8 over 100,000 per c.c.

The increase in purity is also reflected in the results of analysis of the 164 samples of pasteurised milk taken, only 7 of which had a count of over 30,000 bacteria per c.c. These were samples of milk pasteurised by the holder process. The same satisfactory result is not evident in the milks which are flash-pasteurised.

Milk (Special Designations) Order, 1923.

The number of dealers in the City licensed to sell designated milks under the above order has continued to increase. There were 188 licences issued in 1930 as compared with 116 in 1929. During the year 209 samples of Graded milk were taken including 44 samples for the Ministry of Health, and they have in all cases come within the standard laid down by the Ministry.

Producers of Certified Milk	1
Dealers in Certified Milk	6
Dealers in Grade A. (T.T.) Milk	38
Producers of Grade A Milk	4
Dealers in Grade A. Milk	58
Producers of Grade A. Pasteurised Milk	1
Dealer in Grade A. Pasteurised Milk	1
Producers of Pasteurised Milk	12
Dealers in Pasteurised Milk	54
Supplementary Licence for Certified Milk	1
Supplementary for Grade A. (T.T.) Milk	1
Supplementary Grade A. Milk	7
Supplementary Pasteurised Milk	4

The bulk of the City's milk supply is now subjected to some form of treatment by heat. Any exact estimate is impracticable, but probably some 20 per cent of all the milk is unheated, this including designated milks; perhaps 25 per cent is pasteurised by the holder process and some 5 per cent by flash pasteurisation, while roughly 50 per cent of Birmingham milk continues to be heated by a process of sterilisation, not pasteurisation. It is to be hoped that the latter will steadily and not too slowly be replaced by milk treated by pasteurisation by means of the holder process rather than by sterilisation.

Milk and Dairies Order, 1926.

All matters referable to dairies come under the control of the Public Health Committee; matters relating to cows and cowsheds come under the Markets and Fairs Committee, acting through the City Veterinary Department.

The Order has been complied with in a satisfactory manner, and the standard of cleanliness in dairies calls for no observation.

Some degree of difficulty is experienced in inspecting the distribution of milk by roundsmen, many of whom come into the City area from outside. The prevalence of unemployment has led to an influx into the ranks of the retail milk purveyor of persons who are not conversant with the legal requirements. Sixteen summonses were issued against individuals of this class during the year, mainly for having a vehicle and utensils without any means of identification. Twelve convictions were recorded and fines imposed totalling £4 7s 6d.; one summons was dismissed and three withdrawn.

INSPECTION OF COWS AND COWSHEDS WITHIN THE CITY.

(Report by Mr. Brennan DeVine, Chief Veterinary Officer).

At the end of the year there were 98 dairy farms with a total of 1,309 cows in milk in the City. During the year Veterinary Inspectors paid 2,485 visits to cowsheds, averaging one visit per month to each shed. Throughout the year, the health and cleanliness of the cows in the City was good. In two cases special attention of the owner was drawn to the want of cleanliness in the sheds. There were 35 cases of cows affected with acute catarrhal mastitis. In all of those cases the affected cows were kept isolated and their milk was prohibited from sale for human consumption.

Herds Producing Grade "A" Milk.—In connection with the sale of Special Designated Grade "A" Milk, one of the conditions under which the Licence is granted for the sale of same is:

(*ii.*) An examination of the herd must be made once in every three months by a Veterinary Surgeon nominated by the Licensing Authority. Any animal certified as showing evidence of any disease which may injuriously affect the milk must be immediately removed from the herd and information as to its disposal given to the Licensing Authority.

Special Veterinary examination has been made of every milch cow in the following herds and the usual three-monthly Certificate issued:—

P. D. Bickle, Hawkesley Hall, King's Norton.
Mrs. Butler, Rednal House Farm, Rednal.
E. Burchell, Four Dwellings Farm, Quinton.
F. W. Lloyd, Hill Top Farm, Handsworth.

Cowsheds.—In all the dairy farms throughout the City, the cleanliness and general condition of the cowsheds was maintained at a high standard during the year. Three applicants applied for registration as cowkeepers in the City for the sale of milk. In each case, when the sheds had been suitably altered to comply with the bye-laws, the necessary registration was granted.

In three other cases new sheds were erected in accordance with the bye-laws and registered.

In 11 cases dairymen discontinued keeping cows owing to their sheds being demolished on account of building residential property, and their names have been removed from the register.

Detection of Tuberculosis in Milk.

Bulk samples of milk are taken from each City dairy at least once annually as a check on our system of clinical examination of the dairy cows, and individual samples are taken in suspected cases. During the year 185 samples of milk were taken from City dairies, of which 11 mixed samples and 11 individual samples were found to contain living tubercle bacilli. The offending cows were all dealt with, 9 being taken and slaughtered under the Tuberculosis Order, and the other 2 cows were slaughtered at the City Meat Market at the owner's request. In each case Tuberculosis was found on Post Mortem.

TUBERCULOSIS AND THE MILK SUPPLY.

(Report by Mr. DeVine).

In addition to the 185 samples of milk taken from City dairy herds, 1,699 mixed samples of milk were taken from supplies sent in from outside sources as follows:—

Source.	Mixed Samples.	Result of Examination. Free.	Infected.	Percentage Infected.
Cheshire	1	1	—	—
Derbyshire	5	4	1	20.0
Gloucestershire	72	68	4	5.5
Herefordshire	4	4	—	—
Leicestershire	13	11	2	15.3
Montgomeryshire	1	—	1	100.0
Shropshire	187	170	17	9.0
Staffordshire	500	467	33	6.6
Warwickshire	662	625	37	5.5
Worcestershire	254	244	10	3.9
	1,699	1,594	105	6.2

(Note.—In order to sample the whole of the City's milk supplies the number of samples taken weekly was increased to 3 dozen as from 1st January, 1930.)

Milk and Dairies (Consolidation) Act, 1915. *Section* (4) (1).—Following the detection of the 105 infected samples of milk coming into the City from outside sources, notification was sent in each case to the Medical Officer of Health of the County in which the dairy from which the infected milks came was situated, and a Veterinary Inspector from this Department attended at the time the inspection of each of the herds was made by the Local Authority concerned. Altogether 117 visits were paid to outside farms.

The 105 infected bulk samples were taken from milk produced by 109 different herds, comprising 2,754 dairy cows. The cows were examined and further milk samples taken at each farm. Up to the 31st December the reports on the samples taken had been received in 74 cases, as a result of which 71 cows affected with Tuberculosis of the udder, and giving milk containing living tubercle bacilli, were discovered on 62 farms, and subsequently slaughtered by the County Authorities. At 12 of the farms visited, the cows responsible for giving tuberculous milk were not found, but it was ascertained at each farm that cows had either gone "dry" or been sold out for slaughter prior to the visit of the Veterinary Inspector. Further bulk samples of milk were taken as controls, which, on examination, were found to be free from tubercle bacilli, thus proving in each case the offending cow has not been kept in the herd.

The reports on the subsequent bulk and individual samples of milk taken at the farms by the County Local Authorities from 35 of the 109 herds visited had not, by December 31st, been received.

Comparative Return.—The following table shows the number of samples taken of milk sent in from outside sources during the past ten years, and the percentage infected:—

Year.	Samples Taken.	Samples Infected.	Percentage Infected.
1921	184	9	4.9
1922	228	8	3.5
1923	258	19	7.3
1924	303	26	8.5
1925	622	46	7.4
1926	811	71	8.7
1927	835	60	7.2.
1928	974	91	9.3
1929	958	64	6.7
1930	1,699	105	6.2
	Average for period: 7.2		

In connection with the question of eradication of Tuberculosis from bovine animals, the Chief Veterinary Officer of the Ministry of Agriculture in his Annual Report for the year 1929 states :—

> " The Tuberculosis Order of 1925 was neither designed nor expected to eradicate tuberculosis completely from bovine animals in this country. In the present state of knowledge that object cannot be achieved in any comparatively short space of time, without a great and sudden depletion of the herds of this country and very large expenditure in compensation. The Order was designed to remove as far as possible a source of immediate danger to human health, and at the same time to reduce the number of infected animals able to spread the disease among other animals. The Order deals, therefore, with tuberculous animals as falling into two distinct categories :—(*a*) cows giving tuberculous milk, which are dangerous to human beings as well as to other animals ; and (*b*) bovine animals freely execreting tubercle bacilli in other ways, which are the main source of the disease among animals. It is to be taken not as representing a policy of complete eradication, but as a measure complementary to the Milk and Dairies Acts and Orders."

Eradication of Tuberculosis from Dairy Herds.

Tuberculin Testing of Cattle.—The Ministry of Health issued special instructions directing that in all tuberculin testing beginning on or after 1st July, 1930, of herds producing Certified or Grade A (Tuberculin Tested) milk, the double intradermal test shall be used. Up to that date it was permissible to use either the double intradermal or the subcutaneous test.

Birmingham Corporation Scheme.—The double intradermal test has been used for all herds tested during the year under the Birmingham Corporation scheme for the eradication of tuberculosis from herds supplying milk to the City. For the purposes of this scheme the Corporation send their Veterinary Inspectors to carry out the testing of herds for Farmers who desire to be included in it.

Nineteen herds, comprising 672 animals, were continuing in the Scheme on 31st December. From 11 of these herds Certified or Grade " A " T.T. Milk is supplied to the City :—

No.		Approx. No. in Herd.	Certified and Grade A (T.T.) Milk.	Breeding Herds.	Mixed Herds.	City Dairies.	Outside Dairies.
1	...	100	1	1	—	1	—
2	...	44	—	—	1	1	—
3	...	25	1	1	—	—	1
4	...	4	—	1	—	1	—
5	...	40	1	1	—	—	1
6	...	8	—	1	—	—	1
7	...	30	1	—	1	—	1
8	...	4	—	1	—	—	1
9	...	25	—	—	1	1	—
10	...	30	1	1	—	—	1
11	...	100	—	—	1	1	—
12	...	40	—	—	1	—	1
13	...	20	1	1	—	—	1
14	...	29	1	—	1	—	1
15	...	15	—	1	—	—	1
16	...	28	1	1	—	—	1
17	...	44	1	1	—	—	1
18	...	50	1	1	—	—	1
19	...	36	1	1	—	—	1
		672	11	13	6	5	14

The testing of two herds which have been included in the Scheme was discontinued owing to the high percentage of animals failing to pass the test. Five owners of other herds applied to be admitted to the scheme, but in only two cases were their herds suitable and these have been admitted to the Scheme.

Herds Tested During 1930.

The testing of herds which come under the Scheme is carried out half-yearly and the following return gives the number of animals tested during the year:—

	Tested	Passed	Failed	Date of entering Scheme
1 ...	458	449	9	October 24th, 1907
2 ...	132	126	6	October 3rd, 1908
3 ...	54	52	2	September 23rd, 1913
4 ...	11	9	2	April 14th, 1916
5 ...	118	105	13	June 8th, 1920
6 ...	18	17	1	May 26th, 1928
7 ...	80	69	11	November 22nd, 1907
8 ...	8	8	—	January 6th, 1908
9 ...	55	35	20	September 21st, 1921
10 ...	68	45	23	October 9th, 1913
11 ...	215	209	6	October 3rd, 1908
12 ...	84	78	6	June 6th, 1913
13 ...	57	52	5	October 4th, 1924
14 ...	68	60	8	October 9th, 1928
15 ...	31	28	3	May 13th, 1929
16 ...	78	70	8	Sept. 26th, 1929
17 ...	129	107	22	February 7th, 1929
18 ...	50	35	15	November 2nd, 1930
19 ...	36	30	6	September 12th, 1930
20 ...	41	17	24	Tested but not admitted
21 ...	55	26	29	to the
22 ...	37	11	26	Scheme
	1,883	1,638	245	
%		86.9	13.1	

Note.—In connection with the three herds tested but not brought into the Scheme, the owners decided that owing to the high percentage of animals which failed to pass the preliminary test, they could not see their way to comply with the conditions of the Scheme.

Summary.

Dairy Farms in the City	98
Milking Cows	1,309
Visits to Sheds	2,485
Cows in City Dairies affected with Mastitis	35
Cows in City Dairies affected with Tuberculosis	12
Samples of Milk taken	1,884
Samples of Milk taken found to be infected	127
Visits to Outside Farms	117
Herds tested	22
Cows tested	1,883
Cows which passed the test	1,638
Cows which failed to pass the test	245

INSPECTION OF MEAT AND OTHER FOODS.

(Report by Mr. DeVine).

The work connected with the inspection of meat and other foods may be classified as follows:

1.—The inspection of Slaughterhouses, etc.
2.—The inspection of Wholesale Fish, Fruit and Vegetable Markets.
3.—The inspection of Food Preparation Premises and Food Shops.
4.—The inspection of Fish Friers' Premises.
5.—The inspection of Meat and other Food surrendered as unfit for human food.
6.—Public Health (Meat) Regulations, 1924.
7.—Sale of Food Order, 1921 (Part III.).
8.—Shell Fish, etc.
9.—Merchandise Marks Act, 1926.
10.—Agricultural Produce (Grading and Marking) Act, 1928.
11.—Miscellaneous.

(1) Slaughterhouses, Etc.

Public Abattoir.—The present system of meat inspection at the City Meat Market and the small number of Inspectors employed, permits only a percentage of the meat sold there to be inspected. When slaughtermen or others engaged in the handling of carcases recognise anything which appears abnormal, or shows any indication of disease, it is their duty to at once report it to the Inspection Staff to be examined before being offered for sale in the market. It is, however, necessary under the Orders issued by the Ministry of Agriculture to carry out the veterinary examination of live animals awaiting slaughter so that any diseased animals may be isolated and steps taken to prevent the spread of infection to other animals.

The Inspection Staff in the City Meat Market at the present time consists of three Veterinary Inspectors and two lay-inspectors. Their duties are so arranged that there is always an Inspector on duty in the market during slaughtering hours.

During the year the following animals were slaughtered in the Public Slaughterhouses :—

	Beasts	Calves	Sheep and Lambs	Pigs	Total
City Meat Market	44,161	60,611	201,397	51,423	357,592
Montague Street	8	—	290	2,502	2,800
	44,169	60,611	201,687	53,925	360,392

Private Slaughterhouses.—There are in the City at the present time the following Private Slaughterhouses :—

Registered	50
Licensed	46
	96

There are also two licensed Private Knackeries.

In 52 of the Private Slaughterhouses, cattle, sheep and pigs are slaughtered: in 16, cattle and sheep only and in 28 pigs only are slaughtered.

Changes of Occupancy.—In the following cases notices of change of occupancy were received. The premises were inspected and found to be in a satisfactory sanitary and hygienic condition, and in each case the Committee confirmed the change.

347, Arthur Street, Small Heath.
217, Balsall Heath Road.
1,542, Coventry Road.
45, Station Road, Stechford.

Inspection, etc.—The city is divided into six separate areas for inspection work. The central district, which includes Montague Street and the principal bacon factories, has a Veterinary Inspector in charge and a Food Inspector is employed in each of the other five districts.

The following return shows the number of animals slaughtered in Private Slaughterhouses during 1930 :—

District	Beasts	Calves	Sheep	Pigs	Total
Central ...	550	172	7,067	179,573	187,362
No. 1 ...	930	264	7,753	662	9,609
No. 2 ...	1,233	524	6,882	10,942	19,581
No. 3 ...	2,250	784	9,382	5,895	18,311
No. 4 ...	1,187	518	9,289	1,959	12,953
No. 5 ...	1,713	847	16,952	6,822	26,334
	7,863	3,109	57,325	205,853	274,150

Montague Street Pig Market.—During the year, 79,101 fat pigs (including 21,333 Imported Pigs) passed through Montague Street Pig Market and were licensed to Bacon Factories and Slaughterhouses.

Irish Pigs.—The following gives the number of Irish Pigs received in Birmingham on licence during the year: —

Licensed to Montague Street Pig Market	21,333
Licensed direct to Bacon Factories and Slaughterhouses	76,446
	97,779

Imported Meat.—During the year the following imported meat was sold in Birmingham:—

	T.	C.	Q.
Beef	11,265	14	0
Veal	2	0	0
Mutton	13,862	11	3
Pork	71	0	0
Offal	688	7	2
	25,889	13	1

Caseous Lymphadenitis.—During the year we received notifications from the Port Authorities of Imported Mutton being sent to Birmingham. Following these notifications we controlled this mutton until examined by our Inspectors.

Altogether 170 consignments, consisting of 48,680 carcases and 3,378 hind quarters, were examined. 49 carcases, weighing approximately 1 ton 3 qrs. were found to be affected with Caseous Lymphadenitis and destroyed, viz.:

Origin	Number of carcases received	Number Condemned
Argentine	16,808	30
South Africa	1,000	6
Uruguay	5,494	6
New Zealand	2,751	4
Australia	21,480	2
Brazil	1,147	1
	48,680	49

The Mechanical Slaughter of Animals.—A Memorial requesting the Council to adopt measures to secure the mechanical slaughtering of animals, came before the Markets and Fairs Committee who presented certain recommendations upon this subject to the City Council on February 4th. While the recommendations included in that Report reflected the considered opinions of the Committee upon the matter, the City Council referred the Report back in order to enable the Committee to explore the subject further and to secure additional information.

Further investigations were made, including the examination of methods of slaughter which exist in other areas in England and also on the Continent.

After fully considering the results of the further investigations and experiments made, it was unanimously agreed that the Committee were unable to recommend the City Council that it is in the interests of the meat-consuming public of the City, and of the market tenants, and others engaged in the preparation and disposal of meat, that the adoption of Bye-law 9B, of the Ministry of Health's Model Bye-laws is either necessary or desirable until some further improvements are made in mechanical slaughtering instruments, and that it is inadvisable to introduce the compulsory use of such instruments in the City. It is, however, the full intention of the Committee to watch carefully any developments or improvements in the design of the hand-operated mechanical killers.

A Report to this effect was presented to the Council on December 2nd, 1930.

(2) Wholesale Fruit and Vegetable Market and Fish Market.

There is one Inspector wholly engaged in the Fruit and Vegetable Markets, Fish Market and Market Hall. In addition, this Inspector is in charge of the sorting room in Gloucester Street and of the Hawkers in the Bull Ring.

(3) Food Preparation Premises and Shops.

On the 31st December, there were 236 Food Preparation premises on our register as follows:—

Cooked Meat, etc., Manufacturers	147
Sausage and Pork Pie Manufacturers	88
Jam Manufacturers	1
	236

In addition the following shops, in which food is sold, were regularly visited:—

Beef and Pork Butchers	964
Grocers	1,031
Greengrocers and Fishmongers	1,036
Hucksters	2,985
Fish Friers	641
	6,657

Visits of inspection were paid by the Inspectors as follows:—

Slaughterhouses	7,533
Food Preparation Premises	7,651
Fish Friers	4,683
Beef and Pork Butchers	29,764
Grocers	3,187
Greengrocers and Fishmongers	18,218
Hucksters	4,107
Ham and Bacon Curers	3,030
Street Hawkers	23,018
Horse Flesh	48
Cold Stores	15,836
	117,075

Of the above visits, 1,423 were " by request."

(4) Offensive Trades—Fish Friers' Premises.

By an Order dated the Fifth Day of March, 1930, the Minister of Health confirmed an Order made 31st January, 1930, by the Lord Mayor, Aldermen and Citizens of the City of Birmingham, acting by the Council, in pursuance of Section 112 of the Public Health Act, 1875, as amended by Section 51 of the Public Health Acts Amendment Act, 1907, declaring the trade of a Fish Frier within the City of Birmingham to be an offensive trade.

The Bye-laws made by the City Council and allowed by the Minister of Health for regulating the trade of Fish Frier, are now in force in the City of Birmingham.

It is now necessary for any person desiring to establish the trade of a Fish Frier in the City, to obtain the prior consent in writing of the Corporation.

Since the introduction of these Regulations written consent has been given in 45 cases where the premises have either been built or altered so as to comply with the Bye-laws. Of these, four cases were in the first instance referred to the Public Works Committee for their sanction under the South-West Birmingham Town Planning Scheme.

The following is a list of Fish Friers in the City at 31st December:—

Established since the introduction of special Bye-laws	45
Established previously	596
	641

(5) Meat and Other Foods Surrendered as Unfit for Human Consumption.

No. of Surrenders.	Class of Foodstuffs.	Weight. Tons.	Cwts.	Qrs.	Lbs.
9,512	Meat	323	13	3	26
775	Fish	87	11	2	19
830	Poultry, Game, etc.	19	10	0	17
476	Fruit and Vegetables	280	11	1	14
136	Miscellaneous	1	19	2	24
11,729		713	6	3	16

Summary of Meat and Organs Surrendered.

	Beasts.	Calves.	Sheep.	Pigs.	Total.
Lungs—					
Tuberculosis	2,774	52	—	3,804	6,630
Other Conditions	1,384	280	407	855	2,926
Hearts—					
Other Conditions	2,121	329	400	4,588	7,438
Bowels—					
Tuberculosis	2,031	29	—	3,296	5,356
Other Conditions	421	198	263	278	1,160
Stomachs—					
Tuberculosis	2,023	29	—	3,282	5,334
Other Conditions	422	198	270	268	1,158
Spleens—					
Tuberculosis	2,002	49	—	3,699	5,750
Other Conditions	438	281	394	804	1,917
Livers—					
Tuberculosis	2,183	48	—	3,797	6,028
Other Conditions	7,571	309	3,260	1,197	12,337
Kidneys—					
Tuberculosis	1,654	53	—	252	1,959
Other Conditions	739	667	1,978	789	4,173
Heads—					
Tuberculosis	1,820	41	—	3,930	5,791
Other Conditions	435	249	381	320	1,385
Fore Quarters—					
Tuberculosis	41	4	—	30	75
Other Conditions	30	4	6	11	51
Hind Quarters—					
Tuberculosis	27	1	—	2	30
Other Conditions	46	2	4	3	55
Carcases—					
Tuberculosis	307	23	—	114	444
Other Conditions	313	333	944	402	1,992

Miscellaneous—	cwts.	cwts.	cwts.	cwts.	t.	c.	q.
Tuberculosis	305¼	¼	—	103½	20	8	3
Other Conditions	128	4¼	14¾	51	9	18	0
Frozen and Chilled—							
Other Conditions	38¼	—	27¾	¼	3	6	1

132 of the Carcases of Calves were surrendered for immaturity.

Residual Value.—Compensation at the rate of 3/- per cwt. is paid to the owners of carcases and parts of carcases surrendered as unfit for human food.

During the year £626 2s. 9d. was paid in respect of the following meat:—

	T.	C.	Q.
Beef	137	4	2
Veal	5	19	2
Mutton	13	8	2
Pork	52	1	3
	208	14	1

(6) Public Health (Meat) Regulations.

Article 20 (5) of these Regulations states that:

The occupier of any such room—

(*a*) Shall take all such steps as may be reasonably necessary to guard against the contamination of the meat therein by flies and shall cause the meat to be so placed as to prevent mud, filth, or other contaminating substance being splashed or blown thereon.

Subsequently the Ministry of Health issued Circular No. 604 which stated that windows may be open when a brisk trade takes place, but it does not define what constitutes a "brisk trade." This has led to a slackening in the carrying out of the Regulations and as a result of observations made and from our experiences during the past four years, it would appear that the only practical solution of this question is for butchers' and grocers' windows to be compulsorily kept closed.

The following table shows the position as regards meat shops in Birmingham.

Butchers' Shop Windows.

Fixed type	604	or	62.7%
Openable but always kept closed	89	or	9.2%
Openable, sometimes opened	266	or	27.6%
Removable fronts	5	or	.5%
Total ...	964		

Part VI. of the Meat Regulations requires that every person who conveys, or causes to be conveyed, any meat in a vehicle —

(*b*) "If the vehicle is open at the top, back, or sides, or if any other commodity is being conveyed therein, shall cause the meat to be adequately protected by means of a clean cloth or other suitable material."

Prosecutions.—There were prosecutions in three cases in connection with infringements of the Meat Regulations, and fines amounting to £4 were imposed.

(7) Sale of Food Order, 1921 (Part 3.)

This Section of the Sale of Food Order, 1921, requires that all Imported Meat exposed for sale by retail must be labelled with the word "Imported."

In four cases it was found necessary to take legal proceedings for non-compliance with the regulation and fines amounting to £2 10s. were imposed.

(8) Shellfish, Etc.

The following summary shows the samples taken and submitted for bacteriological examination of shellfish offered for sale on the City Market:—

Number of Samples.	Samples.	Origin. Gt. Britain.	Ireland.	Other.
4	Oysters	2	—	2
35	Mussels	17	18	—
1	Cockles	1	—	—
2	Periwinkles	1	1	—
42		21	19	2

As a result of the bacteriological examination, mussels from Dundalk, Drogheda, and Killorglin, were prohibited from being offered for sale on our Market.

Salmon and Freshwater Fisheries Act, 1923.

Notices of Close Seasons dealing with Salmon and other Freshwater Fish, were received from the Fishmongers' Company and distributed among the Wholesale Fishmongers and, in addition, posters were displayed in the Fish Market and Market Hall.

Salmon and Freshwater Fisheries (Amendment) Act, 1929.

Under this Act it is illegal for persons to sell or deal in Trout captured in the Coquet Fishery District after the 31st August. At the instigation of the Fishmongers' Company we notified the fish salesmen on our Markets that persons dealing in such fish are liable to be prosecuted.

Fisheries, (Oyster, Crab and Lobster) Act, 1877.

Section 9 of this Act states that the measurement of a lobster shall not be less than 8 inches from the tip of the beak to the end of the tail. A consignment of live, undersized lobsters was received on our Market from a sender in Ireland. The matter was reported to the Fishmongers' Company who took the matter up with the Department of Lands and Fisheries, Dublin, and asked them to issue a suitable warning to the sender.

(9) Merchandise Marks Act, 1926.

The following Orders relating to Foodstuffs have been made under this Act and were still in force at 31st December :—

Number of Order	Order relates to:—
3/1928.	Honey and Fresh Apples.
5/1928.	(1) Currants, Sultanas and Raisins.
	(2) Eggs in Shell and Dried Eggs.
	(3) Oat Products.
4/1929.	Raw Tomatoes.
5/1930.	Malt Products.

As each Order requires that the foodstuffs to which it relates shall bear an indication of origin on exposure for sale, notices have been printed for use in our Markets, and further attention has been directed to them by advertisements in the local press.

The introduction of these marking orders has greatly increased the work of the district inspectors. These orders require goods from foreign countries to be marked with the word " Foreign "; or if imported from the Dominions, with the word " Empire." In either case, however, the goods may be marked with a definite indication of the country of origin (*e.g.*, " Danish," " Produce of Canada," etc.) instead of with the words " Foreign " or " Empire."

(10) Agricultural Produce (Grading and Marking) Act, 1928.

Regulations are made under this Act for the better marketing of home-grown agricultural produce. Regulations have been made for the grading and marketing of the following foodstuffs:

Eggs.	Beef.
Apples and Pears.	Wheat Flour.
Tomatoes and Cucumbers.	Malt Flour and Malt Extract.
Strawberries.	Potatoes.
Canned Fruit, Peas and Beans.	Broccoli.
Dressed Poultry.	Cider.
Cherries.	

Attention has been directed to these regulations by advertisements in the local Press.

(11) Miscellaneous.

Sugar Sweepings.—4 consignments, consisting of 188 bags of sugar sweepings were forwarded to Birmingham from the Port of London. These were controlled by us until they had been submitted to a special refining and filtration process, when they were examined and passed as fit for human consumption.

Certificates.—Consignments of animal casings sent to the U.S.A. and Continent are required to be accompanied by a Veterinary Certificate. In addition, Hams which are exported to the Continent are also required to be accompanied by a Veterinary Certificate to comply with the Regulations of foreign countries.

During the year 16 Certificates were issued for Hams, etc., and 47 in respect of animal casings, 3 of the latter consignments being for America.

VI. PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES

GENERAL.

The mortality figures for 1930 are compared with the decennial averages in the statement below.

Disease.	Deaths in 1930.	Average 1920-1929.	Above or below the average.
Enteric Fever	9	3	+ 6
Smallpox	0	0	—
Measles	58	120	— 62
Scarlet Fever	15	30	— 15
Whooping Cough	110	156	— 46
Diphtheria	88	108	— 20
Pulmonary Tuberculosis	884	888	— 4
Other Forms of Tuberculosis ...	124	142	— 18
Influenza	123	386	—263

The prevalence of the notifiable diseases is shown in the next table :—

Disease.	Cases in 1930.	Average 1920-1929.	Above or below the average.
Enteric Fever	62	30	+ 32
Smallpox	1	6	— 5
Scarlet Fever	2,397	2,598	—201
Diphtheria	1,701	1,652	+ 49
Erysipelas	569	427	+142
Puerperal Fever	116	127	— 11
Puerperal Pyrexia	131	Only recently notifiable.	
Ophthalmia Neonatorum	596	439	+157
Pulmonary Tuberculosis	1,242	1,670	—428
Other Forms of Tuberculosis ...	241	303	— 62
Acute Primary or Influenzal Pneumonia	2,108	2,331	—223
Cerebro-Spinal Fever	14	12	+ 2
Acute Poliomyelitis	9	17	— 8
Polioencephalitis	0	2	— 2
Encephalitis Lethargica	10	67	— 57
Malaria	4	22	— 18
Dysentery	8	10	— 2

The action taken with regard to puerperal fever, puerperal pyrexia and ophthalmia neonatorum, is recorded in the section of this Report on Maternity and Child Welfare.

The following cases were reported through the Elementary School Teachers and Attendance Officers :—

	1930.	1929.	1928.
Measles	6,512	9,764	5,030
German Measles	1,226	642	325
Whooping Cough	5,012	3,347	6,463
Chicken Pox	4,467	5,208	5,555
Mumps	2,730	5,440	5,014

These cases were all visited by the Health Visitors and steps were taken to exclude the contacts where necessary.

ENTERIC FEVER.

During the year there were 93 cases of enteric fever notified to this Department, but further investigation revealed the fact that 28 of these were not, in fact, suffering from the disease.

Of the 65 true cases, three had contracted the disease outside Birmingham, leaving 62 infected within the City.

The 62 cases are tabulated as follows :—

Typhoid Fever	12 cases
Para-typhoid "A"	2 ,,
Para-typhoid "B"	48 ,,

From the table below it will be seen that the incidence of enteric fever is in excess of that experienced for some recent years; but it is to be noted that 24 of the cases were related to an outbreak commencing in December, 1929, which was described in last year's Report.

Among these 65 cases there are six deaths, four of which were due to typhoid infection, the remaining two being due to para-typhoid "B" infection.

ENTERIC FEVER.

	Number of Cases.	Case rate per 1,000	Number of deaths registered	Death rate per 1,000
1901-5 (Average)	544	.70	91	.12
1906-10 ...	242	.30	51	.06
1911-15 ...	90	.11	22	.03
1916-20 ...	22	.02	5	.01
1921-25 ...	30	.03	4	.00
1926-30 ...	41	.04	5	.00
1921 ...	26	.03	5	.01
1922 ...	11	.01	3	.00
1923 ...	32	.03	4	.00
1924 ...	48	.05	5	.01
1925 ...	31	.03	4	.00
1926 ...	52	.05	3	.00
1927 ...	40	.04	4	.00
1928 ...	20	.02	3	.00
1929 ...	31	.03	4	.00
1930 ...	62	.06	9*	.01

*Including one visitor from abroad, one transferred from West Bromwich and one doubtful diagnosis.

UNDULANT FEVER.

Although regarded until recent years as a sub-tropical condition, there is now abundant evidence that undulant fever is widespread through many civilised countries. Sheep, cattle, horses, goats and dogs may spread the disease to man. The most important mode of spread in this country is through the milk or milk products of cattle which are themselves infected with the organism of the disease.

One case of undulant fever came to the notice of the Department last year. The patient was a man aged 45 years, and the disease was of a mild type lasting some weeks. The evidence showed that the infection had in all probability been contracted while the patient was on holiday in another part of the country. The Medical Officer of Health of the locality was notified accordingly of the facts. The diagnosis of the disease was arrived at by clinical and blood examination. No other cases have come to the notice of the Department during the year.

GLANDULAR FEVER.

Twenty-five cases of this disease came to the notice of the Department during the year, reported owing to their close similarity to undulant fever or to enteric fever. The average duration was from 6 to 7 weeks. In all cases diagnosis was arrived at after examination of the blood-cell count and after the alternative diseases named had been eliminated by means of agglutination tests.

Careful enquiry into each case failed to implicate milk, water or any foodstuffs as the causative agent. It has to be assumed that in these cases, as in the groups of the same disease noted in London and elsewhere at the same time, infection was spread by personal contact. The intensity of the infection appeared slight, for in no case did any other member of the infected household contract the disease.

SMALLPOX.

One case of smallpox occurred during the year in a man aged 55 years. The infection was apparently contracted elsewhere. Although he suffered from the rash for some days before removal to hospital no other cases followed in the City.

During the year two persons suffering from smallpox are known to have visited Birmingham, without giving rise to further infections. The first attended a Conference in Birmingham after which he had a meal in one of the larger cafes. The second was a woman on a canal boat who came in contact with other patients in a doctor's surgery while she herself was suffering from smallpox. The numerous contacts of these cases were visited, vaccination offered, and daily supervision of each carried out for a period covering the interval of incubation of the disease. Fortunately no further cases arose.

VACCINATION.

On April 1st, 1930, when the Local Government Act, 1929, came into force, the administration of the Vaccination Acts was transferred to the control of the Public Health Committee. Below are tabulated statistics relating to this work for the current year together with similar figures relating to each year from 1926. It will be seen that the percentage of "removals" has slightly increased, and there is some increase in the number of conscientious objectors during 1930. These facts do not, nevertheless, altogether account for the decrease in the number of successful vaccinations in 1930. As, however, there has been practically no incidence of smallpox in this City since 1928 (when 54 cases occurred), there would be a corresponding absence of great incentive to have vaccination performed where parents are otherwise hesitant.

There are 17 Public Vaccinators for the general population of the City, in addition to four others whose work is confined to the institutions of which they are medical superintendent or medical officer.

Six Vaccination Officers are responsible for the clerical work and visiting under the Act.

VACCINATION.

	1930.	1929.	1928.	1927.	1926.
Births returned	17,590	17,786	17,954	18,291	18,215
Conscientious objectors, per cent.	25.2	20.4	18.7	18.4	18.0
Died unvaccinated	900	939	1,029	1,051	1,072
Successful Vaccinations (per cent of survivors)	53.7	62.0	65.0	65.0	66.0
Insusceptible ,, ,,	1.2	0.5	0.7	0.9	0.7
Postponed by Medical Certificate ,, ,,	0.6	0.7	0.4	0.8	1.0
Removed ,, ,,	5.1	4.1	3.9	3.6	3.0
Lost sight of ,, ,,	2.4	2.5	2.6	2.6	2.5
Still under notice ..... ,, ,,	10.5	9.1	7.7	7.6	7.6

MEASLES.

All cases notified to the Department through the schools have been systematically visited by health visitors, and advice as to nursing and general hygiene given where required.

During the year 412 cases were admitted to Little Bromwich Hospital for treatment.

Owing to the relatively high mortality rate from this disease, it was considered advisable during the third quarter of 1930 to apply immunisation methods, even though on a restricted scale, to the attenuation of infection or the prevention of the disease. It is known that the blood-serum of a person who has previously suffered from measles, when given intramuscularly to contacts in suitable amount and at a suitable stage in the incubation period, will either prevent the disease occurring, or so modify it as to make the attack a mild one.

For a supply of serum the Department is indebted to members of the health visitors' staff, who, with the greatest cheerfulness and willingness, offered their services as blood-donors. While the fact in no way takes away from the generosity of the gift, it is only proper to say that a relatively small amount of blood is taken in each case, far less than from the donor for transfusion purposes; and never enough to cause even transient effect on the health.

This serum has been given to selected children under five years of age who were at the time contacts of measles and were themselves either acutely ill with some other disease or were in a state of chronic ill-health. In most of the cases the aim was, not to prevent infection, but to attenuate it, thus obtaining life-long immunity without grave disturbance of health. Apart from cases referred by health visitors and general practitioners for such immunisation, some of the voluntary hospitals requested help with a view of *preventing* further cases occurring in their wards where there were children suffering from acute illnesses. Immunisation was carried out on some 150 children, the results obtained being excellent.

Fifty-eight deaths were registered from the disease during the year. The figure is undoubtedly an under-estimate of the actual mortality, as children may succumb to the complications of measles without the nature of the disease being recognised.

The number of cases in past years, together with the mortality rate, are set out in the following table.

	Number of Cases*	Number of Deaths.	Death rate per 1,000 of population.
1901-5 (Average)	?	279	.36
1906-10 ...	?	294	.36
1911-15 ...	6,027 (1912-1915)	419	.48
1916-20 ...	10,773	168	.18
1921-25 ...	6,831	121	.13
1926-30 ...	7,464	100	.10
1921 ...	4,618	153	.17
1922 ...	4,147	79	.09
1923 ...	7,787	186	.20
1924 ...	5,969	79	.08
1925 ...	11,636	109	.11
1926 ...	6,980	78	.08
1927 ...	9,032	129	.13
1928 ...	5,030	41	.04
1929 ...	9,764	196	.20
1930 ...	6,512	58	.06

*Partial notification only through schools, except for the years 1916-19.

From the following table it is evident that the death-rate from measles in the central wards is far in excess of that for the middle or the outer ring of wards, owing to the course of the disease and the liability to contract complications being directly influenced by overcrowding and insanitary conditions.

Measles death-rate per 1,000.

	1928.	1929.	1930.
Central Wards	.11	.43	.17
Middle Ring	.03	.16	.04
Outer Ring	.01	.10	.02

The age-distribution of the fatal cases of measles was as follows :—

	1928.	1929.	1930.
Under 1 year	13	38	11
1 and under 2 years	17	92	29
2 and under 5 years	8	49	12
5 years and over	3	17	6
... ...	41	196	58

SCARLET FEVER.

The total number of notifications received during the year for this disease was 2,525. Of these 1,861 were treated in hospital and the remainder, 664, were treated at home.

After revision of diagnosis in those cases admitted to hospital, the total number of true cases of scarlet fever treated in hospital was 1,738.

From the table below it will be seen that although there was a drop in the number of cases, the proportion of deaths was raised slightly. This death-rate of .02 per 1,000 for 1930 is, however, identical with the average death-rate for this disease for the past 10 years.

SCARLET FEVER CASES AND DEATHS.

	Number of Cases.	Case-rate per 1,000 population	Number of Deaths	Death-rate per 1,000 population	Case mortality per. cent.
1901-05 (Average)	4,038	5.21	172	.22	4.26
1906-10 ...	3,956	4.83	116	.14	2.93
1911-15 ...	5,456	6.29	125	.14	2.29
1916-20 ...	2,472	2.73	41	.04	1.66
1921-25 ...	2,652	2.84	32	.03	1.21
1926-30 ...	1,910	1.96	9	.01	0.47
1921 ...	3,320	3.62	40	.04	1.20
1922 ...	3,250	3.51	36	.04	1.11
1923 ...	2,619	2.81	39	.04	1.49
1924 ...	2,219	2.31	23	.02	1.04
1925 ...	1,852	1.95	22	.02	1.19
1926 ...	1,709	1.78	8	.01	0.47
1927 ...	1,510	1.56	8	.01	0.53
1928 ...	1,521	1.56	5	.01	0.33
1929 ...	2,413	2,46	9	.01	0.37
1930 ...	2,397	2.44	15	.02	0.63

The report on cases treated at the Infectious Diseases Hospital will be found on page 63.

WHOOPING COUGH.

Whooping cough caused 110 deaths during 1930. The following table gives the number of cases and deaths in previous years, and it will be seen that although the incidence of the disease remains high, yet the death-rate shows a tendency to decline.

	Number of Cases*	Number of Deaths	Death-rate per 1,000 Population:
1901-5 (Average)	?	316	.41
1906-10 ...	?	294	.36
1911-15 ...	3,264 (1912-1915)	213	.25
1916-20 ...	3,592	206	.23
1921-25 ...	4,463	180	.19
1926-30 ...	4,443	119	.12
1921 ...	2,449	93	.10
1922 ...	7,175	356	.38
1923 ...	1,772	44	.05
1924 ...	4,783	185	.19
1925 ...	6,138	222	.23
1926 ...	4,895	128	.13
1927 ...	2,496	69	.07
1928 ...	6,463	163	.17
1929 ...	3,347	123	.13
1930 ...	5,012	110	.11

*Partial Notification through Schools.

The ages at death were as follows :—

	1926.	1927.	1928.	1929.	1930.
Under 1 year	61	31	75	46	60
1 and under 2 years	42	25	54	46	27
2 and under 5 years	17	11	30	23	17
Over 5 years	8	2	4	8	6
Totals	128	69	163	123	110

From the above it will be seen that 87 of the 110 deaths occurred among children under 2 years of age.

The death-rate for the three rings of wards is given below and it will be noted that as in past years the death-rate is highest in the central areas.

	Death-rate per 1,000.
Central Wards	.22
Middle Ring	.10
Outer Ring	.06

Every case of whooping cough reported to the Department is visited with a view to giving advice on hygienic measures. Where necessary the services of a district nurse are supplied under an arrangement made with the District Nursing Associations.

DIPHTHERIA.

The total number of notified cases was 2,296. Of these 2,076 were removed to the City Fever Hospital, the remainder being nursed at home.

Revision of diagnosis took place in 609 of the hospital cases, while a few cases sent in as scarlet fever proved to be suffering from diphtheria.

After correction, the net actual number of cases of diphtheria belonging to the City was 1,701, of whom 1,485 were treated in hospital and 216 at home.

In addition, there were 56 cases treated in the City Hospital on behalf of other authorities.

From the following tables it will be noted that there was a slight increase in the number of cases as compared with those occuring in 1929, but that the death-rate remained the same.

Diphtheria Cases and Deaths.

	Cases Notified.	Case-rate per 1,000 of Population.	Deaths.	Death-rate per 1,000 of Population	Case Mortality per cent.
1901-05 (Average)	991	1.28	159	.20	16.0
1906-10	1,210	1.48	149	.18	12.3
1911-15	1,125	1.30	155	.18	13.8
1916-20	1,065	1.19	143	.16	13.4
1921-25	1,651	1.76	109	.12	6.6
1926-30	1,642	1.69	84	.09	5.1
1921	1,652	1.80	120	.13	7.2
1922	1,285	1.39	89	.10	6.9
1923	1,537	1.65	139	.15	9.0
1924	1,887	1.97	100	.10	5.3
1925	1,896	2.00	95	.10	5.0
1926	1,804	1.88	116	.12	6.4
1927	1,543	1.60	61	.06	4.0
1928	1,552	1.59	70	.07	4.5
1929	1,611	1.64	86	.09	5.3
1930	1,701	1.73	88	.09	5.2

The distribution over the City is indicated in the table below. From this it will be seen that the cases were more numerous in the central wards than in the middle and outer ring.

	Ward.	Diphtheria Case-rates per 1,000 population	
Central Wards	St. Paul's	1.49	Average 1.86
	St. Mary's	3.19	
	Duddeston and Nechells	2.30	
	St. Bartholomew's	2.22	
	St. Martin's and Deritend	1.36	
	Market Hall	0.68	
	Ladywood	1.76	
Middle Ring	Lozells	1.95	Average 1.43
	Aston	1.81	
	Washwood Heath	1.96	
	Saltley	1.51	
	Small Heath	1.47	
	Sparkbrook	0.90	
	Balsall Heath	0.85	
	Edgbaston	1.15	
	Rotton Park	1.35	
	All Saints'	1.31	
Outer Ring	Soho	1.38	Average 1.44
	Sandwell	1.03	
	Handsworth	0.80	
	Perry Barr	1.26	
	Erdington North	1.78	
	Erdington South	1.29	
	Yardley	2.79	
	Acocks Green	1.23	
	Sparkhill	2.32	
	Moseley and Kings Heath	1.19	
	Selly Oak	1.68	
	King's Norton	0.86	
	Northfield	1.12	
	Harborne	1.38	
	Whole City	1.73	

A report on the cases treated at the Infectious Diseases Hospital will be found on page 63.

Diphtheria Anti-toxin.

Diphtheria anti-toxin is distributed free of charge to medical practitioners for the treatment of their patients and can be obtained from the Public Health Department, the Bacteriological Laboratory, and 19 Police Stations.

Immunisation against Diphtheria.

This work is carried out by a medical officer who devotes five half-days per week to diphtheria immunisation, the remaining sessions each week being spent in Maternity and Child Welfare work.

From the table below it will be seen that the work of immunisation has been carried out during the year at 14 schools, 8 infant welfare centres, and 7 residential institutions, while one clinic per week is held at the Council House. In all 4,168 children have been fully immunised during the year (apart from cases immunised by private practitioners) while 171 children have been partially immunised.

Clinic at	Schick tested.	Schick positive.	Re-Schicks.	Immunised (full course).	Immunised (not completed)
14 Schools	1,287	822	—	2,959	116
8 Welfare Centres	—	—	—	612	55
7 Residential Institutions	139	87	835	291	—
Council House	29	14	205	306	—
	1,455	923	1,040	4,168	171

In reference to the work carried out in the 14 schools it is to be noted that the percentage rate of acceptances varied from 22 to 70, the average for the 14 schools being 38 per cent.

Arrangements were made during 1930 for medical practitioners to be supplied on request with immunisation material for preventing diphtheria. Advantage was taken of this in 28 cases.

DYSENTERY.

Eight cases of bacillary dysentery were notified during the year, the diagnosis being confirmed by bacteriological examination in six cases. These were sporadic cases, occurring independently of each other, and in no instance could any specific source of infection be traced. One death occurred in a woman aged 34 years, the diagnosis being based on post-mortem findings.

ACUTE FOOD POISONING.

Although acute food poisoning is not a notifiable condition, information was received of 18 cases.

After detailed investigation of the circumstances and examination of blood and excreta of 15 of the notified cases no *definite* evidence was forthcoming that these cases were, in fact, suffering from food poisoning, the bacteriological results being negative. As will be seen from an example given below, the absence of direct evidence is not conclusive proof against the diagnosis of food poisoning. The remaining three cases were due to infection with *Bacillus aertrycke*. In one case à-la-mode beef appeared to be the infecting factor. In the other two cases no clear source of infection could be verified. Of these three definitecases two died after an illness lasting some 7 days.

In all cases the investigation relating to suspected foodstuffs was carried out in conjunction with the Veterinary Department's Staff. The following fatal case illustrates the household incidence and the result of bacteriological investigations:

A man, aged 36 years, consumed à-la-mode beef and some 4 hours later suffered from diarrhoea and vomiting. Two days afterwards he was admitted into hospital, and died 56 hours later. On enquiry it was found that six other people had been ill at the same time as this man and that they had also partaken of the same à-la-mode beef.

Enquiry shewed that two households were affected. In one all the four members had partaken of à-la-mode beef, and some three hours later diarrhoea and vomiting had set in. All were acutely ill for 8 days. In the other household two members were affected, and these had eaten à-la-mode beef; the third member of the household had not partaken of the meat and remained well. The illnesses here had a similar course and duration.

It was possible to obtain blood for bacteriological examination from three only of the six cases, and only one of these three shewed a positive reaction.

ACUTE ANTERIOR POLIOMYELITIS.

Nine cases of this disease were notified, one case proving fatal. A review of the remaining eight cases some six months after the onset shews that three have completely recovered; marked improvement is shewn by four cases, while little improvement can be noticed in the remaining case. All are continuing to receive treatment.

POLIOMYELITIS.

Year.		Cases notified	Died	Complete recovery.	Some Paralysis.
1917	...	11	2	6	3
1918	...	4	—	2	2
1919	...	14	1	6	7
1920	...	1	—	—	—
1921	...	11	4	1	6
1922	...	6	—	1	5
1923	...	33	3	1	29
1924	...	39	5	5	29
1925	...	11	3	5	3
1926	...	38	3	3	32
1927	...	15	1	6	8*
1928	...	6	1	1	4
1929	...	6	—	1	5
1930	...	9	1	3	5

*One died later of intercurrent disease.

POLIO-ENCEPHALITIS.

No cases of this disease were notified during the year.

ENCEPHALITIS LETHARGICA.

During the year 10 cases of this disease came to light in the City, 7 proving fatal. On analysing the cases we find:—

7	had a date of onset in	1930
1	,,	1927
1	,,	1924
1	,,	1923

The age, sex and duration of illness of the 7 fatal cases are shewn below:—

Age.	Sex.	Duration of illness.
22	F.	3 days
52	M.	10 days
5	M.	9 days
4	F.	19 days
11	M.	3 years
22	F.	7 years
50	M.	6 years

The cases and deaths in previous years have been as follows:—

Year.			Cases.	Deaths.
1919	...	...	11	5
1920	...	...	18	7
1921	...	...	25	8
1922	...	...	12	4
1923	...	...	29	12
1924	...	...	282	44
1925	...	...	92	32
1926	...	...	89	36
1927	...	...	53	32
1928	...	...	41	22
1929	...	...	27	20
1930	...	...	10	7

The following table shows the sex, age-groups and number of deaths of the 10 cases in which the diagnosis of encephalitis lethargica has been confirmed.

Age group.	No. of Cases. Male.	Female.	No. of Deaths. Male.	Female.
1— 5 years	0	1	0	1
5—15 years	2	0	2	0
15—25 years	0	2	0	2
25—45 years	1	2	0	0
45 and over	2	0	2	0
	5	5	4	3

CEREBRO-SPINAL FEVER.

Fourteen cases were notified as cerebro-spinal meningitis during the year. Of these, 9 were confirmed bacteriologically, and 5 could not be examined for purposes of confirmation. All succumbed to the attack, giving a case mortality rate of 100 per cent. Particulars of these are given below :—

Age.	Sex.	Duration of illness.
1 year, 2 months	F.	36 days
5 months	M.	34 ,,
4 years	M.	29 ,,
7 months	M.	27 ,,
43 years	F.	22 ,,
1 year 4 months	F.	19 ,,
5 years	F.	19 ,,
4 months	M.	13 ,,
1 year 5 months	M.	12 ,,
1 year 7 months	M.	6 ,,
4 months	M.	4 ,,
20 years	M.	3 ,,
2 years	M.	?
10 months	M.	?

It will be seen that five cases were under one year of age, while 9 of the 14 cases were under two years old.

The cases and deaths in previous years have been as follows :—

Year.	Cases notified.	Deaths.	Fatality per cent.
1920	25	18	72
1921	9	7	78
1922	18	16	89
1923	4	2	50
1924	11	8	73
1925	7	6	86
1926	10	9	90
1927	12	10	83
1928	12	9	75
1929	15	15	100
1930	14	14	100

REPORT ON THE CITY INFECTIOUS DISEASES HOSPITALS

(By Dr. E. H. R. Harries, Medical Superintendent.)

The hospitals were exceptionally busy in 1930. The outstanding points in the year's work are the very large numbers of cases admitted with a diagnosis of diphtheria, the total of 2,163 exceeding by 64 the previous record of 2,099 admissions for diphtheria in 1929. As is shewn below, this crude figure becomes reduced by more than a third when correction has been made for errors of diagnosis. The number of direct admissions with a diagnosis of scarlet fever (1,894) exceeded by 124 the total of 1,770 cases admitted in 1929. Witton Hospital, which had been opened in October, 1929, for the admission of additional cases of scarlet fever, remained open until the end of July. It became necessary again to open the Taplow wards of that institution at the beginning of December for the admission of scarlet fever. One case of smallpox was also admitted to the smallpox block at Witton during the year. As will be seen by reference to the tables below, a considerable number of cases of other infections, notably measles and whooping cough, were admitted during the year.

Statistics.

The following tables shew the number of direct admissions and transferred cases during the calendar year. The figures in these tables *have not been revised for diagnosis*. The revised figures for the main diseases admitted are set out in subsequent sections of the report.

(a) Diphtheria (Uncorrected for diagnosis).

	Little Bromwich.	Witton.	Total.
In hospital on December 31st, 1929	353	—	353
Admitted during 1930	2,161	2	2,163
Transfers during 1930	1	1	2
Discharged during 1930	2,079	2	2,081
Transfers during 1930	1	1	2
Died during 1930	94	—	94
Remaining on December 31st, 1930	341	—	341

(b) Scarlet Fever (Uncorrected for diagnosis).

	Little Bromwich.	Witton.	Total.
In hospital on December 31st, 1929	197	71	268
Admitted during 1930	1,700	194	1,894
Transfers during 1930	16	261	277
Discharged during 1930	1,519	436	1,955
Transfers during 1930	261	16	277
Died during 1930	15	—	15
Remaining on December 31st, 1930	118	74	192

(c) Miscellaneous (Uncorrected for diagnosis).

			Little Bromwich.	Witton.	Total.
In hospital on December 31st, 1929			15	—	15
Admitted during 1930					
	Measles	394			
	Whooping Cough	105			
	Enteric Fever ...	49	621	(Rubella) 1	622
	Other infections ...	73			
Transfers during 1930			1	—	1
Discharged during 1930			531	—	531
Transfers during 1930			1	1	2
Died during 1930			55	—	55
Remaining on December 31st, 1930			50	—	50

(d) Smallpox (Admitted to Witton).

	Witton.	Total.
In hospital on December 31st, 1929	—	—
Admitted during 1930	1	1
Discharged during 1930	1	1
Remaining on December 31st, 1930	—	—

Diphtheria.

From the gross total of 2,162 cases admitted with a notified diagnosis of diphtheria have to be subtracted the very large number of 744 (34.4%) without evidence of clinical diphtheria. This compares with 703 (53%) of similar cases admitted out of a gross total of 2,000 reported upon in 1929. The percentage of admissions for diphtheria necessitating revision of diagnosis rises steadily year by year. Subtracting these 744 cases and adding 32 cases of faucial diphtheria, notified as other diseases, but in which diphtheria was either the sole or associated infection, the net total of cases of clinical diphtheria admitted during 1930 becomes 1,450 (of these, 51 cases were admitted on behalf of other Authorities, notably the County Borough of Smethwick—42 cases: there were six fatalities amongst these 51 cases, most of which were a severe type). Thus, 1,399 cases remain which were admitted from the City of Birmingham (a few of these were from Sutton Coldfield). The net number of deaths amongst these cases was 69. This is equivalent to a case mortality of 4.95%. Of the 69 fatal cases, 28 (40%) were moribund on admission and died within 48 hours. If these be removed, the net number of deaths of cases, with any reasonable prospect of recovery, becomes 41, which is equivalent to a case mortality of 2.95%. Of these fatal cases, admission to hospital was sought only after receipt of a bacteriological report in 12 instances. In one case, admission to hospital was not sought for 8 days, and in two cases for 10 days because of the receipt of a negative bacteriological report in the earlier days of the illness. The net result of undue reliance

upon a bacteriological procedure which is only intended as confirmatory of a clinical condition, on the one hand results in the unnecessary hospitalisation of large numbers of adults and children and upon the other in the loss of lives which might otherwise have been saved. If the practitioner would rely upon his clinical judgment, giving antitoxin upon suspicion that the case may be one of diphtheria, and swabbing if desired, *after* this essential precaution it would result in the saving of lives.

The 69 fatal cases are analysed below into age groups and divided into those who survived less than 48 hours, and more than 48 hours respectively.

TABLE I. SURVIVED.

Age group.	Less than 48 hours.	More than 48 hours.	Total.
0—1	—	2	2
1—5	15	11	26
5—10	9	21	30
10—15	1	4	5
15—20	—	—	—
Over 20	3	3	6
TOTAL	28	41	69

In the next table (table II) *all* the cases admitted suffering from clinical diphtheria, including those from outside areas, have been analysed in order to shew the form of disease, faucial, laryngeal, laryngeal and faucial or nasal in each age group, together with the number and percentage of fatal cases.

TABLE II. FORM OF DISEASE.

Age group.	Faucial.			Laryngeal or Laryngeal and Faucial.			Nasal.		
	No.	Deaths.	% c/m.	No.	Deaths.	% c/m.	No.	Deaths.	% c/m.
0—1	7	—	—	2	—	—	9		
1—5	244	17	7%	75	15	20%	37	1*	
5—10	520	19	3.7%	30	8	26.5%	54		
10—15	214	7	3.3%	—	—	—	19		
15—20	75	—	—	—	—	—	2		
Over 20	158	5	3.1%	—	—	—	3		
TOTAL	1218	48	3.9%	107	23	21.5%	125		

* Nasal diphtheria concomitant only :
Actual cause of death was measles and bronchopneumonia.

Of the total number of cases, faucial diphtheria comprised 84% ; laryngeal or laryngeal and faucial 7.5% and nasal 8.5%.

Only 18 cases, half of them nasal diphtheria, occurred in infants under a year old and none proved fatal.

LARYNGEAL DIPHTHERIA.

An analysis has been made of the cases of laryngeal or laryngeal and faucial diphtheria. Of the total of 107 cases, 32 were suffering from primary laryngeal diphtheria without evidence of faucial or nasal infection. Tracheotomy was necessary in 10 of these cases. Only one of these primary laryngeal cases was fatal. Laryngeal diphtheria, combined with faucial diphtheria of moderate severity, was present in 57 cases. In this group, 25 cases required tracheotomy ; of these, 7 proved fatal. 18 cases had laryngeal and severe faucial diphtheria. Tracheotomy was necessary in 16 out of the 18 cases. There were 15 deaths in this group ; 13 of them being cases in which tracheotomy had been necessary. Of the total of 51 cases in which tracheotomy was performed, 21 proved fatal ; 16 of them within 24 hours of admission, and 5 at a later date. The following table (table III) shews the age distribution and types of case with laryngeal diphtheria :—

TABLE III.

		No.	Tracheotomy.	Deaths.
	Ages 0—1.			
(*a*)	Primary Laryngeal	—	—	—
(*b*)	Laryngeal and moderate faucial	2	2	—
(*c*)	Laryngeal and severe faucial	—	—	—
	Ages 1—5.			
(*a*)	Primary laryngeal	26	6	—
(*b*)	Laryngeal and moderate faucial	35	16	4
(*c*)	Laryngeal and severe faucial	14	13	10
	Ages 5 and over.			
(*a*)	Primary laryngeal	6	4	1
(*b*)	Laryngeal and moderate faucial	20	7	4
(*c*)	Laryngeal and severe faucial	4	3	4
	TOTALS	107	51	23

% requiring Tracheotomy, 47%. % Deaths, 21.5%.

An analysis of the 1,218 cases admitted with faucial diphtheria has been made: the cases being divided into age groups and according to the severity of type on admission (table IV).

TABLE IV.

Faucial Diphtheria.

	Mild.		Moderately severe.		Very severe.				
Age group.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Total Cases.	Total Deaths.	Case Mortality %
0—1	5	—	1	—	1	—	7	—	—
1—5	132	—	83	1	29	16	244	17	7
5—10	293	—	169	2	58	17	520	19	3.7
10—15	127	—	63	—	24	7	214	7	3.3
15—20	46	—	20	—	9	—	75	—	—
Over 20	99	1*	47	—	12	4	158	5	3.1
TOTAL	702	1	383	3	133	44	1218	48	3.9
% of total	58%		31.5%	0.78%	10.75%	33%		3.9%	

* Diphtheria contributory only.

It will be seen that 133 (10.75%) of the cases of faucial diptheria were of a very severe type and that 44 (33%) of these cases proved fatal (these are additional to those in which laryngeal diphtheria played a part and which have been analysed in table III). Of the total of 44 fatal cases, 11 were moribund upon admission to hospital, dying within 48 hours. If these be subtracted, a total of 33 fatal cases, of very severe type but in which there was some prospect of recovery, remains. Based upon the total (133) of this grade this represents a case mortality of 24.5%. Most of these fatal cases died from the effects immediate or remote of diphtheria toxin upon the heart. In the treatment of severe faucial diphtheria, administration of a very large dose of antitoxin is essential, and a part at least of this dose must be given intravenously in order that there may be an immediate concentration in the blood.

THE BLOOD SUGAR IN DIPHTHERIA.

Recent work has shewn that the toxin of diphtheria produces a severe disturbance of carbohydrate metabolism, and that it is not sufficient in the treatment of the severe case to rely upon antitoxin alone, absolutely essential as this is. Antitoxin adsorbs the circulating toxin and possibly toxin which is only loosely fixed in the tissues. It is incapable of undoing damage already done. This damage as the work of Schwentker and Noel of the Johns Hopkins Hospital, based upon the pathological investigations of Warthin, has shewn, affects every tissue in the body but the results become most evident in the case of the heart and nervous tissues. Much of this damage results from an upset of the glycogenic function of the liver, resulting in the disappearance of glycogen from that organ and from the bundle of His. During the last few months, the work of Schwentker and Noel has been repeated and extended in this hospital, and although the results in detail must necessarily be the subject of reports too lengthy for inclusion here, a brief summary of this work so far as it has proceeded may be given.

The treatment consists essentially in giving an adequately large dose of anti-diphtheritic serum. Part of the serum is given intramuscularly and the remainder intravenously about one hour later. For example, in a severe case, 40,000 units of serum might be given intramuscularly and 50,000 units or more intravenously. When the intravenous serum is given, 20-40 c.c. of a 50% solution of dextrose are injected by the same route. The carbohydrate metabolism is further assisted by giving the patient glucose by the mouth for some days. The value of the increased amount of carbohydrate available is enhanced by the use of insulin. In a severe case 15 to 20 units of insulin might be given twice daily. To estimate the requirements in regard to extra carbohydrate repeated blood sugar readings are made. The character of the curve thus obtained indicates to what extent assistance of the carbohydrate metabolism is desirable by the administration of glucose and insulin. Daily blood sugar estimations are made until the curve returns to normal.

To supplement the detailed clinical history of the case, electrocardiograms are taken at intervals and separate records of the series of tracings are available for most of the patients treated by these methods.

The value of this therapy can only be estimated by comparing all the important particulars of the series under observation with a similar series in which large doses of anti-diphtheritic serum were necessary but in which glucose and insulin were not used. This comparison is now made possible from the records which have been collected in the past three years.

The material analysed in the tables which follow consist of

(a) 159 cases drawn from amongst the most severe examples of faucial diphtheria admitted during the years 1927-30 inclusive. These cases represent about half the available material in the same category. In this series, no case with a laryngeal element and no case moribund on admission and dying within 48 hours has been included. The cases in this series were treated with antitoxin given intramuscularly, intravenously, or by both routes combined. In fifty cases of this series, electrocardiographic tracings are available.

(b) 63 cases of severe type admitted during the latter part of 1930 and the early part of 1931. Except that as in series (a) no case with a laryngeal element and no case moribund upon admission has been included, these cases form a consecutive series of faucial diphtheria of severe type treated in addition to diphtheria antitoxin with dextrose insulin and glucose. Electrocardiographic records are available for most of them.

TABLE V. SERIES A. 159 CASES.

Age group.	No. of cases.	Died.	Recovered. Pareses.	Recovered. No pareses.
0—2	—	—	—	—
2—5	17	6	6	5
5—10	80	31	18	31
10—15	44	11	13	20
15—20	10	2	2	6
Over 20	8	2	—	6
TOTAL	159	52	39	68
% of Total		33%	24.25%	43%

In the first series, 35.5% of the total were cases admitted upon the fifth day or later of the disease. Further, 80% of them were cases of hypertoxic diphtheria of very severe type. These cases received an average amount of antitoxin of 77,000 units. 29 of them by the intramuscular route, 48 by the intravenous, and 82 by the intramuscular and intravenous combined. Case mortality in this series of 159 cases was 33%. These 159 cases are analysed in table V above.

In the second series, which comprises 63 cases admitted to hospital during the last quarter of 1930 or the first quarter of 1931 and clinically similar to those in the first series, treatment in addition to antitoxin consisted in the administration of dextrose and if the blood sugar estimations showed the necessity for it of insulin as well. These 63 cases are analysed below (table VI).

TABLE VI. SERIES B. 63 CASES.

Age group.	No. of cases.	Died.	Recovered. Pareses.	Recovered. No pareses.
0—2	—	—	—	—
2—5	3	2	—	1
5—10	41	8	26	7
10—15	13	3	7	3
15—20	4	—	3	1
Over 20	2	—	2	—
TOTAL	63	13	38	12
% of Total		(20.3%)	(60%).	

Of the above cases, 38% were admitted to hospital upon the fifth day, or later, of the disease and 86% were hypertoxic diphtheria of very severe type. They received an average amount of antitoxin of 79,000 units. All except two were treated with intramuscular and intravenous serum combined. The case mortality in this series of 63 cases was 20.3%. Thus, in two comparable series of cases of severe faucial diphtheria the case mortality was 33% and 20.3%. The only essential difference between the two series was the employment in the second series of dextrose-insulin therapy in addition to an average amount of antitoxin very much the same as that employed in the first series, the conclusion seems clear that the factor responsible for the striking difference in case mortality in the two series was the stabilisation of the carbohydrate metabolism by the use of dextrose-insulin. The very high recovery rate with pareses (60%) in series B. will be noted. This is undoubtedly due to the fact that in this series many more patients survived to experience pareses. In series A. they died before pareses became evident.

NOTE CONTRIBUTED BY DR. STANLY ALSTEAD, ON

THE ELECTROCARDIOGRAPH IN DIPHTHERIA.

The study of the electrocardiogram during acute infections is a matter which has been engaging an increasing amount of attention during the past five years. It is not surprising, therefore, that acute infectious diseases and among them diphtheria in particular, should be considered a suitable field for research and the application of the conclusions reached by such research to the management of cases found in fever hospitals.

In this country, however, the use of the electrocardiograph is comparatively rare, and when the cardiographic apparatus was installed in the Little Bromwich Hospital, Birmingham, it was realised that much of the work would have to take the form of original observations before the practical utility of this method of investigation could be estimated.

Eight large wards are specially equipped for the electrocardiograph and by using Cohn electrodes it is possible to obtain records from any patients in any of these wards on the apparatus contained in the Electrocardiograph Room situated centrally in the hospital.

In the investigation of the changes in the myocardium in infectious diseases, it has been possible to obtain serial records from day to day—or even more often as occasion required—from any patient under observation.

During the past six months, the records obtained from cases of diphtheria and of scarlet fever have been analysed and the results tabulated. In scarlet fever, the changes have been shewn to be relatively slight and apparently due to a transient myocarditis co-existent, as a rule, with the period of pyrexia and tonsillitis. Having arrived at this conclusion from cases which have been investigated for some years past, it has been considered justifiable to use *mild* cases of *uncomplicated* scarlet fever well advanced in convalescence as " normal hearts " for the purpose of collecting a series of controls with which records obtained in cases of diphtheria could be compared.

One of the many interesting features of this work has been to attempt to correlate the clinical account of the state of the heart in diphtheria with the electrocardiographic tracing. With this in view, a full analysis of one hundred cases of diphtheria was undertaken and the cases graded into three groups according to severity. The tables of data collected are available in the hospital for inspection, but without going into a detailed description of this particular line of investigation, it may be stated that within certain limits a fairly close relationship has been established between the electrocardiogram and the physical signs *in the heart* which can be elicited at the bedside.

The phrase " within certain limits " is to be emphasised because it is quite clear that the milder degrees of diphtheritic myocarditis pass undetected by the clinician, and it is equally true that the very gross lesions often remains imperfectly diagnosed when the electrocardiograph is not employed. In the latter group are included the most profound cases of myocardial damage and *all* conductive lesions. It is true that the physician in charge of a case may *suspect* some pathological state in the conductive system but few would go so far as to make a definite diagnosis of the site of the lesion and still fewer would be correct if they attempted to do so.

The outcome of this research is to demonstrate to us quite clearly that in estimating the effect of diphtheria upon the heart, not only is the electrocardiograph a useful accessory, but in the mild cases on the one hand and the severe cases on the other, its use is indispensable in coming to an accurate conclusion. At the same time, there are cases which occur from time to time which do *not* shew that degree of myocardial damage that one would naturally expect after examining a patient from the point of view of existent toxaemia. A grave degree of circulatory collapse can often be seen and neither the clinical nor cardiographic diagnosis seems to be sufficient to account for the state of *the patient* as distinct from the state of the myocardium.

This may be expressed in another way: it is commonly understood that with a gross degree of myocardial damage or heart block, a patient looks gravely ill. In many cases, this is perfectly true, but it has been found that there is considerable number of cases in which heartblock has occurred *without* the usual signs of circulatory collapse and impending death.

In other words, although the gravity of profound myocarditis or varying degrees of heart block can never be questioned, it would appear that the widespread opinion that death in diphtheria is due to these central circulatory lesions alone is to be doubted.

This conclusion, reached after a consideration of the accumulated material in the electrocardiograph files of the hospital, is of special interest to those of us who are at present engaged upon research on the lines indicated by Schwentker and Noel in regard to carbohydrate metabolism in diphtheria.

The problem that is set for us is to find that other factor which seems to be concerned in the mechanism of circulatory collapse in this disease and from the data which have now become available, it seems that the factor which is the object of our search has been identified with nutritional changes not only in the heart-muscle, but widespread throughout the body of the organism.

Scarlet Fever.

Of the gross total of 1,894 direct admissions with a notified diagnosis of scarlet fever, 1,700 were admitted to Little Bromwich Hospital and 194 to Witton Hospital. In 237 cases the diagnosis was revised. When these are subtracted, a net total of 1,657 cases of scarlet fever remains. To this total must be added 59 cases notified as other diseases but in which the condition was actually scarlet fever. Thus the total becomes 1,716. The net total of deaths for which scarlet fever or its complications was responsible was 11. Based upon the revised admission figure, this is equivalent to a case mortality of 0.7%. The following are the details of these 11 fatal cases:—

		Remarks.
1.	Septic scarlet fever	Admitted on 11th day of disease.
2.	Hypertoxic scarlet fever	Died within 3 hours of admission.
3.	Hypertoxic scarlet fever.	
4.	Sc.F. mastoiditis, nephritis and meningitis.	
5.	Sc.F mastoiditis, septicaemia and meningitis...	Admitted 23rd day of disease.
6.	Sc.F. nephritis, thrombosis of femoral vein ...	Admitted 25th day of disease.
7.	Sc.F. mastoiditis and meningitis	Admitted 31st day of disease. (Died within 4 hours).
8.	Sc.F. acute rheumatism, peri- and endocarditis.	
9.	Toxic scarlet fever and nasal diphtheria.	
10.	Sc.F. and septicaemia	Followed tonsillectomy before admission.
11.	Sc.F. and congenital heart disease.	

It will be noted that 4 of the 8 cases were admitted late in the disease in a condition which was virtually hopeless.

Scarlet Antitoxin.

Of the total of 1,716 cases 1,129 (65%) were treated with scarlet antitoxin and 587 (35%) were not so treated. The serum treated cases comprised the early and the more severe types. The non-serum, the mildest cases and those sent in desquamating or with late complications of such a type that serum did not appear to be indicated. Thus the two groups are not clinically comparable. Nevertheless, the numbers in each series are sufficiently large for analysis to be useful. Although many of the non-serum cases were admitted late in the disease they were, nevertheless, examples of cases of scarlet fever which had been treated by methods other than serum therapy in their early stages.

The two series have been analysed as follows (tables VII and VIII).

Table VII.

1,129 cases of Scarlet Fever treated with Scarlet Fever Antitoxin in 1930.

Age Group.	No. of cases.	% of total.	* Cases with complications.	Simple adenitis.	Suppurative adenitis.	Otitis media.	Mastoid disease.	Albuminuria.	Acute nephritis.	Arthritis.	Carditis.	Onychia.	Erysipelas.	Relapse.
0—5	213	17.8	46	8	7	12	2	1	1	—	1	16	1	1
5—10	491	43.5	52	14	6	16	4	8	4	—	2	11	—	3
10—15	243	21.5	14	2	—	6	—	1	—	—	1	2	1	1
15—20	91	8.2	2	—	—	—	—	1	—	—	—	1	—	—
Over 20	91	8.2	7	1	1	1	—	2	—	2	—	—	—	—
Total	1129	—	121	25	14	35	6	13	5	2	4	30	2	5
% of Total			11.0	3.5		3.5		1.6				2.7		0.45

* 10 cases had multiple complications. Each complication is recorded separately in the table.

Table VIII.

587 cases of Scarlet Fever **not** treated with Scarlet Fever Antitoxin in 1930.

Age Group.	No. of cases.	% of total.	* Cases with complications.	Simple adenitis.	Suppurative adenitis.	Otitis media.	Mastoid disease.	Albuminuria.	Acute nephritis.	Arthritis.	Carditis.	Onychia.	Erysipelas.	Relapse.
0—5	130	22	30	9	—	14	—	2	3	—	—	6	—	—
5—10	288	47	54	10	2	10	4	10	9	—	—	15	—	2
10—15	122	20.5	14	2	—	2	2	4	2	—	—	2	—	—
15—20	22	3.6	—	—	—	—	—	—	—	—	—	—	—	—
Over 20	25	4.2	1	—	—	—	—	1	—	—	—	—	—	—
Total	587		99	21	2	26	6	17	14	—	—	23	—	2
% of Total			16.8	3.9		5.4		5.3				3.9		0.3

* 8 cases had multiple complications. Each complication is recorded separately in the table.

It will be noted that the age distribution in the two series differs considerably in the 15-20 and over 20 years groups. The type of attack in adolescence and adults was predominantly somewhat severe. Hence, a high proportion of cases in these age groups was treated with antitoxin.

The difference (5.8) in the complication rates in the two series is noteworthy, as also the difference in the incidence of renal complications; 1.6% in the serum series and 5.3% in the non-serum series. Part of this difference is doubtless due to the fact that in the non-serum treated series, scarlet fever was only suspected by the practitioner with the onset of nephritis between the second and third week, and the case was only then sent into hospital. Experience is accumulating that the administration of serum at the onset of ' late ' complications frequently produces striking improvement. This is probably due in part to the bactericidal power of the serum apart from any specific antitoxic effect.

The relapse rate is extraordinarily low in both series, viz., 0.45% and 0.3%. This is the only particular in which the serum treated series shews a higher percentage than in the non-serum treated series.

Measles.

A gross total of 394 cases with a notified diagnosis of measles was admitted. Of these, 30 shewed no evidence of the disease but on the other hand 39 patients sent in with a diagnosis of some other disease were in fact suffering from measles. This brings the total number of cases of measles admitted to hospital to 403. After similar revision for diagnosis, there occurred 24 deaths from measles and its complications. Based upon the revised admission figure, this is equivalent to a case mortality rate of 5.9%. The complications have been analysed as follows (table IX) :—

Table IX.

Measles complications.

	Broncho-pneumonia.	Otorrhœa.	Blepharitis.	Adenitis.	Laryngitis.	Stomatitis.	Enteritis.
On admission	48=12%	15=3.7%	12=3%	3=0.7%	10=2.5%	1=0.25%	2=0.5%
Developed in Hospital	15=3.7%	15=3.7%	16=4%	—	2=0.5%	3=0.7%	8=2%

Six of the above cases had measles and whooping cough; two measles and chickenpox; and one measles and diphtheria.

Whooping Cough.

105 cases with a notified diagnosis of whooping cough were admitted. Of this total, 16 shewed no evidence of the disease but six cases, admitted for other infections, were actually cases of whooping cough. The corrected admission figure thus becomes 95. Of these, 13 died; a case mortality rate of 13.6%. Complications were as follows:—

Bronchopneumonia ...	23 (12 fatal).
Convulsions	7 (1 fatal).

Enteric Fever.

During the year, 49 cases were admitted with a diagnosis of enteric group infections. Sixteen of these cases shewed no clinical, serological or bacteriological evidence of an enteric group infection. There remains a total of 33 cases, three of which were convalescent on admission. There was one death. Of the 30 acute cases, B. typhosus was the causal organism in 23; B. para A. in 1: and B. para B. in 6. Two cases had complications: (one—a boy with a perforated appendix abscess recovered; the other—a woman with suppurative cholecystitis died after operation). The 16 cases in which diagnosis was revised have been analysed as follows:—

No evidence of disease, 8: Enteritis (Morgans No. 1), 2: Dysentery (Sonne), 1: Colitis, 1: Perforated appendix, 1: Pneumonia, 1: Temporo-sphenoidal abscess, 1: Diabetic coma, 1.

Miscellaneous Infections.

In addition to the diseases noted in the previous sections of the report, the following acute infectious conditions were also admitted (the figures in brackets shew the number of cases in which revision of diagnosis was made) :—

Erysipelas 25 (2): Chickenpox 18 (3): Mumps 7 (1): Dysentery 3: Cerebrospinal fever 1 (1): Encephalitis lethargica 1.

Treatment of Erysipelas.

Most of the cases of erysipelas were treated either with erysipelas antitoxin or scarlet fever antitoxin. One patient died of toxaemia. There is no doubt about the value of specific antitoxic therapy in the treatment of the *toxaemia* of erysipelas. It is necessary to give serum in full doses,

10-20 c.c.'s intramuscularly or intravenously in the worst cases, even although the patient is a child. These full doses must be given and repeated each day, if necessary, for the first three or four days until the effect is obtained. There appears to be no direct influence upon the spread of the local bacterial process, but the severity of the accompanying toxaemia is mitigated very greatly; the temperature falls and the patient's general condition improves markedly. There would appear to be little or no difference between the respective therapeutic values of erysipelas antitoxin and scarlet fever antitoxin in the treatment of erysipelas.

Immunisation at the Hospital.

Diphtheria.

(1) *Nursing and Domestic Staff.* So great at one period* was the pressure upon the accommodation of the hospital with the consequent necessity for an augmented nursing staff that it became desirable to immunise *passively* with a prophylactic dose of antitoxin eight temporary nurses who were found to be Schick positive on entry. This procedure enabled these nurses at once to work in the wards with safety to themselves during the period of greatest pressure. None of these nurses developed diphtheria. But it has to be recorded that five probationers developed clinical diphtheria during the year. Two of them on entry had been recorded as Schick positive. They contracted the disease before immunisation could be commenced. Three others were recorded on entry as Schick negative and were therefore not immunised. At the time of the clinical attack, which was in each instance mild, the Schick test when repeated was *positive*. The occurrence of these cases was unfortunate. Not since 1924 have as many as five members of the staff contracted diphtheria in a year. (See table X). A rigorous enquiry and a retesting of the whole of the available staff of original Schick negative reactors was undertaken. Dr. E. C. Benn, the senior assistant medical officer, reports as follows:—

> "During the latter part of 1930, each member of the nursing and domestic staff who had given a negative Schick test on entrance to this hospital was re-tested in as many instances as possible. The test was thus repeated on 80 nurses and 20 maids, a total of 100. The interval between the primary and confirmatory Schick test varied from 5 weeks to 9 years. About half the number of tests were made within one year of the primary test.
>
> In this series of 100 re-tests, 95 were found to be again negative and 5 gave positive results. Thus there was an apparent 'relapse' of 5%. But 2 of the 5 nurses who were positive on re-test had been members of a group of new entrants tested with a particular toxin dilution which gave persistently negative results. Two other members of this group developed clinical diphtheria (see above) and when Schick tested at the onset of symptoms were found to be in reality Schick positive. Every traceable Schick test performed with this toxin dilution had been read as negative, and it is reasonable to suppose that there had been some loss of toxin in the final dilution before use. Of the remaining 3 cases which were positive on re-test, one was frankly positive and the other two, faintly but definitely so. Immunity was quickly produced in each case by the use of diphtheria prophylactic T.A.M. One nurse became Schick negative within two weeks of a single injection."

It is hardly necessary to add that the occurrence of these cases of diphtheria in 3 members of the nursing staff who had been recorded as Schick negative, but who at the time of the attack at least were positive, in no way diminishes one's belief in the integrity of the test properly carried out with properly diluted toxin and correctly read and recorded. Nearly 10 years' experience in this hospital, during which time many thousands of tests have been performed, has demonstrated its essential reliability. The occurrence of these cases does serve to emphasise the absolute importance of attention to every detail. Park of New York some years ago estimated the possibility of an error of 2% due, in a word, to the human factor. It is well to remember this. Looked at in another way, the occurrence of these cases throws into yet higher relief the importance of protecting the staff against diphtheria. Under the conditions which obtained in the hospital in 1930 with a record number of cases of diphtheria and a staff of maximum size, it is unlikely that the cases of staff diphtheria would have been limited to 5 in the absence of active immunisation. The following tabel (table X) is reproduced from a paper in The Lancet, April 13th, 1930. It shews the incidence of diphtheria amongst the nursing and domestic staffs of the hospital before and after the institution of Schick testing and active immunisation of the positive reactors.

TABLE X.

	Year.	Diphtheria admissions. (crude).	Average strength of staff. N.	D.	Diphtheria amongst staff. Number and incidence to average strength. N. %	D. %	C. %
	1916	695	80	40	16 (20)	5 (12)	21 (17.3)
	1917	632	66	33	16 (24)	6 (18)	22 (22.2)
	1918	725	61	30	6 (9.8)	4 (13)	10 (10.9)
	1919	799	64	32	10 (15)	3 (9)	13 (13.5)
	1920	1349	98	49	24 (24)	8 (16)	32 (21.8)
	1921	1301	108	45	14 (12.9)	5 (11)	19 (13.0)
(*a*)	1922	1090	108	45	7 (6.4)	3 (6.6)	10 (6.7)
(*b*)	1923	1409	108	45	4 (3.7)	4 (8.8)	8 (5.4)
(*c*)	1924	1734	108	45	1 (0.95)	5 (11)	6 (4.0)
(*d*)	1925	2005	C.130*		—	—	1 (0.76)
	1926	2003	C.131*		—	—	1 (0.76)
	1927	1842	C.130*		—	—	0
	1928	1909	C.162*		—	—	0
	1929	2106	C.166		—	—	1 (0.6)

N=nursing. D=domestic. C=combined.
*Reconstruction of some scarlet fever wards.

(a) Differentiation of nursing staff by Schick test commenced Jan. 28th.
(b) Active immunisation of nurse-positive reactors commenced in last quarter of year.
(c) Active immunisation of nurse—positive reactors through year.
(d) Schick testing and immunisation of domestic staff also, from 1925 onwards.

("Lancet," April 13th, 1930).

In 1930, the figures were as follows :—

Diphtheria admissions. (crude)	Average strength of staff. (combined)	Diphtheria amongst staff. (Number and incidence to average strength)
2,163	185	5 (2.7%)

(2) *Scarlet Fever Patients.*

The practice, recorded in the Report for 1929, of requesting the signed permission of parents of children admitted with scarlet fever to allow them to be actively immunised, if necessary, against diphtheria during their stay in hospital was continued throughout the year. The number of refusals was small. By the end of 1930, 720 scarlet fever patients had received a full immunising course of, with few exceptions, T.A.M. An important point arose about the preliminary Schick test in those patients who had received scarlet fever antitoxin. As has been mentioned in the section of this report dealing with scarlet fever, roughly two thirds of the scarlet fever admissions were treated with scarlet fever antitoxin. In the earlier part of the year it was the practice to give scarlet antitoxin shortly after the admission of the case and then, if consent to immunisation had been obtained, to perform a Schick test the next day. Naturally, only positive reactors required immunisation. It was noted by Dr. Benn that, contrary to all experience in pre-scarlet antitoxin days, practically all the serum-treated scarlet fever cases were Schick negative. In seeking a cause for this it occurred to him that scarlet fever antitoxin might contain also some diphtheria antitoxin. If this were so it would explain the observations. The injection of a small amount of diphtheria antitoxin would, of course, inhibit the appearance of a Schick positive reaction by producing passive immunity. The point was referred to Dr. R. A. O'Brien who confirmed the surmise that some batches at least of scarlet fever antitoxin did contain a small amount of diptheria antitoxin. Since this discovery, we have ceased to perform a preliminary Schick test before actively immunising against diphtheria, children who have received scarlet antitoxin. Further, the series of injections has been spaced as late in the child's stay as possible in order that any residual passive immunity to diphtheria might wane before active immunisation is begun. It follows that in the earlier part of the year, a number of children who gave a negative Schick test after receiving scarlet antitoxin were not necessarily naturally Schick negative reactors at all. All these presumed negative reactors have been discarded from our immunisation records. Otherwise, in the absence of full knowledge of the circumstances, a subsequent Schick test performed outside the hospita proving positive with the waning of passive immunity might give rise to erroneous conclusions.

Diphtheria in the 'Immunised.'

During the year, 30 patients with a previous history of immunisation were admitted to hospital with a notified diagnosis of diphtheria. The period which had elapsed since the immunising course varied from six days to as long as three years. Fourteen of the total were Schick negative on admission; none of these presented any evidence of clinical diphtheria. Of the remaining 16 cases, 7 had clinical diphtheria on admission to hospital—in each case, the attack was mild. In four of these cases the Schick test was performed on admission and was found to be positive; to the remaining three, serum was administered without the performance of a preliminary Schick test. Details of these 7 cases are as follows:—

No.	Age.	Schick test o.a. hospital.	Diagnosis.	Immunisation course.
1.	15	Not done.	Doubtful diphtheria.	3 years b.a. (No confirmatory Schick).
2.	3	Positive.	Mild diphtheria.	2 weeks b.a.
3.	11	,,	,, ,,	1 month b.a.
4.	8	Not done.	,, ,,	6 days b.a.
5.	10	Positive	,, ,,	2 weeks b.a.
6.	12	,,	,, ,,	Incomplete course: two injections: 2 weeks b.a.
7.	7	Not done.	,, ,,	Incomplete course: two injections: 1 month b.a.

The remaining cases amongst the 30 admissions included such conditions as scarlet fever, follicular tonsillitis, and common cold. Three patients shewed no evidence of any pathological condition on admission to hospital.

Immunisation of staff against scarlet fever.

Simultaneously with the Schick test, a Dick test was performed on all new entrants to the nursing and domestic staff. Of 94 new entrants to the nursing staff, 14 were Dick positive; one left before the test was done. Amongst the domestic staff, only one of 31 new entrants was Dick positive. These 15 new entrants were actively immunised with the following series of skin test doses of scarlet toxin:—

2,000: 5,000: 10,000: 20,000.

No case of scarlet fever occurred in a member of the staff thus immunised during the year, and no case in an original Dick negative reactor. There was one case of scarlet fever amongst the staff during the year, the particulars of which are as follows:—

This nurse was Dick positive on entrance to hospital on 20.11.29. She received a series of immunising doses and was Dick negative when tested on 22.1.30 and again on 10.9.30. On 1.10.30, however, she was warded with a definite attack of scarlet fever; her active immunity had evidently waned. When re-tested after the attack on 7.1.31, the patient was again Dick negative.

Passive Immunisation.

As in past years, Dick positive patients in the wards have been passively immunised in the event of the occurrence of a case of scarlet fever as a cross-infection in the ward. The dose of scarlet antitoxin used is 5 c.c's. The immunity produced endures, on an average, for 10 to 14 days. No original Dick negative reactor amongst the patients has contracted scarlet fever following exposure.

We have not so far commenced the routine active immunisation of diphtheria patients against scarlet fever.

Measles.

Serum prophylaxis.

It was recorded, in the Report for 1929, that considerable use had been made of the serum of adult immunes, i.e., those who had had a well authenticated attack of measles in childhood. The supply of measles immune serum was obtained as in the previous year from volunteers amongst the probationers. The samples of serum obtained were prepared and pooled for us by Dr. Henry.

During 1930, towards the latter end of which measles was very prevalent in the City, the disease was unwittingly introduced into the wards on numerous occasions, by the admission of children suffering from some other infection but also incubating measles. Adult immune serum was used with a high proportion of successes either in the prevention or the attenuation of the attack of measles which almost invariably follows the exposure of susceptible children. In the case of children who were in a debilitated state from the primary infection for which they were admitted, prevention was aimed at: whereas, in the case of those whose general condition was good, attenuation of the attack as the result of which the child attained active immunity to measles, was produced. With the use of adult immune serum, ward closure on account of cross-infection of measles is now usually unnecessary.

DISINFECTION.

The following table gives details of the work done during 1930:—

Houses disinfected after scarlet fever	889
Houses disinfected after diphtheria	2,109
Houses disinfected after enteric fever	75
Houses disinfected after smallpox	1
Houses disinfected after tuberculosis	1,991
Houses disinfected after cancer	356
Houses disinfected after miscellaneous diseases (by request)	251
Beds disinfected	2,521
Miscellaneous articles of clothing and bedding	23,949
Library books disinfected	2,346
Public conveyances disinfected	33

TUBERCULOSIS.

The notified cases of Tuberculosis again showed a decrease, the number being 1,483 against 1,538 in 1929.

The cases and deaths in past years have been as follows:—

Tuberculosis (All Forms).

	New Cases	Rate per 1,000	Deaths	Death-rate per 1,000
1901-1905 (Average)	—	—	1,384	1.78
1906-1910 ,,	—	—	1,235	1.51
1911-1915 ,,	—	—	1,307	1.51
1916-1920 ,,	3,343	3.73	1,261	1.40
1921-1925 ,,	2,060	2.20	1,046	1.12
1926-1930 ,,	1,588	1.63	1,016	1.04
1921	2,247	2.45	1,035	1.13
1922	1,961	2.12	1,049	1.13
1923	2,166	2.32	1,006	1.08
1924	2,129	2.22	1,055	1.10
1925	1,797	1.89	1,083	1.14
1926	1,704	1.78	1,024	1.06
1927	1,607	1.66	1,017	1.05
1928	1,606	1.64	965	0.99
1929	1,538	1.57	1,066	1.09
1930	1,483	1.51	1,008	1.03

The table indicates how steady and how striking has been the decrease in the new cases, the number having fallen in ten years from 2,247 to 1,483. The decrease in the deaths is not so striking but this is largely accounted for by the fact that tuberculosis is often a very chronic disease and better treatment and improved environment undoubtedly tend to prolong the patient's life even if a cure is not achieved. Thus amongst the deaths last year there were 86 which had been notified more than 10 years ago, and 107 others which had been notified more than 5 years ago.

Last year 643 cases were marked off the register as "cured," no case being regarded as "cured" until 5 years, in pulmonary cases, and 3 years, in non-pulmonary cases, have elapsed without symptoms of active disease.

The statistics relating to the pulmonary and non-pulmonary form of the disease are given in the next two tables.

PULMONARY TUBERCULOSIS.

	New Cases	Rate per 1,000	Deaths.	Death-rate per 1,000
1901-1905 (Average)	—	—	1,039	1.34
1906-1910 ,,	—	—	947	1.16
1911-1915 ,,	—	—	1,057	1.22
1916-1920 ,,	2,936	3.27	1,062	1.18
1921-1925 ,,	1,739	1.86	903	.96
1926-1930 ,,	1,327	1.36	881	.91
1921	1,969	2.15	890	.97
1922	1,669	1.80	899	.97
1923	1,785	1.91	860	.92
1924	1,780	1.85	934	.97
1925	1,491	1.57	930	.98
1926	1,421	1.48	905	.94
1927	1,343	1.39	857	.89
1928	1,361	1.39	840	.86
1929	1,270	1.30	918	.94
1930	1,242	1.26	884	.90

NON-PULMONARY TUBERCULOSIS.

	New Cases.	Rate per 1,000	Deaths	Death-rate per 1,000
1901-1905 (Average)	—	—	345	.45
1906-1910 ,,	—	—	289	.35
1911-1915 ,,	—	—	249	.29
1916-1920 ,,	407	.45	199	.22
1921-1925 ,,	321	.34	143	.15
1926-1930 ,,	260	.27	135	.14
1921	278	.30	145	.16
1922	292	.32	150	.16
1923	381	.41	146	.16
1924	349	.36	121	.13
1925	306	.32	153	.16
1926	283	.30	119	.12
1927	264	.27	160	.17
1928	245	.25	125	.13
1929	268	.27	148	.15
1930	241	.25	124	.13

The next table shows the number of pulmonary and non-pulmonary cases notified together with the number which first came to light through death certificates :—

	New Cases Notified in 1930.	Deaths not Notified as Cases before Death.	Total Deaths.
Pulmonary Tuberculosis	1,242	69	884
Tubercular Meningitis	23	41	58
Tubercle of the Abdomen	26	9	12
Tubercle of the Spinal Column ...	34	2	9
Tubercle of the Joints	66	1	6
Disseminated Tuberculosis ...	7	14	29
Tubercle of the Glands and other parts	85	4	10

It will be noted that only a comparatively small proportion (8 per cent) of the deaths from the pulmonary form escaped notification. On the other hand a large proportion of the non-pulmonary deaths had never been notified as cases. This arises from the fact that some non-pulmonary cases are often of very short duration, and others are difficult to diagnose until death is near at hand, or has actually taken place.

Tuberculosis in Wards.

The distribution of the cases of tuberculosis over the wards of the City is shown in the next table :—

Distribution of Tuberculosis.

		Case-rate per 1,000 in 1930			
		Pulmonary	Non-Pulmonary	Total	
Central Wards	St. Paul's ...	2.05	.24	2.29	Average 2.02
	St. Mary's ...	1.66	.40	2.06	
	Duddeston and Nechells	1.74	.22	1.96	
	St. Bartholomew's ...	1.41	.46	1.87	
	St. Martin's & Deritend	1.76	.30	2.06	
	Market Hall ...	1.55	.12	1.67	
	Ladywood	2.06	.15	2.21	
Middle Ring	Lozells	1.72	.19	1.91	Average 1.49
	Aston	1.89	.35	2.24	
	Washwood Heath ...	1.16	.23	1.39	
	Saltley	0.93	.30	1.23	
	Small Heath ...	1.15	.12	1.27	
	Sparkbrook ...	0.87	.30	1.17	
	Balsall Heath ...	1.53	.28	1.81	
	Edgbaston ...	0.65	.12	0.77	
	Rotton Park ...	1.30	.26	1.56	
	All Saints' ...	1.39	.13	1.52	
Outer Ring	Soho	0.92	.15	1.07	Average 1.11
	Sandwell	1.03	.15	1.18	
	Handsworth ...	1.01	.10	1.11	
	Perry Barr	0.49	.10	0.59	
	Erdington North ...	1.24	.27	1.51	
	Erdington South ...	1.10	.33	1.43	
	Yardley	1.19	.41	1.60	
	Acocks Green ...	1.17	.32	1.49	
	Sparkhill	0.80	.14	0.94	
	Moseley & King's Heath	0.58	.11	0.69	
	Selly Oak	1.01	.23	1.24	
	King's Norton ...	0.58	.16	0.74	
	Northfield	0.91	.48	1.39	
	Harborne	0.46	.05	0.51	

As usual the incidence of the disease has been much higher in the Central wards than in the Outer Ring. The case-rates in previous years are given in Table IX on page 134, and it will be seen that the Central wards have shared in the great improvement recorded in recent years.

Work of Tuberculosis Visitors.

There are ten nurses engaged as Tuberculosis Visitors, each having charge of a definite part of the City. It is the duty of these visitors to make enquiry into every notified case of tuberculosis and afterwards to keep in touch with the patient and carry out any "after care" that may be needed.

At the end of 1930 there were 8,452 cases of tuberculosis on the current register, all of which have to be visited at more or less regular intervals. The visits paid last year were as follows :

Primary visits (to fresh cases)	1,742
Routine re-visits (to old and new cases)	19,729
Special re-visits	9,653

At the first visits to the fresh cases it was found that 887 patients out of 1,742 were sharing a bed with some other person, while 396 others shared a bedroom but had a separate bed. Efforts are always made to get a separate bedroom, or if that is out of the question, at least a separate bed for every patient. Unfortunately, owing to lack of accommodation or to unwillingness on the part of patients, this is often impossible, but in order to help in getting it done, 104 beds were issued last year by the Public Health Department either on loan or on hire-purchase. In addition to this 22 open-air shelters were sent out to patients who were in a position to use them.

Action under Legal Enactments.

No action was necessary during the year under the Public Health (Prevention of Tuberculosis) Regulations, 1925, relating to tuberculosis employees in the milk trade, nor was Section 62 of the Public Health Act, 1925, employed to remove a patient compulsorily to a sanatorium.

THE ANTI-TUBERCULOSIS CENTRE.

(Report by Dr. G. B. Dixon, Chief Clinical Tuberculosis Officer.)

The Anti-Tuberculosis Centre, centrally situated in the City, is open daily for five days during the week and on Saturdays for half the day. Six sessions weekly are reserved for patients attending for treatment, supervision and observation. Thirty-nine sessions, and occasionally more, are set apart weekly for consultations and examinations; in addition, many consultations and examinations are undertaken at the homes of patients by members of the medical staff. Many of our patients attend the Sanatorium at Yardley Green Road as out-patients for artificial light treatment.

Admissions to the City Sanatoria are decided upon only after examination at the Centre, or at the patient's home, and the sanatorium to which they are sent depends entirely upon the condition of the patient's disease, etc.

On returning from Sanatoria, patients are re-examined at the Centre and many old patients who have discontinued treatment for various purposes are re-examined from time to time.

The Anti-Tuberculosis Scheme provides 36 beds at Yardley Green Road Sanatorium for the purpose of observation. Ten are reserved for boys, ten for adult males, eight for adult females and eight for female children. Their utilization allows a correct diagnosis to be made in many instances where this would be impossible without the facilities which they offer.

The Scheme is also fortunate in having a large number of beds set apart for the care and treatment of the "hospital" type of case. Advanced male cases are admitted to Yardley Green Road Sanatorium and advanced female cases to West Heath Sanatorium. Beds for the treatment of advanced types of tuberculosis are essential upon humanitarian grounds, and, in addition, are a prophylactic asset in association with the Public Health work of the City, from which point of view it is advisable that as large a percentage as possible of the deaths annually occurring in the City from pulmonary tuberculosis should take place in the Sanatorium pavilions provided for patients with advanced disease, as the risk of infection from this type of patient is usually increased during the last six months of life.

Attendances and Examinations.

During the year 1930 the total number of attendances made by patients for diagnosis, consultation, observation, advice and treatment, was 23,165; the total number of attendances for supervision, observation, advice and treatment, was 7,395, the number of examinations made was 10,303, and, in addition, there were 5,467 X-ray examinations. As compared with the previous year there was a decrease in the number of attendances and an increase in the number of examinations and X-ray examinations. During the year a grant of extra nourishment was given to 111 patients. Shelters, beds and bedding were hired or loaned to 154 patients, and 55 patients were helped to procure housing accommodation.

Attendances for supervision, observation and treatment ...	7,395
Attendances for consultation and examination	10,303
Attendances for X-ray examination	5,467
	23,165

During the year 1930, 1,242 new cases of pulmonary tubercle were notified to the Medical Officer of Health, and of this number 982 or 79.06 per cent. were examined at the Centre. There were also 241 cases of non-pulmonary tuberculosis notified during the year, and 67 or 27.8 per cent. were examined at the Centre.

A certain number of cases of Silicosis are seen at the Centre every year, Silicosis being a condition of fibrosis of the lungs resulting from the inhalation of minute particles of Silica in the form of dust arising from various industrial processes. The cases of Silicosis seen here occur chiefly among Metal Grinders, Polishers, and Sand Blasters. The disease is very frequently associated with tuberculosis of the lungs.

The number of persons on the dispensary register on January the first was 6,000, the number of patients transferred to other areas during the year, and the cases "lost sight of" numbered 114, the number transferred to us from other areas, and the "lost sight of" cases returned, was 69.

Dental treatment was given during the year to 202 patients attending the Centre. At the end of the year 696 Insured persons were receiving Domiciliary treatment at the recommendation of the medical staff. There were 3,206 consultations with Medical Practitioners during the year, and the number of reports from Medical Practitioners during the year numbered over two thousand.

Treatment Recommended.

7,319 old and new patients were examined at the Centre during the year. The following table shows the number of newly notified and suspect cases of all varieties of tuberculosis, and the number of patients coming up for re-examination. It also shows the numbers recommended for the different forms of treatment. Some 1,058 patients were examined at their own homes.

	First Examinations.		Re-examinations.	
	Newly notified.	Suspects or Contacts.	Old Cases.	Suspects or Contacts.
Sanatorium Treatment	605	318	506	37
Dispensary Treatment	7	8	55	1
Dispensary for Supervision	23	13	1,341	1
Out-patient Light Treatment	8	8	18	—
Domiciliary Treatment	106	45	1,203	2
No Treatment required	300	1,895	376	443
	1,049	2,287	3,499	484

Classification of Patients According to Group of Disease.

The following tables show the classification of the patients examined according to Group of disease; adults and children are shown separately.

Adults.

	First Examinations.		Re-examinations.	
	Newly notified.	Suspects or Contacts.	Old Cases.	Suspects or Contacts.
Group I.	70	76	619	4
Group II.	329	163	1,571	12
Group III.	254	81	485	7
Group IV.	34	17	128	2
No Treatment Required	242	984	69	164
	929	1,321	2,872	189

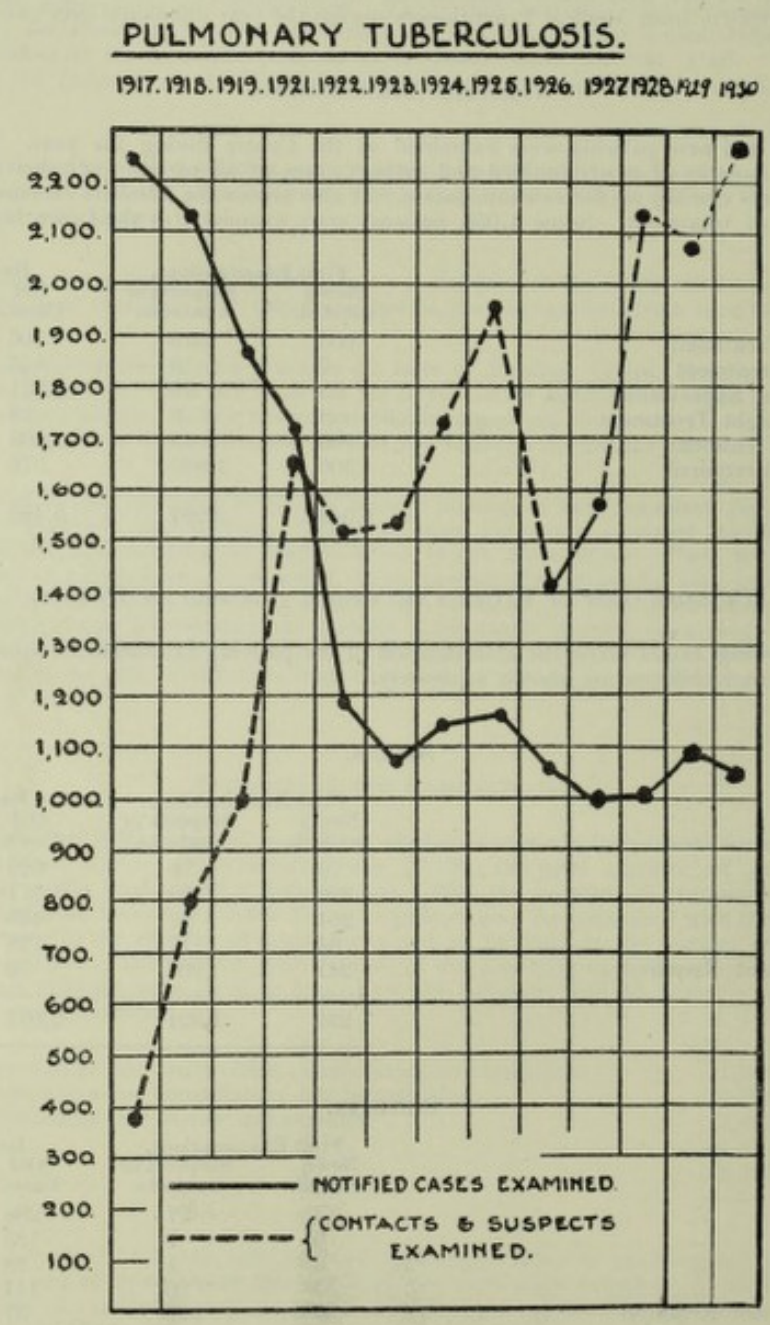
Children.

	First Examinations.		Re-examinations.	
	Newly notified.	Suspects or Contacts.	Old Cases.	Suspects or Contacts.
Group I.	13	27	288	8
Group II.	6	9	133	4
Group III.	9	1	28	1
Group IV.	33	20	141	2
No Treatment Required	59	909	37	280
	120	966	627	295

In certain instances patients included in the various Groups are suffering from other forms of tuberculosis in addition to pulmonary, but for convenience are classified as pulmonary cases, when this type of the disease is present in association with other forms.

"Contacts" and Notified Cases.

In the graph are shown the number of contacts and suspects, and notified cases, examined over a series of years.



The following table shows the working capacity of the newly notified cases when they were examined for the first time. It is interesting to note that among adults, 27.3 per cent. were sent to us while their working capacity was still unimpaired, and 31.2 per cent. came to us when totally incapacitated. In the case of the children, this point is more emphasised; 50.8 per cent. had an unimpaired working capacity, and 16.6 per cent. were totally incapacitated, the working capacity indicated here being ability or otherwise to attend school regularly.

	Newly notified cases.		Contacts and Suspects.	
	Adults	Children.	Adults.	Children.
Unimpaired working capacity	254	61	990	907
Impaired working capacity	385	39	255	55
Totally incapacitated	290	20	76	4
	929	120	1,321	966

Family History.

A survey of the family and social history of 5,097 patients who were examined during the year shows that there was no history of existing tuberculosis or knowledge of relatives dying of, or suffering from, tuberculosis in connection with 2,920 or 56.9 per cent. In 2,177 or 42.7 per cent. there was a history of some near relative or intimate friend being either affected with tuberculosis, or having succumbed to it. In 823 instances or 37.8 per cent. of such cases the relative affected was the father, and in 395 or 18.1 per cent. the relative affected was the mother, and in 746 or 34.2 per cent. a brother or sister was affected. In 447 instances two or more relatives were known to have suffered from tuberculosis.

Dental Treatment.

The services of a part-time dental surgeon are utilised at the Centre for the necessary treatment of our patients. The treatment is conservative in type, and consists mainly of extractions, fillings, and scalings. There is no fund to assist in the provision of artificial dentures. Those patients who wish to provide their own can do so under conditions advantageous to themselves by arrangement with the dentist. The dental surgeon informs me that there were 747 extractions, 13 fillings and 7 scalings, and dentures were supplied in 19 instances. The condition of the teeth and gums of most of our patients seen during the year, so far as dental caries, masticatory power, and the state of the gums were concerned, is shown in the following table.

Condition of Teeth and Gums.

Number of Teeth with infected pulp chambers.			Masticatory power in Molars and Bicuspids.			State of Gums.		
None.	1 to 4.	More than 4.	Six or more.	Less than 6.	None.	Healthy.	Gingivitis.	Pyorrhoea.
1,685	2,657	345	3,093	1,056	345	3,440	727	506

Sputum Results.

A very large number of sputum examinations are undertaken during the year on behalf of persons who are referred to us for an opinion. If the first examination gives a negative result, subsequent and repeated specimens are examined by the concentration method of Ellerman and Erlandsen.

As soon as a patient is referred to us for examination, a sputum outfit, with instructions and a request for its early return, is posted.

Many specimens from an individual patient are examined when they prove to be negative; in addition, concentration methods are utilised extensively, and the medical staff supervises the examinations.

Amongst the new adult patients examined for the first time during the year in whom a definite diagnosis of pulmonary tuberculosis was made, i.e., 973, there were 543 or 55.8 per cent. who presented tubercle bacilli in their sputum. Amongst the total number of children primarily examined, in whom a definite diagnosis of pulmonary tuberculosis was made, i.e., 65, there were 7 or 10.8 per cent. who presented tubercle bacilli in their sputum.

The difficulty of obtaining sputum from children, even when it exists, is recognised, and to compensate for this, when in the Sanatoria, all children, whether admitted for observation or treatment, have the faeces examined for acid fast bacilli, and are submitted to a Von Pirquet or intradermal tuberculin test. All adult patients who enter observation pavilions have a blood sedimentation test undertaken, and have the faeces examined for acid fast bacilli.

Acid fast bacilli in the faeces of children are only discovered amongst our patients in a small percentage of the specimens examined, but, when present, a large percentage prove to be tubercle bacilli after animal inoculation.

Laboratory Work—Yardley Green Road Sanatorium and the Centre.

At the Sanatorium 2,706 specimens of urine and specimens of sputum were examined during the year. Of the sputum specimens examined 1829 presented tubercle bacilli after staining alone, and the remaining specimens were tested by the sedimentation method of Ellerman & Erlandsen. Of these 1,120 were found to contain tubercle bacilli ; these were not found in every instance after one examination, and in some instances the test had to be repeated on several occasions before a positive result was obtained, as shown in the following table :—

Tubercle Bacilli found after				1st	sedimentation	in	736	instances.
,,	,,	,,	,,	2nd	,,	,,	218	,,
,,	,,	,,	,,	3rd	,,	,,	62	,,
,,	,,	,,	,,	4th	,,	,,	104	,,

In the Laboratory at the Centre during the year, 6,371 specimens of sputum were examined; 53 other specimens were also examined. Of sputum specimens, 1,114 which were previously negative after one staining, were examined by the concentration method of Davis, the results being as follows :—

Tubercle Bacilli demonstrated after				1st	concentration	...	29
,,	,,	,,	,,	2nd	,,	...	6
,,	,,	,,	,,	3rd	,,	...	Nil.

Completed Cases.

During the year 2,222 patients completed a course of treatment or supervision, etc., at the Centre, of whom 1,761 were adults and 461 were children.

In the next table the working capacity at the commencement and at the end of a completed period of treatment is given for those old patients who were examined during the year. The group of disease quoted was determined at the first examination.

Working Capacity of Patients Attending Centre.

	Group I.		Group II.		Group III.		Group IV.	
	Adults.	Children.	Adults	Children	Adults	Children	Adults	Children.
Unimpaired working capacity becoming impaired ...	3	—	—	2	—	—	1	1
Unimpaired capacity for work persisting	—	1	—	—	—	—	1	2
Impaired capacity for work becoming unimpaired ...	272	148	212	49	18	6	24	54
Impaired capacity for work becoming totally incapacitated	8	—	59	2	17	1	3	—
Impaired capacity for work persisting	168	77	497	35	101	6	35	29
Total incapacity for work becoming impaired ...	11	3	93	8	85	2	16	10
Total incapacity for work becoming unimpaired ...	18	2	40	8	14	3	7	10
Total incapacity for work persisting	—	—	21	1	35	1	2	—
	480	231	922	105	270	19	89	106

After Care.

In the following tables are set out, as briefly as possible, the main points in connection with an investigation undertaken to ascertain the conditions of those past patients who received treatment at the Centre between the years 1913-1930 inclusive.

PRESENT CONDITION OF PATIENTS TREATED IN PREVIOUS YEARS SHOWING CONDITION OF THOSE WHO WERE TREATED FOR PULMONARY TUBERCULOSIS.

Pulmonary Tuberculosis. Present Condition of Patients Treated in Previous Years.			Previous to 1926.					1926.					1927.					1928.					1929.					1930.				
				Class T.B. plus.					Class T.B. plus.					Class T.B. plus.					Class T.B. plus.					Class T.B. plus.					Class T.B. plus.		
			Class T.B. minus.	Group I.	Group II.	Group III.	Total T.B. plus.	Class T.B. minus.	Group I.	Group II.	Group III.	Total T.B. plus.	Class T.B. minus.	Group I.	Group II.	Group III.	Total T.B. plus.	Class T.B. minus.	Group I.	Group II.	Group III.	Total T.B. plus.	Class T.B. minus.	Group I.	Group II.	Group III.	Total T.B. plus.	Class T.B minus.	Group I.	Group II.	Group III.	Total T.B. plus.
Discharged as Cured.	Adults	M.	1,232	105	169	58	332	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	1,354	69	104	30	203	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Children	M.	882	15	5	3	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	769	12	10	7	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Disease Arrested.	Adults	M.	317	33	69	31	133	52	3	16	5	24	17	11	17	—	28	3	—	—	—	—	7	—	—	—	—	—	—	—	—
		F.	317	23	25	18	66	36	—	5	1	6	5	—	1	—	1	3	—	—	—	—	3	—	—	—	—	—	—	—	—
	Children	M.	176	3	2	4	9	14	—	—	—	—	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	143	3	—	3	6	12	1	—	—	1	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Disease Not Arrested.	Adults	M.	328	77	188	143	408	21	2	45	12	59	41	11	57	21	89	71	20	89	16	125	94	35	121	34	190	166	18	168	68	254
		F.	434	51	111	94	256	52	9	26	9	44	53	4	46	6	56	52	14	46	14	74	78	17	88	25	130	134	9	99	60	168
	Children	M.	142	1	2	3	6	24	1	—	—	1	47	—	1	—	1	35	—	—	—	—	52	—	—	—	—	36	—	—	—	—
		F.	143	3	6	5	14	17	—	—	2	2	30	1	1	—	2	30	—	2	2	4	45	1	1	—	2	31	—	2	1	3
Lost Sight of or otherwise removed from Register.			1,735	172	244	181	597	43	—	12	7	19	29	2	5	—	7	24	3	7	9	19	19	3	21	4	28	16	1	3	5	9
Dead.	Adults	M.	839	139	724	1,386	2,249	52	10	96	173	279	34	2	127	158	287	39	7	114	148	269	34	6	79	141	226	20	1	34	78	113
		F.	615	55	269	685	1,009	70	5	77	119	201	53	3	61	116	180	29	5	89	95	189	22	5	47	90	142	16	—	12	44	56
	Children	M.	77	3	2	16	21	3	—	1	1	2	5	—	1	—	1	—	—	—	1	1	3	1	—	1	2	—	—	—	1	1
		F.	89	4	7	23	34	6	—	1	5	6	3	—	—	6	6	4	—	1	3	4	2	—	—	4	4	5	—	—	3	3
Totals			9,592	768	1,937	2,690	5,395	402	31	279	334	644	340	34	317	307	658	290	49	348	288	685	359	68	357	299	724	424	29	318	260	607

PRESENT CONDITION OF PATIENTS TREATED IN PREVIOUS YEARS SHOWING CONDITION OF THOSE WHO WERE TREATED FOR NON-PULMONARY TUBERCULOSIS.

Non-Pulmonary Tuberculosis. Present Condition of Patients Treated In Previous Years.			Previous to 1926.					1926.					1927.					1928.					1929.					1930.				
			Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
Discharged as Cured.	Adults	M.	5	2	2	3	12	1	—	—	1	2	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	2	2	2	5	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Children	M.	3	7	1	16	27	1	—	—	5	6	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	3	3	—	23	29	2	—	—	2	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Disease Arrested.	Adults	M.	3	4	—	—	7	6	1	1	—	8	6	1	2	—	9	1	1	—	1	3	—	—	—	—	—	—	—	—	—	—
		F.	2	—	—	1	3	—	—	2	3	5	—	3	1	—	4	1	1	—	—	2	—	—	—	—	—	—	—	—	—	—
	Children	M.	2	3	3	4	12	2	—	1	5	8	1	2	—	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		F.	1	6	1	7	15	1	1	—	1	3	—	—	—	2	2	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—
Disease Not Arrested.	Adults	M.	15	1	1	1	18	7	—	—	1	8	3	—	—	1	4	5	2	5	2	14	18	2	5	3	28	13	2	8	8	31
		F.	12	3	3	5	23	5	2	4	—	11	10	5	3	4	22	3	—	2	4	9	6	5	7	5	23	10	6	5	6	27
	Children	M.	2	5	4	8	19	6	1	—	8	15	6	2	1	5	14	4	10	2	12	28	13	8	2	8	31	7	7	4	12	30
		F.	5	1	2	16	24	2	1	—	5	8	2	4	1	2	9	5	—	1	7	13	11	3	2	14	30	4	3	—	12	19
Transferred to Pulmonary			2	2	1	5	10	—	1	—	2	3	1	—	—	1	2	—	—	1	—	1	—	—	1	—	1	—	—	—	—	—
Lost sight of or otherwise removed from Register.			6	7	5	16	34	4	3	1	5	13	5	2	2	1	10	—	2	—	5	7	1	1	—	2	4	—	—	1	—	1
Dead.	Adults	M.	10	2	4	1	17	3	2	—	—	5	3	1	—	—	4	6	—	—	1	7	2	3	1	—	6	—	1	—	—	1
		F.	9	2	1	2	14	2	—	—	—	2	—	—	1	1	2	—	—	1	1	2	—	1	—	—	1	—	—	—	—	—
	Children	M.	4	5	—	—	9	—	1	—	1	2	—	—	—	—	—	1	—	—	—	1	—	1	1	1	3	—	1	—	1	2
		F.	2	1	1	2	6	—	1	—	—	1	—	3	—	—	3	—	—	—	—	—	1	1	—	—	2	—	—	—	—	—
Totals			88	56	31	115	290	42	14	9	39	104	38	23	11	19	91	26	16	12	33	87	52	26	19	33	130	34	20	18	39	111

Radiological Work.

5,467 attendances were made for X-ray examination, as follows :—

Screen examinations	3,774
Films taken	1,693
	5,467

Summary.

1. There was a decrease in the number of attendances of patients during the year 1930 as compared with 1929.
2. No less than 79 per cent. of the total number notified in the city during the year as suffering from pulmonary tuberculosis were examined at the Centre.
3. 1,058 patients were visited and examined in their own homes.
4. During the year no less than 3,774 screen examinations were made in the radiography section, and films were taken in 1,693 cases.
5. Amongst new patients suffering from pulmonary tuberculosis, 55.8 per cent of the adults presented tubercle bacilli in their sputum, and the children 10.8 per cent.
6. Of the patients treated during the periods 1913-1930, some 8,713 presented tubercle bacilli in their sputum. Of this number 31.5 per cent. are known to be still alive, 60.6 per cent. are known to be dead, and 7.7 per cent. have been lost sight of.
7. During the same periods, 11,407 patients whose sputum contained no tubercle bacilli were treated. Of this number, 65.9 per cent. are known to be still alive, 17.7 per cent. are known to be dead, and 16.3 per cent. have been lost sight of.

SANATORIA FOR TUBERCULOSIS.

(Report by Dr. G. B. Dixon, Chief Tuberculosis Officer.)

Accommodation.

The Birmingham Public Health Committee has 597 beds available for the treatment and prevention of pulmonary, and other forms of tuberculosis, and for the observation of suspected cases of tubercle. These beds are distributed in four Sanatoria, as follows :—

	Beds.	Total.
Yardley Green Road Sanatorium.		
Adults : Male : observation	10	
Treatment, intermediate and advanced cases	144	
	—	154
Female : observation	8	
Treatment, early and intermediate cases	44	
	—	52
Children : observation	18	
Treatment, all stages, general, bone, joint, glands, abdominal tuberculosis	101	
	—	119
		— 325
West Heath Sanatorium.		
Adults : Female : advanced	92	
Male : all stages	24	
		— 116
Salterley Grange Sanatorium, near Cheltenham.		
Adults : Males : early cases	38	
Females : early cases	30	
		— 68
Romsley Hill Sanatorium.		
Adults : Males : all stages	59	
Females : all stages	29	
		— 88
		597

In addition to patients treated in the City Sanatoria 39 cases were admitted to the Royal Cripples' Hospital, 24 to the Children's Hospital, 9 to the Moseley Hall Convalescent Home, 3 to the General Hospital, and 1 to the Warwickshire Orthopaedic Hospital. All of these patients were suffering from the non-pulmonary forms of tuberculosis, and many required surgical treatment. A grant towards the maintenance of these patients was made by the Public Health Committee.

Occupational Therapy in Sanatoria.

In all of the municipal sanatoria particular attention is paid to the question of occupational therapy with the object of interesting and employing suitably a certain number of the patients whose condition admits of it. The fitness of the patient to engage in occupational therapy is always judged by the medical officer, who has the patient under constant supervision. The occupation to be followed and the number of hours to be devoted to it are both decided upon by the doctor after careful consideration. At Salterley Grange Sanatorium, the physical condition of the patients is usually so good and their disease so early that temporary employment suitable to their needs can be found in the gardens and upon the estate. At West Heath and Yardley Green Road Sanatoria, particularly in the latter, facilities for occupational therapy have existed for many years. At West Heath the patients are employed in basket making. Classes for the teaching of basket and leather work have also been started at the Romsley Hill Sanatorium.

At Yardley Green Road Sanatorium they are engaged in basket making, leather work of different kinds, and in mat making, etc., and considerable development has taken place here during the past year. In the Leather Department two sewing machines have been installed, and have proved to be extremely useful in the making of a cheaper class of goods. Both in the Basket Department and the Leather Goods Department employment has been found for several ex-patients who have been trained in our workshops, thus increasing output. Efforts have been made to stimulate sales and with this end in view two Exhibitions have been held in the men's Recreation Hall, both being financially successful; and potential buyers have been interviewed with encouraging results. The effect of these efforts is evidenced by greatly improved sales.

It is interesting to note that the children attending the Sanatorium School are taught various forms of handicraft work, including leather work, pewter work, raffia work, basket making, etc. The children who are confined to bed are also taught handicraft work, and in most cases they show great aptitude and eagerness. At the Exhibitions a Stall was devoted entirely to the work done by the children which was of such a high standard that practically every article was sold. The children take a keen interest in this work and many of them seem to realize that, apart from the occupational side, the work may be valuable to them in later years.

Total Numbers Treated in Sanatoria and Duration of Stay.

During the year 1930 there were 1,848 patients discharged from all the Sanatoria. Included in this number are 71 patients suffering from surgical tuberculosis who have been treated in Institutions subsidised by the Health Department. Of this number 959 were adult males, 575 were adult females, 174 were male children and 140 were female children.

The average duration of stay, excluding those admitted for observation and who, proving negative, remained only for a short time, and excluding those Hospital cases with advanced disease who died within a few days of their admission, was 106.8 days for adult males, 110.3 for adult females, and 202.2 days for children.

RESULTS OF TREATMENT OF PATIENTS AND OF OBSERVATION OF DOUBTFUL CASES DISCHARGED FROM RESIDENTIAL INSTITUTIONS DURING THE YEAR 1930.

Classification on admission.	Condition at time of discharge.	Duration of Residential Treatment. Under 3 months. M.	F.	Ch.	3—6 months. M.	F.	Ch.	6—12 months. M.	F.	Ch.	More than 12 months. M.	F.	Ch.	Total
Class T.B. minus.	Quiescent	49	43	11	19	12	45	3	2	21	4	—	6	215
	Improved	79	56	4	22	17	6	4	3	5	—	—	1	197
	No material improvement	10	3	—	—	4	2	2	—	—	—	—	—	21
	Died in Institution ...	13	5	2	1	1	1	1	1	1	—	1	—	27
Class T.B. plus. GROUP I.	Quiescent	7	1	—	3	—	—	—	2	—	—	—	—	13
	Improved	8	6	—	5	3	—	—	—	—	—	1	—	23
	No material improvement	—	—	—	—	—	—	1	2	—	—	—	—	3
	Died in Institution ...	2	—	—	—	—	—	—	—	—	—	—	—	2
Class T.B. plus. GROUP II.	Quiescent	9	1	—	3	4	—	—	—	—	—	—	—	17
	Improved	156	54	—	67	50	1	10	8	1	1	—	—	348
	No material improvement	35	20	—	11	12	—	9	6	—	—	—	—	93
	Died in Institution ...	30	5	—	8	3	—	6	3	—	3	—	—	58
Class T.B. plus. GROUP III.	Quiescent	—	—	—	1	1	—	1	—	—	—	—	—	3
	Improved	60	35	—	37	21	—	7	6	—	—	1	—	167
	No material improvement	39	28	1	18	13	—	4	3	—	—	1	—	107
	Died in Institution ...	105	51	1	11	11	—	4	7	1	4	1	—	196
BONES & JOINTS.	Quiescent or arrested ...	4	4	25	3	2	5	2	1	16	2	3	23	90
	Improved	3	1	—	—	—	2	—	1	1	—	—	1	9
	No material improvement	—	2	3	4	—	—	1	—	—	1	—	—	11
	Died in Institution ...	—	—	—	2	—	—	1	—	—	—	1	1	5
ABDOMINAL.	Quiescent or arrested ...	1	2	—	—	2	5	1	—	2	—	—	1	14
	Improved	—	—	—	1	1	—	—	—	1	—	1	2	6
	No material improvement	—	1	—	—	—	—	—	—	—	—	—	—	1
	Died in Institution ...	—	—	1	—	—	—	—	—	—	—	—	—	1
OTHER ORGANS.	Quiescent or arrested ...	2	1	—	—	—	—	—	—	—	1	—	—	4
	Improved	1	2	1	1	1	1	2	1	—	1	—	—	11
	No material improvement	—	—	—	—	—	—	—	—	—	—	—	—	—
	Died in Institution ...	—	—	—	—	—	—	—	—	—	—	—	—	—
PERIPHERAL GLANDS.	Quiescent or arrested ...	—	1	1	1	—	2	1	1	2	—	—	1	10
	Improved	1	—	4	—	—	4	—	1	1	—	—	—	11
	No material improvement	—	—	2	—	—	1	—	—	—	—	—	—	3
	Died in Institution ...	—	—	—	—	—	—	—	—	—	—	—	—	—

		Under 1 week.			1—2 weeks.			2—4 weeks.			More than 4 weeks.			
OBSERVATION FOR PURPOSE OF DIAGNOSIS.	Tuberculous ...	2	1	1	5	1	6	10	6	32	10	4	18	96
	Non-Tuberculous	—	1	—	2	1	—	42	27	86	5	5	6	175
	Doubtful ...	—	2	1	1	1	1	—	—	1	—	—	—	7

NOTE.—"Quiescent." Cases which have no symptoms of tuberculosis and no signs of tuberculous disease except as are compatible with a completely healed lesion, and in which sputum, if present, is free from tubercle bacilli.
"Improved." Cases short of "quiescent" in which the general health is fair and the symptoms of tuberculosis have materially diminished.
"No material improvement." All other patients who are alive.

OBSERVATION PATIENTS.

The beds reserved for the purpose of observation are at the Yardley Green Road Sanatorium. Observation patients are those who, after careful and repeated examinations at the Centre, are found to be indefinite, either as to the absence or presence of tuberculosis, or as to its activity or otherwise when present, and are usually admitted for a period varying from two to four weeks. Of the 1,848, 278 or 15.04 per cent. were admitted primarily for observation to Yardley Green Road Sanatorium. The medical findings are shown at the foot of the previous table.

CLASSIFICATION OF PATIENTS' DISEASE.

In this table the patients are scheduled according to the classification of the Ministry of Health, as follows:—

Group I. Cases with slight constitutional disturbance, if any, e.g., there should not be marked acceleration of pulse nor elevation of temperature, except of very transient duration; gastro-intestinal disturbance or emaciation, if present, should not be excessive.

The obvious physical signs should be of very limited extent, as follows:—Either present in one lobe only, and in the case of an apical lesion of one upper lobe not extending below the second rib in front and not exceeding an equivalent area in any one lobe; or where these physical signs are present in more than one lobe, they should be limited to the apices of the upper lobes and should not extend below the clavicle and the spine of the scapula.

No complication (tuberculous or otherwise) of prognostic gravity should be present. A small area of dry pleurisy should not exclude a case from this group.

Group III. Cases with profound systemic disturbance or constitutional deterioration; with marked impairment of function either local or general, and with little or no prospect of recovery.

All cases with grave complications, whether tuberculous or not, should be classified in this group, e.g., diabetes, tuberculosis of larynx or intestines, etc.

Group II. All cases which cannot be placed in Groups I and III.

Patients suffering from non-pulmonary tuberculosis are classified according to the site of the lesion and are placed under Group IV.

SPUTUM.

Excluding the 87 observation patients with no active signs from the total number of adult patients discharged from the Sanatoria suffering from pulmonary tuberculosis during the year, 1,025 or 74.3 per cent. presented tubercle bacilli in their sputum whilst in the Sanatoria.

Sanatoria	No sputum persisting	No sputum becoming T.B.—	No sputum becoming T.B.+	T.B.— persisting	T.B.— becoming T.B.+	T.B.— becoming no sputum	T.B.+ persisting	T.B.+ becoming T.B.—	T.B.+ becoming no sputum	Totals	
Yardley Green	33	2	1	86	14	19	310	12	6	483	Adult Males.
Road	38	2	—	22	4	21	46	7	6	146	Adult Females.
Sanatorium	131	—	—	8	—	13	3	—	2	157	Children.
										182	Negative diagnosis.
										968	
Romsley Hill	—	1	1	33	8	—	125	20	—	188	Adult Males.
Sanatorium	4	2	3	9	4	2	49	5	2	80	Adult Females.
										268	
Salterley Grange	14	—	—	7	—	22	59	6	21	129	Adult Males.
Sanatorium	27	—	—	2	—	4	24	4	12	73	Adult Females.
										202	
West Heath	3	—	1	16	3	1	55	22	1	102	Adult Males.
Sanatorium	15	1	1	20	2	6	148	37	6	236	Adult Females.
							1			1	Child.
										339	

Occupations.

In the following table the occupations of both male and female adult patients are shown :—

	Males.	Females.
Out-door occupations	77	5
Domestic Occupations	19	266
Sedentary Occupations	73	48
Commercial Occupations	30	23
Engineering Occupations	201	92
Metal Trades	183	56
Building trade	78	4
Other trades	291	78
	952	572

Illnesses Prior to Admission.

In 133 or 9.3 per cent. instances adult patients had a history of having suffered from pleurisy varying from one to twelve years prior to their examination by us. In 89 or 6.2 per cent. of the adult patients there was a history of pneumonia having occurred from one to twelve years previously. Large numbers of patients attributed the onset of their tuberculosis to an attack of influenza. In the case of the children measles appears frequently as a probable predisposing cause of tuberculosis, 78 or 49.4 per cent. having suffered from measles from one to six years previous to the onset of their tuberculosis.

Gain or Loss in Weight.

Amongst a total of 1,777 patients discharged from Sanatoria, many of whom were advanced hospital cases, having been admitted for the purpose of prophylaxis, 122 or 6.9 per cent. remain stationary, and 1,077 or 60.6 per cent. gained weight in amounts varying from one to thirty pounds.

Working Capacity of Patients Treated in Sanatoria.

The working capacity of patients is shown in the following tables :—

	Adult Males.	Adult Females.	Children.	Totals
Unimpaired capacity for work becoming impaired ...	—	—	—	—
Unimpaired capacity for work persisting	1	—	—	1
Impaired capacity for work becoming unimpaired ...	87	52	48	187
Impaired capacity for work becoming totally incapacitated	24	21	5	50
Impaired capacity for work persisting	433	230	79	742
Total incapacity becoming impaired	127	85	17	229
Total incapacity becoming unimpaired	3	9	1	13
Total incapacity for work persisting	36	48	2	86
Died in Sanatoria	191	90	6	287
No active signs	50	37	95	182
	952	572	253	1,777

Summary.

The average duration of patients' stay for all the Sanatoria was 106.8 days for adult males, 110.3 days for adult females and 202.2 days for children.

Of the patients from all Sanatoria no less than 278 or 15.6 per cent had passed through the observation beds at Yardley Green Road Sanatorium.

Over 32.9 per cent. of the patients discharged were in Group III, 43.6 per cent. were in Group II, 12.9 per cent. were in Group I, and 10.6 per cent. were in Group IV.

There were 74.3 per cent. of the total definite pulmonary patients who presented tubercle bacilli in their sputum whilst in the Sanatoria. The number who showed bacillary loss, decided after three examinations, was 169, or 16.6 per cent.

Over 60.6 per cent. of all patients discharged from Sanatoria, gained weight in amounts varying from 1 to 30 lbs., only 6.9 per cent. remained stationary.

Some 374 patients died in "hospital" beds in the various Sanatoria and hospitals. This represents 37.1 per cent. of the total deaths from tuberculosis occuring in the City during the year.

TREATMENT IN THE LIGHT CLINIC, CITY SANATORIUM, YARDLEY ROAD.

(By Dr. G. B. Dixon, Chief Clinical Tuberculosis Officer.)

Reference should be made to last year's report for particulars as to the general arrangements at the Clinic and the types of lamp in use.

Patients Completing Treatment During 1930.

The total number of patients discharged or completing treatment during the year 1930, was one hundred. This number includes thirty-nine adult males, twenty-seven adult females, twenty-one male children, and thirteen female children. Of these patients seventy-seven completed a satisfactory course of treatment, six of whom have since died, twenty-three failed to complete a satisfactory course of treatment for one reason or another, and four of these have since died.

Of those who completed a satisfactory course of treatment during the year, thirty were cases of bone and joint tuberculosis, thirteen suffered from abdominal forms of tuberculosis, twenty-two were the subjects of peripheral adenitis and twelve suffered from tuberculosis in other forms.

In a majority of instances our patients received their initial artificial light treatment and Sanatorium treatment concurrently, and the majority, after discharge from the Sanatorium continued to attend the Light Clinic as out-patients.

Length of Treatment and Number of Exposures.

The average length of time during which "completed" patients received artificial light treatment was approximately 76.05 weeks, and the average number of exposures was 151.4, and the average gain in weight in each case was 5 lbs.

Patients Who did not Complete Treatment.

The patients who discontinued treatment for various reasons numbered twenty-three, they included cases of tuberculosis of the bones and joints, of the peripheral glands, the larynx and genito-urinary tract.

On the 31st December 1930, one-hundred and sixty-seven patients were continuing their treatment in the Light Clinic, and many showed an improvement in their condition.

Cost of Current.

The cost of current for working of the Light Clinic was 1s. 8.9d. per hour.

Patients who Satisfactorily Completed a Course of Light Treatment Previous to 1930

			1925						1926						1927						1928						1929					
			Other Organs.	Lupus.	Peripheral Glands.	Larynx and P.T.	Abdominal.	Bones and Joints.	Other Organs.	Lupus.	Peripheral Glands.	Larynx and P.T.	Abdominal.	Bones and Joints.	Other Organs.	Lupus.	Peripheral Glands.	Larynx and P.T.	Abdominal.	Bones and Joints.	Other Organs.	Lupus.	Peripheral Glands.	Larynx and P.T.	Abdominal.	Bones and Joints.	Other Organs	Lupus	Peripheral Glands	Larynx and P.T.	Abdominal	Bones and Joints
Discharged as Cured.	Adults	M.	—	1	—	—	1	2	—	—	2	—	1	3	—	—	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—	1
	,,	F.	—	—	—	—	—	—	—	—	—	2	—	1	—	—	1	2	—	—	—	—	—	—	1	—	—	—	—	—	—	—
	Children	M.	—	—	1	—	—	—	—	—	4	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	,,	F.	—	—	2	—	—	2	—	1	1	—	1	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—
Disease Arrested.	Adults	M.	1	—	—	1	—	2	—	—	—	2	1	1	—	—	1	1	—	7	—	—	—	1	—	1	—	—	1	—	—	4
	,,	F.	1	—	1	—	—	2	—	—	1	1	1	2	—	1	1	—	1	1	—	—	1	1	1	—	—	—	1	—	3	—
	Children	M.	—	1	1	—	1	2	—	—	2	—	1	2	—	—	3	—	2	3	—	—	—	—	1	1	—	—	—	—	—	—
	,,	F.	—	—	3	—	—	2	—	1	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	1	—	—	—
Disease Quiescent.	Adults	M.	—	—	—	—	—	—	—	2	1	1	—	2	—	—	1	1	—	1	—	1	1	—	—	1	3	—	1	—	1	8
	,,	F.	—	—	1	—	—	1	—	—	—	1	—	1	—	—	1	—	—	2	—	2	—	—	2	4	1	2	6	—	—	5
	Children	M.	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	2	—	—	—	—	2	1	—	—	5	—	1	8
	,,	F.	—	—	—	—	—	1	—	—	—	—	—	—	—	2	—	—	1	1	—	—	—	—	2	1	—	—	4	—	1	3
Disease Not Quiescent.	Adults	M.	—	—	—	—	—	—	1	—	2	—	—	—	—	—	—	1	—	1	—	—	—	—	—	1	—	—	—	—	—	1
	,,	F.	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	1	1	—	—	1	—	—	—	—	—	1	1	—	—	1
	Children	M.	—	2	—	—	—	—	1	—	—	—	—	1	—	—	—	—	1	1	—	1	—	—	—	—	—	1	—	—	—	2
	,,	F.	—	1	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1	—	—	—	—
Dead.	Adults	M.	2	2	—	—	—	2	—	1	—	1	—	2	1	1	—	—	2	3	—	—	—	2	—	3	—	1	—	—	—	1
	,,	F.	—	—	1	—	—	—	—	—	—	4	—	2	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
	Children	M.	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	,,	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lost Sight of, etc.	Adults	M.	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—
	,,	F.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	1	—	1	—	1	—	—	—	—
	Children	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	,,	F.	—	—	—	—	—	—	—	1	1	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals			4	7	11	1	2	17	3	7	17	13	6	21	2	4	11	7	10	25	—	6	2	6	10	19	4	7	20	—	6	34

VENEREAL DISEASES.

Three centres for the treatment of venereal diseases are maintained by the City Council, one for men, women and children at the Birmingham General Hospital, one for children at the Children's Hospital, and one for mothers and babies at the Maternity and Child Welfare Centre in Aston Street. At these centres 586 new cases of syphilis, 14 of soft chancre, and 1,323 of gonorrhoea were seen last year.

The centres at which they received treatment are shown below :—

	New Cases.	
	Syphilis	Gonorrhoea
General Hospital	457	1,017
Children's Hospital	13	7
Aston Street Centre	116	299

Of the new cases of syphilis, 284 were in males, 243 in females, and 59 in children. The new cases of gonorrhoea were divided as follows :—males, 896; females, 409; children, 18.

The new cases coming under treatment in previous years have been as follows :—

	New Cases of	
	Syphilis.	Gonorrhoea.
1918	857	688
1919	1,241	1,586
1920	1,145	1,375
1921	766	956
1922	457	711
1923	535	755
1924	610	769
1925	540	892
1926	544	884
1927	638	975
1928	607	1,158
1929	543	1,245
1930	586	1,323

Further particulars of the work done at the centres last year will be found in the statement below :—

	Syphilis.	Gonorrhoea.
No. of cases under treatment January 1st, 1930.	1,411	1,772
New cases coming under treatment during year	586	1,323
Total attendances	24,076	61,871
No. discharged after completion of treatment and observation	65	340
No. transferred to other Centres	76	97
No. who ceased to attend :—		
(*a*). Before completing first course	95	257
(*b*). After one or more courses but before completion of treatment	166	—
(*c*). After completion of treatment but before final tests as to cure	23	236

A grant of £320 was paid by the Public Health Committee towards the expenses of the Birmingham Branch of the British Social Hygiene Council which carries on propaganda against venereal diseases. The report of this Branch shows that lectures and addresses were given during the year to approximately 20,000 persons, these talks including general addresses in factories, and to social and religious organisations, and special instructional lectures to a large variety of special bodies. A large amount of personal work has also been done by the officers of the Branch.

VII. MATERNITY AND CHILD WELFARE.

(Report by Dr. Ethel Cassie).

BIRTHS.

The number of live births registered for Birmingham in 1930 was 17,417. This is 614 more than in 1929. The birth-rate was 17.7 per 1,000. The birth-rates for the past 30 years are given in table I in the appendix (page 123). It will be seen that, except for fluctuations during the War, there has been a steady decrease from 31.4 in 1901 to 17.1 in 1929.

The Birmingham birth-rate is still above the rates for Manchester (17.2), Sheffield (15.1), Bristol (15.7), Leeds (15.8), London (15.7) and Edinburgh (17.1), but below those for Liverpool (21.7) and Glasgow (21.5). This relationship appears to be fairly well maintained from year to year.

The birth-rate varied greatly in different parts of the City, as shown in the table below.

Birth-Rates in Wards.

	Ward	Birth-rate	
Central Wards	St. Paul's	22.5	Average 21.3
	St. Marys	25.3	
	Duddeston and Nechells	21.6	
	St. Bartholomew's	20.9	
	St. Martin's and Deritend	21.8	
	Market Hall	17.6	
	Ladywood	19.5	
Middle Ring	Lozells	16.4	Average 16.0
	Aston	18.8	
	Washwood Heath	15.6	
	Saltley	14.4	
	Small Heath	15.6	
	Sparkbrook	15.4	
	Balsall Heath	15.2	
	Edgbaston	12.3	
	Rotton Park	18.4	
	All Saints	18.4	
Outer Ring	Soho	11.8	Average 16.2
	Sandwell	10.5	
	Handsworth	11.7	
	Perry Barr	27.7	
	Erdington North	18.9	
	Erdington South	18.1	
	Yardley	17.5	
	Acock's Green	21.1	
	Sparkhill	16.7	
	Moseley and King's Heath	13.1	
	Selly Oak	13.1	
	King's Norton	12.6	
	Northfield	21.3	
	Harborne	12.5	

STILLBIRTHS.

The net number of stillbirths was 688, equal to 4 per cent of the live births.

Forty per cent of the stillbirths occurred in primiparæ.

The percentage of illegitimate births among the stillbirths was 5.7 against 3.6 amongst the live births.

A very high proportion of the stillbirths were premature—216 out of 585 for which records are available or 37 per cent; 148 out of 688 (22 per cent) stillbirths occurred in the practice of midwives; of these 28 or 19 per cent were in breech presentation, as far as can be ascertained. Three hundred and seventy-two of the stillbirths occurred in multiparæ, and 116 (or 31 per cent) of these had had a previous miscarriage or stillbirth.

SUPERVISION OF THE ILLEGITIMATE INFANT.

During 1930, there were 623 illegitimate births belonging to Birmingham. Of these 594 occured in the City and 29 in other places. The illegitimate births were in the proportion of 35.8 1,000 of the total live births. This is about the usual proportion for Birmingham.

Some information was obtained with regard to 575 cases.

Of these 575 illegitimate babies, no less than 310 were born in institutions, 240 of these being in the Dudley Road or Selly Oak Hospitals.

The infant mortality among illegitimate children is high. In 1930 it was at the rate of 117 per 1,000 births, while among legitimate children it was 58.

At the time of preparation of this report 41 of the babies born in 1930 were still inmates of the institutions in which they were born. Forty-five babies died before a visit could be paid to them, and 15 others had been removed to other areas before they could be visited. In 8 cases the child could not be traced. This leaves 445 babies who received at least one visit and regarding whom the following information was obtained.

In 32 cases the parents had married after the baby's birth. In 88 the parents were living together though not married. This implies that in 120 or 27 per cent of the cases the child lived under conditions comparable to those in the ordinary home.

Twenty-five of the babies had been satisfactorily adopted.

In 56 cases, the father was contributing to the child's maintenance under an Affiliation Order; in 48 others the father was contributing voluntarily, while in 201 no help of this kind was being received by the mother. In the remaining 39 cases no information on this point could be obtained.

The fact that illegitimate infants have a mortality rate almost double that of normal infants has led to considerable concentration of effort on their behalf. On the notification of the birth, a special card is prepared, in addition to the ordinary visiting card, and monthly reports are required from Health Visitors on these cards, which are specially issued for the purpose. This removes any chance of visits to these cases being omitted. Health Visitors make every effort to secure breast-feeding for the baby, and give detailed attention to diet and hygiene.

CARE OF THE UNMARRIED MOTHER.

In April, 1930, the Maternity and Child Welfare Department became responsible for work previously carried out by the Board of Guardians relating to the welfare of the unmarried mothers. A preliminary ante-natal examination is always desirable, and a special clinic has been established where the girls attend by appointment to see a woman medical officer, who carries out not only the ordinary ante-natal examination, but also the examinations necessary for the diagnosis of venereal disease.

Two Homes belonging to voluntary associations are available for girls pregnant for the first time, viz.: "Hope Lodge" (30 beds) and "Woodville" (6 beds), the latter for Roman Catholics only. "Hope Lodge" has a maternity department in which normal cases can be delivered. From "Woodville" all cases are sent for their confinements to Dudley Road Hospital. These Homes do not admit girls suffering from venereal disease or mental deficiency, or those of bad moral character. The maintenance charges of such girls as are admitted to these institutions through the Maternity and Child Welfare Committee are paid by the Committee for two months before confinement and nine months after.

Girls considered unsuitable for the special Homes, or those unwilling to go and without suitable accommodation at home, may be admitted to Western House (Public Assistance Department) for the ante-natal period, to be confined subsequently in Dudley Road Hospital where also their ante-natal condition is supervised. Those girls who can remain at home are sent to Dudley Road Hospital or the Maternity Hospital for their confinements. Patients suffering from venereal disease are encouraged to attend the special V.D. Centre.

The Association for the Care and Training of Unmarried Mothers and their Babies, besides maintaining "Hope Lodge," employs two women officers who assist girls to obtain affiliation orders through the courts, and every suitable case is put in touch with these officers. These ladies also visit the maternity wards at Dudley Road Hospital and the Selly Oak Infirmary wards to keep in touch with the first pregnancy cases with whom the Association is specially concerned. In this way close touch is maintained between the Association and all first cases.

After the birth of the baby, girls who are not being dealt with by either "Hope Lodge" or "Woodville" and who are not returning to their own homes, may in first cases only be recommended for the Day Servants' Hostel, Monument Road. The girl may remain here with her baby until the child is a year old, and may go out to daily work to help to support herself and the child. Girls who are unwilling to go to the Hostel, and who have no home, go to the special block in Selly Oak Infirmary where such cases are received. Here the mothers assist in the care of the baby and do laundry work.

Girls remaining at home for their confinements or returning there afterwards are visited from the Maternity and Child Welfare Department. Where foster mothers are required, girls are put in touch with suitable women. The difficulty lies in the inability of an unmarried woman to support herself and her child adequately. Where there is a second child it becomes increasingly difficult, and under present circumstances little can be done except by arranging for adoption or for admission of one of the children to a Public Assistance Institution.

A number of cases are dealt with by the Salvation Army in "The Hawthorns." During 1930 20 girls were reported as having been admitted, of whom 9 were from outside the City. "The Hawthorns" takes second pregnancy cases and admits for the ante-natal and post-natal period. All confinements are dealt with at Dudley Road Hospital, ante-natal care being given in the Home.

Cleveland House, Wolverhampton, admits girls suffering from venereal disease during pregnancy, for labour and the post-natal period. Suitable cases are sent to this Home.

The following particulars can be given of the cases dealt with directly by the Department :—

In 222 cases (Group A, below) application for help was made at the office for assistance or advice during the ante-natal period.

In 15 cases (Group B, below) contact was established after childbirth, through the hospital wards. These were all second pregnancies.

This gives 237 cases dealt with from April to December or about half of the illegitimate births during that period.

GROUP A. (Cases seen in the ante-natal period)—222.

(1)	Single girls (1st child)	192
(2)	Single girls (2nd child)	21
(3)	Widows	3
(4)	Married Women	6
		222

(1) *Single girls with first baby*—192.

Returned to own City ... 10
Remaining 182

	Ante-natal Care.	Confinement.	Post-natal Care.
Hope Lodge	32	17	30
Hawthorns	15	—	15
Woodville	5	—	6
Cleveland House	4	4	4
Western Road House	4	—	10
Day Servants' Hostel	—	—	5
Dudley Road Hospital	121 (out-patients)	148	—
Hallam Hospital	3 (out-patients)	3	—
Maternity Hospital	—	2	—
Own home or lodgings	8 (Child welfare clinics)	8	112
	192	182	182

Of those returning home, 10 married, 3 returned to the putative father, in 21 cases the baby died, and in 5 cases the baby was adopted. The remaining 144 mothers retained their babies.

At the end of the year the following figures were obtained :—

Babies stillborn	6	
Babies died	17	
Babies adopted	5	
Babies with foster mothers	7	
Babies with mothers in Institutions	52	Hope Lodge 19; Woodville 5; Cleveland House 3; Western House 10; Hawthorns 15
Babies with mothers at home	97	
Total	184	(2 twins)

Of the 97 babies living at home with their mother, the conditions for 56 may be regarded as very satisfactory, 37 as reasonably satisfactory, and 14 as unsatisfactory.

(2) *Single girls with second baby*—21.

In these cases the fate of the first baby is given below :—

Died	7
Taken by relatives	6
Adopted	3
With foster mother	2
With mother	3
	21

Particulars relating to the second confinement are given below :—

	Ante-natal Care.	Confinement.	Post-natal Care
Dudley Road Hospital	16	20	—
Hawthorns	4	—	4
Hallam Hospital	1	1	—
Western House	—	—	1
Selly Oak Infirmary	—	—	2
Own Home or Lodgings	—	—	14
Total	21	21	21

Of those returning home, one married, one baby was stillborn, and in one case the baby was adopted. The remaining 18 mothers are responsible for their second babies. In eight of these cases the mothers are responsible for both their babies and in three they have both babies with them at home.

At the end of the year, the following figures were obtained :—

Babies stillborn	1
Babies adopted	1
Babies with foster mothers	1
Babies with mothers in institutions	7
Babies with mothers at home	11
	21

Of the 11 babies at home with their mother the conditions for 6 can be regarded as quite satisfactory, 3 as reasonably satisfactory, and 2 as unsatisfactory.

(3 and 4) *Widows and Married Women*—9.

	Ante-natal Care.	Confinement.	Post natal Care.
Dudley Road Hospital	8	9	—
Hawthorns	1	—	1
Own home	—	—	8
	9	9	9

Of those returning home, in one case the baby was stillborn, and the remaining eight mothers retained their babies.

GROUP B. (Cases seen after confinement)—15.

All these were second pregnancies.

First Baby—

In two cases they were stillborn.
In three cases they were adopted.
In six cases they were taken by relatives.
In four cases they remained with mother.

Second Baby—

	Confinement.	Post-natal Care.
Dudley Road Hospital	13	—
Own Home	2	8
Western House	—	7
	15	15

At the end of the year the position was as follows :—

In one case (twins) one baby died and the other was adopted, and in one case the mother cannot be traced and the baby is in Lordswood Nursery. The remaining 13 mothers retained their babies. In 9 cases the mother is responsible for both babies, and in 4 cases the mothers are at home with both babies.

INFANT LIFE PROTECTION

On April 1st, 1930, the Public Health Department became the responsible authority for administering Part 1 of the Children Act, dealing with infant life protection.

At the end of the year there were 280 foster children under supervision, and 280 foster mothers on the register. Between April 1st and December 31st, 235 foster mothers were registered.

The following particulars relate to the work of the Infant Protection Visitors :—

Applications for foster children	70
Applications for foster mothers	113
Inspection of homes offered	74
Registration of homes	149
Visits to investigate complaints	21
Special visits for other reasons	283

INFANT MORTALITY.

The infant mortality rates for a number of years are shown in the table below :—

INFANT MORTALITY RATE.

	Birmingham.	England and Wales.
1901-05	157	138
1906-10	131	117
1911-15	126	110
1916-20	94	91
1921-25	80	76
1926-30	70	68
1921	83	83
1922	86	77
1923	72	69
1924	83	75
1925	78	75
1926	73	70
1927	75	70
1928	65	65
1929	79	74
1930	60	60

It will be seen that the infant mortality of 60 is the lowest yet reached in Birmingham.

INFANT MORTALITY IN WARDS.

The appended table shows the infant mortality rate in each of the wards of the City in 1930. The average mortality in the groups of wards ten years ago, and in 1929, is given for comparison.

Central Wards :	St. Paul's	89	Average : In 1929—106. In 1930— 80. In 1920—104.
	St. Mary's	75	
	Duddeston and Nechells	67	
	St. Bartholomew's	74	
	St. Martin's and Deritend	91	
	Market Hall	88	
	Ladywood	74	
Middle Ring :	Lozells	53	Average : In 1929— 71. In 1930— 58. In 1920— 79.
	Aston	61	
	Washwood Heath	37	
	Saltley	54	
	Small Heath	42	
	Sparkbrook	55	
	Balsall Heath	69	
	Edgbaston	77	
	Rotton Park	63	
	All Saints	67	
Outer Ring :	Soho	65	Average : In 1929— 56. In 1930— 49. In 1920— 55.
	Sandwell	38	
	Handsworth	47	
	Perry Barr	63	
	Erdington North	54	
	Erdington South	51	
	Yardley	55	
	Acocks Green	41	
	Sparkhill	51	
	Moseley and King's Heath	49	
	Selly Oak	49	
	King's Norton	36	
	Northfield	38	
	Harborne	53	

Infant Mortality by Age and Cause.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Cause of Death.	Weeks.				Total under One Month.	Months.				Total Deaths under One Year
	0—	1—	2—	3—		1—	3—	6—	9—	
Measles	—	—	—	—	—	1	1	—	9	11
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Whooping Cough	—	—	—	2	2	10	16	15	17	60
Diphtheria and Croup ...	—	—	—	—	—	1	1	1	1	4
Influenza	—	—	—	—	—	—	1	1	2	4
Tuberculous Meningitis ...	—	—	—	—	—	2	3	7	4	16
Abdominal Tuberculosis ...	—	—	—	—	—	—	—	—	1	1
Other Tuberculous Diseases	1	—	—	—	1	1	3	2	6	13
Rickets	—	—	—	—	—	—	—	3	2	5
Syphilis	1	—	2	1	4	4	2	1	—	11
Cerebro-Spinal Fever ...	—	—	—	—	—	—	2	2	1	5
Meningitis (not Tuberculous)	2	1	—	—	3	1	2	2	—	8
Convulsions	7	—	1	—	8	1	1	1	1	12
Bronchitis	—	2	1	—	3	7	7	3	3	23
Pneumonia (all forms) ...	3	4	7	6	20	27	29	32	33	141
Gastritis	—	—	—	—	—	—	1	1	—	2
Diarrhoea, Enteritis, etc. ...	—	—	1	1	2	35	54	20	14	125
Congenital Malformations ...	36	8	9	3	56	28	8	5	3	100
Premature Birth	221	25	17	14	277	17	3	—	—	297
Atrophy, Debility and Marasmus	19	7	4	1	31	13	7	—	2	53
Atelectasis	18	1	—	—	19	2	—	—	—	21
Injury at Birth	46	3	3	—	52	—	1	—	—	53
Neglect (under 3 months) ...	4	—	—	—	4	—	—	—	—	4
Suffocation (overlying) ...	—	—	—	—	—	3	4	1	1	9
Other Causes	4	8	3	2	17	8	19	12	12	68
All Causes	362	59	48	30	499	161	165	109	112	1,046
Rate per 1,000 Births ...	20.8	3.4	2.8	1.7	28.7	9.2	9.5	6.3	6.4	60

The next table shows the number of infant deaths from the more prominent causes of death during the last three years.

Infant Deaths from Different Causes.

	1930.	1929.	1928.
Measles	11	38	13
Whooping Cough	60	46	75
Influenza	4	19	4
Tuberculosis	30	26	19
Convulsions	12	30	23
Bronchitis	23	45	27
Pneumonia	141	218	150
Diarrhoea and Enteritis	125	203	139
Suffocation (overlying)	9	12	20
Congenital malformation	100	97	87
Premature Birth	297	361	327
Injury at Birth	53	46	25
Atrophy, Debility and Marasmus ...	53	51	64
Other causes	128	132	144
Total	1,046	1,324	1,117

It will be seen from these figures that the low infant mortality in 1930 was mainly due to a fall in the deaths from respiratory and bowel infections and to a reduction in the number of premature births.

DEATHS OF CHILDREN BETWEEN 1 AND 5 YEARS OLD.

These are set out in the table below, distinguishing those under 2 years from those over 2.

	1 to 2 years old			2 to 5 years old		
	1930.	1929.	1928.	1930.	1929.	1928.
Measles	29	92	17	12	49	8
Whooping Cough	27	46	54	17	23	30
Diphtheria	12	2	4	22	31	20
Scarlet Fever	0	0	2	4	4	1
Influenza	1	17	3	0	15	4
Tuberculosis	17	27	19	25	32	15
Nervous Diseases	5	18	7	14	17	9
Bronchitis and Pneumonia	45	188	74	24	92	37
Diarrhoea and Enteritis	7	31	22	5	8	8
Other Digestive Diseases	2	8	4	7	14	11
Accidental Deaths	7	17	7	15	17	21
All other Causes	18	29	25	32	23	28
Total	170	475	238	177	325	192

INFECTIOUS DISEASES.

	Number of cases notified during the year.	Number of cases Visited by Officers of the Council.	Number of cases for whom home nursing was provided by the Council.	Number of cases removed to hospitals.
1. Ophthalmia Neonatorum	596	594	505	75
2. Pemphigus Neonatorum	—	—	—	—
3. Puerperal Fever	116	116	1	107
4. Puerperal Pyrexia	131	131	14	79
5. Measles and German Measles (in children under 5 years of age).	Not notifiable.	2,000	75	412
6. Whooping Cough (ditto).	,,	1,900	20	105
7. Epidemic diarrhoea (ditto).	,,	—	—	—
8. Poliomyelitis (ditto).	3	3	—	—

Ophthalmia Neonatorum.

The 596 cases received treatment as given below:—

Treated at home	17
Eye Hospital (out-patient)	497
Eye Hospital (in-patient)	72
Maternity Hospital	1
Selly Oak Hospital	1
Children's Hospital	3
Other Hospitals	5
	596

The majority (485) of the notified cases were very slightly affected, with no after-effects; 105 were moderately severe, though again with no permanent damage. In six cases scaring of the cornea resulted. In these cases the permanent result was as follows:—

	No. of cases.
One eye blind and one slightly defective	1
Both eyes very defective	1
One eye very defective	1
One eye slightly defective	3

The number of cases and the result of treatment since 1917 are indicated below :—

Year.	No. of cases reported.	No. of babies blind in one eye.	both eyes.	No. of babies with eyes otherwise impaired.
1917	237	3	0	6
1918	228	3	0	6
1919	282	4	0	5
1920	444	?	?	6
1921	427	1	0	0
1922	484	1	0	1
1923	433	0	0	10
1924	413	1	1	1
1925	335	0	2	3
1926	395	1	0	2
1927	409	2	0	0
1928	530	6	4	8
1929	522	1	1	4
1930	596	1	0	5

There is no clear indication that the increase in numbers arises from an increased prevalence of gonorrhoeal infection. It seems likely that it is largely, if not entirely, due to more complete notification.

Pemphigus Neonatorum.

Several small outbreaks have occurred in the practice of midwives, but in the majority of instances no second case occurred. Sixty cases have been reported with five deaths. The disease is not notifiable.

Epidemic Diarrhoea (under 2 years).

The deaths from this cause numbered 132. This figure can be compared with previous records from the statement below, which also indicates the meteorological conditions.

The deaths in previous years are given below :—

	Deaths from Diarrhœa and Enteritis. Under 2 years.	Death-rate per 1,000 births.	Days with Temp. of 75° Fahr. or over.*	Days with 0.01 or more inches of Rain.*
1921	367	16.6	27	27
1922	169	8.5	0	55
1923	207	10.9	15	49
1924	170	9.2	2	63
1925	201	11.3	12	46
1926	201	11.2	13	36
1927	198	11.5	3	50
1928	161	9.3	14	30
1929	234	13.9	14	33
1930	132	7.6	4	50

*In the third quarter of the year.

The diarrhoea rates in different parts of the City in 1930 were as follows :—

Central Wards	14.5 per 1,000 births.
Middle Ring	5.1 ,, ,, ,,
Outer Ring	4.7 ,, ,, ,,

HEALTH VISITING.

No. of Health Visitors—94. Total visits paid—331,758.

The Health Visitors undertake home visiting for children under the age of five, ante-natal home visiting, and the visiting required for non-notifiable infectious disease and pneumonia. In order to cope with the outbreaks of infection in different localities, nine visitors are employed for specialised work in this connection, the general health visitors dealing with the sporadic cases in their locality.

The scheme of home visiting for young children includes the following :—

First visit as soon after the 10th day as possible.

Subsequent visits—once monthly to one year.
once quarterly to two years.
once half-yearly to five years.

The general health visitors are each allotted a visiting area in the vicinity of the centre to which they are attached, each centre having a well defined area divided between the visitors attached to it. All general health visitors attend at the centres as well as visiting the homes. The number of visits paid depends on the number of sessions in the centres at which attendance is required. The number of general health visitors attached to centres is 82. In addition two health visitors assist in the work for unmarried mothers and foster children.

Details of the visits paid are given below.

CHILD WELFARE CENTRES.

(a) Number of centres provided and maintained by the Council—27

(b) Number of centres provided and maintained by a Voluntary Association—1

(c) Total number of attendances at all centres during the year:

(1) By children under 1 year of age—103,944

(2) By children between the ages of 1 and 5 years—129,225

(d) Average attendance of children per ordinary session at all centres during the year—41.

(e) Total number of children who attended at the centres for the first time during the year:—

(1) Children under 1 year of age—11,504.

(2) Children between the ages of 1 and 5 years—4,201.

(f) Percentage of total notified live births represented by the number in (e) (1)—65 per cent.

There are still 28 centres in the City, since the centre in Tyburn Road opened during the year replaced an existing one in the Bromford area. The Tyburn Road centre was opened on the 16th December by the Lord Mayor, Alderman W. W. Saunders. The new centre was specially designed for and eminently suited to the type of work it is called upon to perform. It has already proved its usefulness and is dealing satisfactorily with the large number of mothers and children attending the consultations.

The pressure on the centres at Acocks Green and Northfield has been very considerable, but the new centres which are to replace the present cottage accommodation were completed during the early months of 1931.

The centre at College Road, Perry Common, is proving inadequate for the demands made on the space available, and the Committee are proposing to replace this centre by a new building during 1931. Plans are in course of preparation. A similar comment applies to the Billesley centre. It will be noticed that the new centres are being established in the new housing estates where they are urgently needed.

The general statistics are included in the table on page 102.

The figures recorded in the table show that there has been no diminution in the popularity of the child welfare centres, and it will be seen that 65 per cent of children born during the year attended the centres. Although the actual attendances by toddlers exceeds those made by the infants, the percentage attending between one and five is considerably lower than under 12 months. The attendances made by children between one and five number 129,225 at the ordinary children's consultations, as compared with 103,944 attendances made by infants. In addition, the older children attended the medical inspection clinics, of which details are given below.

Comparing the attendances at the children's consultations during 1930 with 1929, we find there has been an increase of 6,780, and in addition 12,516 attendances have been made at the medical inspection clinics, giving a total increase of 19,296 The number of children's consultations has been increased from 3,042 in 1929 to 3,325 in 1930, and 813 medical inspection clinics have been held, making a total increase of 1,096.

The educational classes continue to be well attended.

	Acocks Green and Hall Green	Aston St.	Billesley.	Bloomsbury St.	Bromford	Carnegie Institute.	Erdington.	Floodgate St.	Greet.	Handsworth.	Harborne.	Hay Mills.	Hope St.	Irving St.	King's Heath.	Lansdowne St.	Lichfield Rd.	Northfield.	Perry Common.	St. Vincent St.	Selly Oak.	Smith St.	Stirchley	Stratford Rd.	Trinity Road.	Washwood Heath Rd	Wright St.	Total.
Infants and Children :—																												
Births (and stillbirths) reported	708	663	191	899	454	1006	503	578	805	426	200	654	1170	561	534	904	683	375	561	814	274	794	494	763	554	905	860	17333
Primary visits ...	714	658	216	859	446	1067	477	568	797	482	200	705	1139	565	492	885	940	389	559	767	260	905	560	698	585	861	1034	17828
Re-visits (infants and children)	9244	10308	3939	16368	8134	18887	6831	11731	14540	8646	4021	13361	16560	12774	7021	13587	14543	5758	8798	13704	4211	16810	7854	10452	6834	11269	14709	290894
Total visits & revisits	9958	10966	4155	17227	8580	19954	7308	12299	15337	9128	4221	14066	17699	13339	7513	14472	15483	6147	9357	14471	4471	17715	8414	11150	7419	12130	15743	308722
Mothers (Ante-Natal) :—																												
Primary visits ...	79	137	54	140	55	119	40	152	149	128	69	53	236	136	75	144	128	61	122	131	31	110	46	101	71	100	64	2731
Re-visits	359	466	146	781	167	848	156	626	972	108	229	360	659	381	217	655	482	219	417	469	118	436	193	448	206	473	714	11305
Total visits & re-visits	438	603	200	921	222	967	196	778	1121	236	298	413	895	517	292	799	610	280	539	600	149	546	239	549	277	573	778	14036
Children's Consultations :																												
Number held	98	149	25	100	98	249	150	100	147	100	98	151	112	100	125	103	199	60	112	103	97	149	100	149	100	200	151	3325
Fresh children attend'g	564	579	210	611	496	1847	514	410	685	341	227	524	678	427	427	560	908	298	1005	554	281	770	380	616	498	702	593	15705
Total attendances ...	5053	5671	1258	5566	4254	14817	6098	4673	6674	4395	3265	7082	6670	4580	5261	5053	11674	1945	6090	4913	4075	7187	4671	6079	5480	8798	7442	158724
Number seen by Doctor	2109	3087	505	2281	2190	7069	3186	2213	3807	2201	1585	2677	2563	2293	2272	2250	4630	1342	2958	2466	2028	3125	2107	2843	2506	3952	4483	74728
Medical Inspections (1½—5 yrs.) :—																												
Number held ...	47	47	17	49	—	45	—	46	—	49	—	47	43	44	30	47	46	—	11	47	—	47	—	49	4	49	49	813
Total attendances ...	831	586	270	779	—	615	—	713	—	847	—	718	655	568	379	834	622	—	171	820	—	920	—	577	72	801	738	12516
Mothers' Consultations :																												
Number held	59	118	25	147	51	99	71	49	100	49	22	96	50	24	71	76	149	53	92	49	49	102	66	82	90	98	134	2071
Fresh mothers attend'g Ante-Natal ...	254	719	105	742	220	511	249	284	478	165	103	323	387	138	238	320	837	191	503	216	137	492	196	371	338	450	499	9466
Total attendances ...	897	1349	301	2199	812	1537	998	713	1630	443	292	1087	975	337	732	920	2054	659	1574	612	514	1200	749	1146	1278	1291	2024	28323
Attendance at :—																												
Sewing classes ...	—	527	—	650	—	727	427	413	622	607	466	986	493	505	553	559	468	396	370	382	495	743	628	394	658	40	577	12686
Cookery classes ...	—	613	—	—	—	603	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	644	361	257	—	—	—	2478
Health Talks	1644	2474	265	1638	582	6249	1320	1551	2655	3382	396	1806	1659	1403	970	4092	3730	1019	2025	2416	808	485	1650	3554	1175	399	1411	50758

ANTE-NATAL CLINICS.

No. of clinics.	No. of sessions.	Total attendances.	No. of expectant mothers.
27	2,071	28,323	9,466

The number of ante-natal consultations held at the child welfare centres increased from 1,522 in 1929 to 2,071 in 1930, while the attendances increased from 19,751 to 28,323. The number of new mothers attending during the year was 9,466, representing 54 per cent of the total births and stillbirths reported.

MEDICAL INSPECTION FOR PRE-SCHOOL CHILDREN.

It was decided last year to open special medical inspection clinics for children between 18 months and five years, in order that by systematic medical inspection defects could be detected at an early age and remedied before the child reached school age. Such inspection clinics have been established at 18 child welfare centres. They are held weekly, the children being asked to attend by appointment. A complete physical examination is made at each attendance and quarterly inspections are advised.

It is found that the mothers bring the children more readily for a first than for subsequent examinations, and it is also found that where the child is ailing, the mother brings him more readily than in the case of a healthy toddler. These facts must be remembered in considering the high proportion of children suffering from physical defects.

The inspection clinics have proved popular and have already become part of the routine work of the centres where they are established. The total number of clinics held during the year was 813 and 12,516 attendances were made, giving an average attendance of 15. The number of children attending was 6,474.

The accompanying table gives the list of the commoner defects found in different age groups, and establishes the need for such inspection clinics. It is obvious that the work must be correlated with remedial work in relation to the defects found, and that the cases must be followed up to see that where treatment is required it is obtained.

MEDICAL EXAMINATIONS AT INSPECTION CLINICS. JANUARY 1ST—DECEMBER 31ST, 1930.

Children from 18 months to five years.

	Under 2 Years.			2—3 Years.			3—4 Years.			4—5 Years.			Total.	
	No.	% of Total.	% of Age Group.	No.	% of Total.	% of Age Group.	No.	% of Total.	% of Age Group.	No.	% of Total.	% of Age Group.	No.	% of Total.
Number Examined	884	13.7	—	1,836	28.4	—	1,852	28.6	—	1,902	29.3	—	6,474	—
Enlarged Tonsils	274	10.3	31.0	768	29.0	41.8	750	28.3	40.5	857	32.4	45.1	2,649	40.9
Defective Teeth	20	1.1	2.3	214	11.8	11.7	583	32.2	31.5	995	54.9	52.3	1,812	28.0
Enlarged Glands	148	8.4	16.7	504	28.7	27.4	504	28.7	26.7	599	34.3	31.4	1,755	27.2
Active Rickets	105	64.0	11.9	57	34.8	3.1	2	1.2	0.1	—	—	—	164	2.5
Evidence of Old Rickets	19	6.0	2.1	93	29.2	5.1	113	35.5	6.1	93	29.2	4.9	318	4.9
Other Orthopaedic Defects	6	10.7	0.7	10	17.9	0.5	16	28.6	0.9	24	42.9	1.2	56	0.9
Otorrhoea	22	13.7	2.5	48	29.8	2.6	41	25.5	2.2	50	31.1	2.6	161	2.5
Defective Hearing	1	2.9	0.1	4	11.8	0.21	14	41.2	0.8	15	44.1	0.8	34	0.5
Squint	25	10.4	2.8	46	19.1	2.5	78	32.4	4.2	92	38.2	4.8	241	3.7
Other Eye Conditions	2	28.6	0.2	3	42.9	0.16	1	14.3	0.05	1	14.3	0.05	7	0.1
Chronic Bronchitis	6	16.7	0.7	9	25.0	0.5	7	19.4	0.4	14	38.9	0.7	36	0.53
Other Lung Infections	2	15.4	0.2	2	15.4	0.1	2	15.4	0.1	7	53.8	0.4	13	0.2
Systolic Heart Murmur	3	4.6	0.3	17	26.2	0.9	14	21.5	0.7	31	47.7	1.6	65	1.0
Other Heart Conditions	—	—	—	3	50.0	0.16	2	33.3	0.1	1	16.7	0.05	6	0.1
Eczema	3	18.8	0.3	7	43.8	0.38	3	18.8	0.15	3	18.8	0.2	16	0.24
Other Chronic Conditions	2	14.3	0.2	2	14.3	0.1	1	7.1	0.05	9	64.3	0.5	14	0.2

ULTRA-VIOLET LIGHT CLINICS.

During the year 1930 three more mercury vapour lamps have been installed at Welfare Centres, viz., at Smith Street in January, at Greet in April, and at Wright Street in May. This makes a total of 12 lamps now in use at the Welfare Centres for ultra-violet light treatment.

The total number of cases treated during the year was 1,816 children and 20 mothers, and the total attendances 22,430 children and 240 mothers.

Table 1 shows the number of cases treated at each centre and the conditions for which treatment was obtained; the number of attendances made; and the total figures for the City under each condition.

Table 2 shows the number of cases discharged during the year and the results of treatment. As will be noticed, definite improvement was obtained in the great majority of cases.

Table 3 shows the development of this part of Child Welfare Work since the installation of the first lamp at the Carnegie Institute in 1926.

TABLE 1. ATTENDANCES AT ULTRA VIOLET LIGHT CLINICS DURING 1930.

CONDITIONS TREATED.

Centre	Rickets.		Prophylaxis. (Rickets).		Delayed Dentition.		Debility.		Malnutrition.		Flabbiness.		Catarrh.		Anaemia.	
	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.
Aston Street	23	223	26	227	1	12	23	217	4	38	12	108	7	92	—	—
Carnegie Institute	52	482	48	474	14	157	103	1,237	26	412	31	330	67	768	10	116
Floodgate Street	34	452	38	523	6	88	55	785	7	104	6	81	15	165	5	84
Greet	20	246	19	288	5	92	18	195	4	42	12	155	26	346	4	84
Harborne	6	138	1	7	4	106	17	226	1	6	3	54	18	352	—	—
Hope Street	28	356	15	117	—	—	78	785	—	—	—	—	28	448	6	45
Lichfield Road	56	501	15	348	3	38	76	1,086	18	183	5	29	48	595	8	92
Selly Oak	4	32	3	45	1	12	7	81	2	8	1	4	4	49	—	—
Smith Street	15	196	16	122	1	24	18	168	—	—	—	—	3	53	2	16
Stirchley	10	169	17	219	5	82	22	360	7	119	12	226	4	48	4	49
Stratford Road	20	339	29	303	8	130	32	454	7	67	7	86	32	423	5	52
Wright Street	23	335	28	397	3	45	32	356	3	56	8	81	14	278	10	171
TOTAL	291	3,469	255	3,070	51	786	481	5,950	79	1,035	97	1,154	266	3,617	54	709

TABLE I.—*Continued.*

Centre	Nervous Irritability.		Bronchitis.		Asthma.		* Other Lung Conditions.		Skin Conditions.		** Convalescents.		*** Other Conditions.		Total.		Mothers.	
	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.	No. of Cases.	Attendances.
Aston Street	4	38	7	28	—	—	—	—	1	12	5	17	—	—	113	1,012	—	—
Carnegie Institute	17	176	15	178	3	17	7	69	3	30	—	—	1	3	397	4,449	13	178
Floodgate Street	4	27	4	56	1	20	6	70	1	2	5	76	2	25	189	2,558	—	—
Greet	2	37	16	156	1	10	1	8	1	12	7	83	—	—	136	1,754	3	36
Harborne	—	—	—	—	1	26	—	—	—	—	3	53	—	—	54	968	1	4
Hope Street	—	—	3	10	—	—	—	—	2	58	—	—	—	—	160	1,819	—	—
Lichfield Road	9	81	16	159	—	—	—	—	—	—	13	81	7	83	274	3,275	—	—
Selly Oak	3	40	—	—	—	—	—	—	—	—	3	30	1	13	29	314	1	12
Smith Street	—	—	—	—	—	—	—	—	—	—	—	—	4	61	59	640	—	—
Stirchley	12	210	6	59	—	—	3	38	1	3	7	88	1	11	111	1,681	—	—
Stratford Road	3	20	8	150	2	24	—	—	—	—	15	131	1	8	169	2,187	2	10
Wright Street	1	5	2	37	—	—	—	—	1	12	—	—	—	—	125	1,773	—	—
TOTAL	55	634	77	83	8	97	17	185	10	129	58	559	17	204	1,816	22,430	20	240

* Unresolved Pneumonia, Empyema. **Convalescent from Measles, Whooping Cough, Pneumonia, Diphtheria. *** Enlarged Glands, Discharging Sinus, Chilblains.

TABLE II.

CASES DISCHARGED IN 1930 AND RESULTS OF TREATMENT.

Centre.	Number Discharged.	Improved.	Not Improved.
Aston Street	127	96	31
Carnegie Institute	302	214	88
Greet	136	114	22
Floodgate Street	54	48	6
Harborne	39	36	3
Hope Street	138	118	20
Lichfield Road	171	168	3
Selly Oak	8	5	3
Smith Street	36	27	9
Stirchley	55	48	7
Stratford Road	135	101	34
Wright Street	108	99	8

TABLE III.

FIVE YEARS SURVEY OF ULTRA-VIOLET TREATMENT.

	1926.	1927.	1928.	1929.	1930.
LAMP AT	Carnegie Institute	Carnegie Institute	Carnegie Aston Street Floodgate Street Hope Street Harborne Lichfield Road Selly Oak Stirchley Stratford Road	Carnegie Aston Street Floodgate Street Hope Street Harborne Lichfield Road Selly Oak Stirchley Stratford Road	Carnegie Aston Street Floodgate Street Hope Street Harborne Lichfield Road Selly Oak Stirchley Stratford Road Greet Smith Street Wright St.
Number of Cases (Children)	313	234	1,375	1,365	1,816
Number of Attendances	5,036	4,416	16,481	15,571	22,430
Number of Mothers	—	8	21	36	20
Attendances by mothers	—	97	545	573	240

REMEDIAL EXERCISE CLINICS.

In January, 1930, a fully qualified teacher was appointed, and six weekly remedial exercise clinics were opened. The centres selected for the establishment of these clinics brought them within easy reach of a large part of the City, particularly of the central area where rickets is most prevalent.

During the year, 857 cases were recommended by their clinic doctor for remedial exercises and called to the prescribing remedial clinic, but out of that number only 495 cases kept their appointment.

Of the 495 patients 79 were found to be not altogether suitable cases. The remaining 416 were drafted to the remedial exercises centres most convenient for their homes.

The table shows the various types of cases that have attended the clinics during 1930. On the whole, the results are very satisfactory, and in some cases quite remarkable. Where one is dealing with a marked knock-knee and paralyses following various diseases, the improvement is necessarily slow.

TABLE OF CONDITIONS TREATED.

(1)	Knock-knee	266	
(2)	Chest Deformities	235	
(3)	Flat Foot	222	
(4)	Bad Posture	178	
(5)	Genu Varum and bowing of tibiæ	112	
(6)	Constipation	93	
(7)	Muscular hypotonicity	64	
(8)	Lordosis	19	
(9)	Scoliosis	15	
(10)	Old Anterior Poliomyelitis cases	10	(approx.)
(11)	Talipes equino-varus	6	
(12)	Winged scapulae	4	
(13)	Paralyses from old hemiplegia	2	
(14)	Contraction of trapezii	2	
(15)	Congenital hip deformities	1	
(16)	Old fracture of ulna	1	

DENTAL TREATMENT.

	Stratford Road.	Carnegie Institute.	Tota
Number of clinics held	169	301	470
Mothers attending	2,174	4,036	6,210
Children attending	906	2,076	2,982
Average attendance—Mothers	13	13	—
Average attendance—Children	5	7	—
Local Anaesthetics	227	445	672
Gas	1,545	2,597	4,142
Dentures supplied	169	232	401

Of these clinics, 422 were taken by Mr. Payton, the whole-time Dental Surgeon of the Department, and 38 by part-time dentists, whose services were required on account of the long waiting lists.

In addition, 83 inspection clinics were held at the various child welfare centres in rotation, when the dentist examined 2,568 mothers and children, and gave on each occasion a lecture on dental hygiene.

TREATMENT OF EAR, NOSE, THROAT AND EYE CONDITIONS.

Cases referred from Child Welfare Centres and examined during 1930 at the Children's Hospital for the treatment of the above conditions were as follows:—

Eyes, ear and throat cases	456
Tonsils and adenoids (operation required)	728
Tonsils and adenoids (examination only)	181

MATERNITY FEEDING CENTRES, 1930.

The Municipal Kitchen continued to provide very satisfactory meals for the Maternity Feeding Centres. The number of dinners served throughout the year was 27,807 (21,314 mothers, 6,493 toddlers), 2,222 less than in 1929. There were fewer mothers attending but an increased number of toddlers.

At Whitsuntide one of the dinner centres (St. Vincent Street), closed down as there seemed small demand for the provision of meals in that area.

During the year special attention has been given to the needs of the toddler. Their usual dinner has consisted of minced meat, gravies, potatoes and green vegetables, followed by stewed fruit and custard or milk pudding. To make a little more variety in their menu steamed fish and white sauce have been substituted twice a week instead of mince. There is no doubt that the children greatly benefit by having this regular, well-cooked mid-day meal. They sit round small kindergarten tables provided for their use, and are taught to feed themselves. They are supervised during the meal by the health visitor in charge.

The transport service and the management at the kitchen have been highly satisfactory.

ATTENDANCES.

Newtown Row	6,725	
Smith Street	4,453	
Hope Street	3,900	
Floodgate Street	6,660	 27,807
Bloomsbury Street	4,351	
St. Vincent Street	1,718	

	£	s.	d.
Cost of Food	629	1	0
Cost of Transport	84	7	0
	713	8	0
Receipts from Centres	209	10	0
Nett cost of food	£503	18	0

Nett cost per meal excluding wages and overhead charges—4.3d.

CARNEGIE INFANT WELFARE INSTITUTE.

All the clinics previously established have been continued, and in addition the medical inspection clinic for children from 18 months to 5 years has been held weekly since January, 1930. Mothers have responded very well to the invitation to attend these examination clinics and undoubtedly they will become a popular feature of child-welfare work.

Increasing attention has also been directed to the development of the work of the toddlers' playroom. Here a very successful programme has been instituted and maintained with very gratifying results. Some of these results have been shown in the exhibition of work done in the playroom at Easter, and also in the entertainments given by young children during the Baby Week, and at Christmas and Easter. The work done with these children can best be described as character training, and is beneficial in the highest degree, spoilt and peevish children rapidly becoming manageable and cheerful when taking part in play or exercise.

The Carnegie Baby Week in 1930 aimed at emphasising the importance of cleanliness in relation to health. One of the features was a propaganda play written by the Superintendent, and carried out by the toddler's classes, and an open-air meeting was held at which Mr. Alderman Lucas took the chair and Dr. Fooks and Mr. Duck were the principal speakers.

There can be no doubt that the standard of the educational work of the centre for the year has been extremely satisfactory and that much appreciation has been shown by the mothers.

The attendances at the clinics have been good, except at the test-feeding clinic for the supervision of breast-feeding. Those mothers who have any difficulty with breast-feeding appear increasingly to abandon it at once in favour of artificial feeding, and the popularity of artificial feeding is increased since in many poor homes the mothers are having to go out to work.

The special clinics held at the Institute are dealt with under their separate headings.

The X-ray clinic is doing valuable work, not only for the centres, but for the Babies' Hospital and the Carnegie Institute Ward. The following radiographs were taken:—

Rickets	457
Chest Conditions	327
Pyloric Stenosis	15
Spinal Conditions	23
Stomach Conditions	15
Joint Conditions	63
Other Conditions	48
Total	948

The attendances at the Carnegie Institute are given below:—

	No. held.	Total attendances
Infant Consultations	246	15,063
Ante-natal Clinics	117	1,321
Remedial Exercise Clinics	48	634
Test-feeding Clinics	48	241
Dental Clinics	301	6,112
X-ray Clinics	50	928
Light Clinics	89	5,372
Sewing Classes	47	725
Cookery Classes	42	603
Mothercraft Classes	41	572
Health Talks	447	6,180

THE OBSERVATION WARD.

Total patients	139
Children	127
Mothers	12

CONDITION FROM WHICH THE CHILDREN WERE SUFFERING:—

Asthma	3	Rheumatic infections	3
Anaemia	7	Mental and nervous defects	5
Debility	8	Throat, nose and ear conditions	3
Enteritis, acute and chronic	14	Constipation	2
Malnutrition	7	Old Anterior Poliomyelitis	2
Vomiting	6	Rickets and scurvy	4
Mismanagement	15	"Pink disease"	1
Lung infection, acute and chronic	23	Prematurity	5
Cystitis	5	Management of breast-feeding	10
Nephritis and allied conditions	4		Total 127

RESULTS:—

Cured	16
Improved	86
In status quo	19
Deaths	4
Transferred	2
	127

WALKER SHIELD COMPETITION.
1929-1930.

The Competition for the Walker Shield, 1929-1930, was held as usual, but adjudication was made on lines somewhat different from those of previous years.

The Shield was awarded to the Centre shown to have done the best educational work during the year, as judged by the personal observation of the Medical Officer of Health and by reports on the following subjects:—

(1) Health Talks.
(2) Classes, Sewing, Cookery, Mothercraft, etc.
(3) Original educational demonstrations, e.g., poster exhibits, diet demonstrations, etc.
(4) Individual advising.
(5) Special lectures, including efforts made in Health propaganda.
(6) Educational work in the homes.

Independent reports were submitted by the Superintendent and Medical Officers in charge of the Centres. Details as to the district, character of the Centre and type of mother were given, and in judging, these features were taken into consideration.

Miss Olive Baggallay, Tutor in Public Health to the International Red Cross Students at Bedford College, acted as judge.

As neither the Carnegie Institute nor Greet Centre was eligible for the Shield, each having won it within the last three years, the Shield was awarded to the Lansdowne Street Centre, which came third in the list.

TRAINING COURSE FOR HEALTH VISITORS.

This training course, established jointly by the University of Birmingham and the Public Health Department, has continued to function.

A course was commenced on January 1st, 1930, and was continued for six months, ending June 30th, 1930. Twenty-two students were entered for this course, nine from Birmingham and thirteen independent candidates. One student failed to sit for the examination and seventeen were successful in getting their certificate.

A second course was commenced on October 1st, 1930. There was a large number of applications and thirty students were taken, including candidates from Birmingham, Nottinghamshire County Council, Staffordshire County Council, Derby Municipal Borough and Norfolk County Council, in addition to eleven independent candidates.

The course includes the practical work of a Health Visitor in all its branches, Maternity and Child Welfare, School Nursing, Tuberculosis Work and Infectious Disease Visiting. In addition to the eighty lectures given at the University and the thirty given at the Council House, special lectures have been given this session on Charity and Charitable Institutions.

The usual Tutorials, Demonstrations and Test Examinations have been held, and the usual visits paid to Institutions.

It is impossible at the present to supply the demand for vacancies in this course as it is felt that thirty students are as many as can be dealt with under the existing arrangements and accommodation.

The very satisfactory work of the students and the deserving high repute which the Training Course has established for itself, depend on the one hand on the excellent co-operation between the University and the Public Health Department, and on the other on the devoted services of the Tutor, Miss Lloyd.

HOME HELPS, 1930.

Fifty Home Helps are employed and attended 613 cases during 1930—239 cases more than in the preceding year.

The Home Helps are available in maternity cases both when the patient is nursed at home and when she goes to hospital, cases of illness directly due to future or comparatively recent confinements, and when the expectant or nursing mothers is away at a Convalescent Home. In one case application was made for a Home Help to attend in the home of a mother suffering from tuberculosis during her absence in a Sanatorium; Home Helps were supplied in this instance for a period of 4 months. In maternity cases, it has usually not been considered advisable to allow them to begin their duties until after the birth of the child. They have been sent, however, to cases where it was advisable for a pregnant woman to lie up so as to avert a miscarriage, or on account of varicose veins, or where she had to go into hospital for the treatment of albuminuria.

The Home Helps attend ordinarily for nine, ten or twelve days, Sundays excepted, during the lying-in period, but the service has been extended if necessary, as in the case of thrombosis or of extreme debility. Where the patient's husband had Sunday duties the Home Helps have usually been willing to attend, when no private arrangements could be made by the family.

The duties of the Home Helps consist in keeping the house clean, special attention being paid to the patient's bedroom, in cooking for the family, and in supervising the children, especially the toddlers. They do two weeks' washing for not more than two adults and six children, and also wash daily for the newly born infant, and for the mother if required.

In confinement cases the Home Helps are not permitted to wash the patient or to make her bed, or bathe the infant. They are enjoined not to interfere in any way with the doctor and midwife, but to help the patient to carry out their instructions, The Home Helps are at liberty to take the baby to the Eye Hospital if required, in cases of Ophthalmia Neonatorum.

CITY BABIES' HOSPITAL.

During the year 1930, 451 children were admitted to the City Babies' Hospital.

ADMISSIONS.

1927.	1928.	1929.	1930.
203	288	403	451

The number of beds at the Babies' Hospital was increased from 25 to 50 in October, 1927.

The average duration of stay during 1930 was 42 days, and the condition on discharge was as follows:—

Number admitted:			
	0—1 year	155	451
	1—2 years	130	
	2—5 years	166	
,,	discharged		363
,,	recovered		241
,,	improved		84
,,	in status quo		38
,,	of deaths		17
,,	transferred		30
,,	remaining		41

The main headings under which the cases were classified are shown below:—

	0—1 yr.	1—2 yrs.	2—5 yrs.	Total
Malnutrition	23	19	26	68
Rickets	9	26	27	62
Debility	10	31	69	110
Marasmus	5	—	—	5
Prematurity	9	—	—	9
Mismanagement	19	10	4	33
Diseases of the Circulatory System	—	1	1	2
Pneumonia	6	4	2	12
Bronchitis	9	8	2	19
Other diseases of the Respiratory System	2	6	15	23
Enteritis	28	6	3	37
Other diseases of the Digestive System	14	1	1	16
Diseases of the Nervous System	1	0	1	2
Diseases of the Urinary System	2	2	3	7
Mental Deficiency	—	1	3	4
Otitis Media	4	4	3	11
Impetigo	1	2	0	3
Other diseases	13	9	6	28
	155	130	166	451

PYPE HAYES HALL CONVALESCENT HOME FOR MOTHERS AND BABIES.

During the year, 441 patients were admitted, the majority of these being mothers recovering from their confinements with their babies.

16 Ante-natal cases were admitted, and 12 babies without their mothers (the latter being in hospital).

On an average, each patient stayed two weeks, but extensions were granted in many instances.

The mothers appreciated the rest and improved in health—in several cases breast feeding was restored.

18 mothers with twin babies were admitted, several of these were breast feeding both babies.

Mothercraft lessons have been given to the patients by the nursing staff, and knitting wool has been sold to them at wholesale price to enable them to make their babies' garments.

During the winter months, the patients and staff were entertained by various Amateur Dramatic Societies who gave their services to help our work when the patients were unable to go out.

THE LORDSWOOD NURSERY.

This Nursery was established by the Guardians as a home for infants and children up to the age of two years. It was intended to secure the removal of young children from the poor law institutions, but the accommodation being limited to 44 beds, only a fraction of the children for whom such accommodation is required could be transferred.

The children admitted are kept till the home circumstances enable their return to their parents, or, until they are adopted. On reaching the age of two years they are transferred to other Homes administered by the Education Committee.

The Maternity and Child Welfare Committee became responsible for the management of Lordswood Nursery from April 1st, 1930, admission and discharge continuing in the hands of the Public Assistance Committee.

The normal number of children in residence in the Nursery is 44.

During the year there was considerable trouble with infectious diseases, particularly diphtheria and measles.

Admissions and Discharges.

From April 1st to December 31st, 1930, twenty-four children were admitted to the Nursery and twenty-four were discharged. Of the admissions 15 were under six months, and 9 were under 12 months. Of the cases discharged, 12 had reached the age of 2 years, at which age children leave the Nursery.

Progress of the Children.

In spite of the considerable set back in the progress of the babies due to measles, the children have got on very well. All the two-year-old toddlers were in a good state of health and of a good weight at the time of discharge, with the exception of one case of extreme constitutional anaemia. This child, though it had made great headway in the six months before discharge, was still very feeble and backward.

One child went into Selly Oak Hospital in September for removal of tonsils and adenoids and benefited greatly by the operation.

WAKE GREEN ROAD MATERNITY HOME.

The Home has been open throughout 1930 for maternity patients, but the ante-natal ward and the new block containing a premature baby ward and staff accommodation, only became available at the end of the year. The stables had already been converted into an ante-natal clinic, laundry and mortuary, and the ante-natal ward has now been constructed over these, and gives accommodation for 10 patients, with the necessary duty rooms, etc. The new block was built in close proximity, and has, in addition to the premature baby ward (10 cots), six single rooms for mothers, and adequate staff accommodation has been provided on the first floor.

The Central Midwives Board has recognised the Home as a training school for midwives, and 12 pupils, who must be general trained nurses, will be taken annually.

During 1930, the number of maternity patients admitted was 383, and the average duration of stay was 13.5 days. The midwives delivered 351, and 32 were delivered by doctors.

There were no cases of puerperal fever. Fourteen cases of puerperal pyrexia were notified (i.e., having a temperature of 100.4° on two occasions). Of these, 8 were cases of mild sapraemia (3 following manual removal of the placenta) and 6 were cases of mastitis. This gives a percentage of 3.6. The puerperal morbidity (i.e., a temperature of 100° on one or more occasions after the first 24 hours) was 2.6 per cent., 10 cases being included, 4 being cases of mild sapraemia, and 6 of mammary disturbance. These results are satisfactory.

There were 10 cases of slightly discharging eyes, and one of ophthalmia neonatorum.

Ante-natal Cases.

During the year 1930, 14 cases were admitted before labour, for ante-natal treatment.

Reason for admission.	No of cases.	Result.
Albuminuria + Parkinson's Syndrome ...	1	Mother and child good
Albuminuria	8	Mother and child good
Albuminuria	2	Transferred to other hospital
For rest only	1	Good
High blood pressure and eclampsia	1	Transferred to Maternity Hospital
High blood pressure with embolism of central artery of retina	1	Good

Of the 383 cases admitted for delivery, 204 were primipara, and 179 were multipara.

The presentations were as follows:—

Vertex	370
Breech	12
Face	1
Total	383

Breech Presentations.

Complications, if any.	Number.	Result to child.
Macerated foetus	1	Stillborn
Anencephalic	1	Stillborn
Extended legs	3	Good
Extended legs and arms	2	1 Good, 1 Stillborn
No complications	5	Good

Complications of Labour.

	No of cases.
Morbid adhesion of placenta	4
Post partum haemorrhage (over 20 oz.)	15
Placenta praevia (partial)	1
Perineal lacerations (however slight)	
Primipara	90
Multipara	33
Total	143 (37%)

Instrumental Deliveries.

Ordinary cases (total 368) 22 or 6%
Private doctors' cases (total 15) 7 or 47%

Infants.

During 1930, 383 babies were born.

Full term	370	
Premature	13	
Total	383	

Condition on discharge (373 discharged alive).

Well	366
Weakly	7

Foetal Mortality.

Dead before labour	3	
Died during labour :—		
Breech with extended legs and arms	1	
Cord round neck	1	
Impacted shoulders	1	
		6 or 1.5 %

Infant Mortality.

Deaths after delivery 4 or 1%
(all due to prematurity)

Method of Feeding on Discharge.

Entirely breast fed	317
Breast + Supplement	43
Artificially fed	13
Total	373

HEATHFIELD ROAD MATERNITY HOME.

The Home was available for patients until April 19th, and 126 cases were dealt with. The Committee had decided to close the Institution for six months for re-construction and enlargement, but the closure was hastened by the occurrence of a puerperal sepsis out-break. Six patients were affected, and there were two deaths. In addition, two nurses had tonsillitis. The measures of control taken were successful in checking the progress of what was clearly a very virulent type of streptococcal infection, introduced probably by the first patient, who was found to show a very unhealthy state of the tissues. Owing to various delays in the building operations, it was not possible to re-open the Home within the period here under review.

The average duration of stay for the 126 patients was 14 days, and medical help was sought in 38 cases. The reasons for which medical help was sought were as follows :—

For Mother.	For Child.
3 Delayed second stage.	2 Slight eye discharge.
6 Abnormal presentation.	1 Blueness of baby.
2 Foetal distress.	2 Chest complication.
1 Adherent placenta.	1 Hare lip and cleft palate.
14 Perineal sutures.	
6 Rise of temperature.	

There were seven cases notified of ophthalmia neonatorum, but treatment resulted in complete recovery.

There were no cases of pemphigus neonatorum.

In four cases there was failure to establish breast feeding. The reasons were as follow:—

1 Premature baby. Mother secreting very little milk.
1 Mother taken to Women's Hospital.
2 Insufficient supply.

The foetal deaths were as follow:—

Stillbirths—4
1 Mother high blood pressure. Macerated foetus.
1 Prematurity. Asphyxia.
2 Hydramnios. Anencephalous. Uterine inertia.

Deaths within 10 days of birth—2
Hydrocephalus, spina bifida.
Prematurity.

SUPERVISION OF MIDWIVES.

During the year 1930, 243 midwives notified their practice in the City. Of these, 18 resided outside the City, and, therefore, do not come under routine inspections. Of the remainder, 8 were temporarily employed and 21 were attached to various institutions.

It is interesting to note that no less than 76 of the midwives have received recognised general training, in addition to their midwifery certificate, and that only 23 of the so-called bonafide midwives remain on the Roll, the rest having obtained their Central Midwives Board Certificate.

During the year, 9 midwives gave up work owing to various reasons, such as old age, ill health, or from having sought work elsewhere, while two have died.

There were 196 residing in the City and having private practices, and 185 remained at the end of 1930.

The midwives attended 9,398 cases, that is 54% of the confinements of the City.

The midwives sent for medical help in 3,360 cases, for the mother in 2,568 instances and for the child in 792.

Reasons for sending for medical help:—

For Mother—2,568		For Child—792	
Delayed labour	913	Ophthalmia	461
Laceration of perineum	775	Prematurity	112
Haemorrhage	213	Convulsions	9
Adherent Placenta	79	Jaundice	17
Abnormal presentation	131	Deformity	37
Abortion or miscarriage	39	Skin eruptions	62
Rise of temperature	146	Other causes	94
Other causes	272		

There has been a diminution in the number of cases attended by midwives, and the percentage has fallen to 54% as compared with 60% in 1929. Medical help has, however, been sought in 3,360 cases as compared with 3,026 cases in 1929.

The Refresher Course at the Maternity Hospital continues to operate and 35 midwives took advantage of this during 1930. The Course is much appreciated by the midwives and is a great stimulus to their work.

Midwives were suspended temporarily on six occasions, the reasons for such suspension being as follow:—

Septic arm	1
Septic hand	1
Septic throat	1
Pemphigus Neonatorum (in the midwives' practice)	1
Presence of *streptoccus haemolyticus* in the throat associated with pyrexia in their practice	2

Compensation was paid in each case.

The following visits were paid during the year:—

Routine visits to midwives	417
Special visits to midwives	105
Visits to stillbirths	157
Visits to ophthalmia neonatorum cases	947
Visits to puerperal sepsis cases	253
Visits to nursing homes	109
Visits to handywomen	70
Other visits	251
Useless visits	291

The number of midwives interviewed was 454.

The following table is of interest :—

MIDWIVES' CASES—MEDICAL HELP CALLS.

	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.
Total cases attended	14,858	13,128	11,801	11,459	11,292	12,534	10,921	10,655	10,934	9,398
Total medical help calls	1,943	1,987	2,194	1,968	2,211	2,305	2,518	3,236	3,026	3,360
Percentage of calls	13	15	19	17	19	18	23	30	28	36
Reasons :—										
Delayed labour	571	558	566	507	580	575	628	902	806	913
Lacerated perineum	265	231	308	342	399	462	494	641	674	775
Haemorrhage	125	146	117	115	115	111	133	210	190	213
Adherent placenta	59	78	87	78	85	65	94	104	85	79
Abnormal presentation	127	113	115	77	97	103	83	91	102	131
Discharging eyes	245	224	220	198	210	287	313	374	380	461
Other causes	551	637	781	651	725	702	773	914	789	788

In 1930, the midwives also attended 2,436 cases as maternity nurses.

MATERNITY INSURANCE SCHEME.

In July, 1927, an insurance scheme was inaugurated under which women by paying five shillings could insure against the payment of the doctor's fee, if it should be necessary to call one in. The scheme was not largely used till 1928. It will be seen from the above table that a substantial rise in the number of medical help calls was recorded for 1928, though a definite increase had appeared also in 1927. The figures for patients insured under the scheme and for uninsured patients have been separated in the following :—

Insured patients :—

	No. insured.	No. of calls for medical help.	Per cent. of calls.
1928	3,068	1,196	38
1929	3,145	1,219	38
1930	2,828	1,259	44

Uninsured cases :—

	No. of uninsured.	No. of calls for medical help.	Per cent. of calls.
1928	7,587	2,040	27
1929	7,789	1,807	23
1930	6,570	2,101	32

While a clear tendency to rise is shown in both groups, there is a pronounced excess in the insured as contrasted with the non-insured group. The excess among the insured patients is accentuated by the fact that in 1930 all insured cases were required to produce a medical certificate before the 28th week of pregnancy, stating that there was no reason to expect any abnormality in the confinement, while the uninsured group involved no such favourable selection. After a review of these and other circumstances the Maternity and Child Welfare Committee decided to terminate the maternity insurance scheme after due notice, and the insurance scheme in fact came to an end in June, 1931.

It is of interest to note the increased percentage of medical help calls in all cases, as compared with four years ago. This probably implies increased anxiety on the part of the midwives to share their responsibility with a doctor. It is gratifying to notice that a large part of the increase is in relation to calls for repairing lacerations of the perineum and for discharging eyes.

There can be no doubt that the standard of district midwifery is steadily rising.

NURSING HOMES.

Under the Nursing Homes Act, six new applications were made for registration, and after inspection four of these were registered, while the remaining two withdrew their applications.

Two of the existing Homes were closed by voluntary retirement.

The total number of Nursing Homes was 48. Of these, 15 undertook maternity work only, 7 dealt with old persons and convalescents, 2 specialised in surgical cases, and the remaining 24 were mixed homes. The total number of Nursing Homes admitting maternity cases is, therefore, 37, in addition to the City Maternity Homes.

The Homes, on the whole, are satisfactory, and the keepers of the Homes show themselves ready to conform to any reasonable suggestions for improvement.

PUERPERAL SEPSIS, 1930.

There were 116 cases of puerperal fever, and 131 of puerperal pyrexia during the year.

In 232 instances detailed information was obtained. The following were removed to hospital for treatment :—

Women's Hospital	105
Selly Oak Hospital	17
Dudley Road Hospital	15
General Hospital	10
Queen's Hospital	5
Maternity Hospital	1
Other Hospitals and Nursing Homes	6
	159

Associated conditions in 176 of the cases were as follows :—

Induction	7
Version	4
Injury and internal lacerations	14
Craniotomy	3
Torn Perineums	49
Manual removal of placenta	18
Retained products	34
Placenta praevia	3
Mastitis	4
Pyelitis	6
Eclampsia	2
Albuminuria	3
Contact with infection	8
Intercurrent illness	21
	176

The number of cases in primiparae was 82, in multiparae 137. The parity was not known in 13 cases.

The attendant at delivery (excluding abortions) was as follows :—

Midwife	83	
Midwife and doctor	41	
Doctor and handywoman	12	(3 with students)
Selly Oak Hospital	10	
Maternity Hospital	21	
Dudley Road Hospital	4	
Queen's Hospital	2	
Nursing and Maternity Homes	15	
Born before arrival	10	
	198	

The Period in Pregnancy was as follows :—

Premature	19
Full time	175
Post-mature	1
Unknown	3
	198

The character of labour was as follows :—

Normal	147
Instrumental	42
Extended breech	2
Inductions	7
	198

Out of the 232 cases of puerperal fever or pyrexia, where information was obtained, 29 died, 8 following abortion. A consultant was called in at home in 27 cases.

MATERNAL MORTALITY IN CHILDBIRTH.

The deaths of women classed to pregnancy and child-bearing in Birmingham during 1930 numbered 59. The number of live births was 17,417, giving a maternal mortality rate per 1,000 births of 3.39.

The maternal mortality in previous years is shown in the table below :—

	Deaths from		Rate per 1,000 Births (total).	
	Puerperal Fever.	Other Puerperal Causes.	Birmingham.	England and Wales.
1911	36	48	3.82	3.87
1912	27	45	3.25	3.98
1913	44	48	3.86	3.96
1914	33	41	3.19	4.17
1915	35	38	3.44	4.18
1916	31	40	3.44	4.12
1917	26	20	2.60	3.89
1918	29	22	3.03	3.79
1919	23	28	2.64	4.37
1920	51	39	3.59	4.33
1921	26	37	2.84	3.91
1922	25	35	3.02	3.81
1923	34	33	3.51	3.81
1924	37	35	3.91	3.90
1925	35	39	4.15	4.08
1926	41	33	4.13	4.12
1927	25	37	3.59	4.11
1928	32	34	3.83	4.42
1929	26	41	3.99	4.33
1930	27	32	3.39	4.40

The causes of deaths as given on the death certificates may be classified as follows :—

Puerperal sepsis (after confinement or abortion)	27
Puerperal haemorrhage	8
Albuminuria and convulsions	8
Accidents of pregnancy (abortion, ectopic gestation, etc.)	5
Embolism	4
Other causes	7

MATERNAL MORTALITY ENQUIRY.

At the request of the Ministry of Health a medical enquiry has been made in the case of every maternal death in childbirth during the year. This enquiry was purely medical and scientific, and the reports have been forwarded to the Ministry. The information obtained in these cases, relating mainly to social factors, has been tabulated below with brief comments.

TOTAL DEATHS OF WOMEN ASSOCIATED WITH PREGNANCY AND CHILDBIRTH.

1.	Deaths from intercurrent disease		20
2.	Deaths from child-bearing		59
	(a) Deaths from abortion	15	
	(b) Deaths from puerperal sepsis	17	
	(c) Deaths from toxaemia	11	
	(d) Deaths from haemorrhage	6	
	(e) Other deaths	10	
		Total 59	

GROUP I. DEATHS FROM INTERCURRENT DISEASE. Total 20.

Parity. Primiparae 3. Multiparae 17. Illegitimate 0.

Age Groups. Under 20=0. 20-30=8. 30-40=9. Over 40=3.

Cause of Death.

Pneumonia	5	
Cardiac conditions	4	
Pulmonary tuberculosis	3	
Nephritis	1	
Cancer (stomach)	1	
Pulmonary embolism	4	(1 associated with syphilis).
Cerebral embolism	1	
Laryngeal diphtheria	1	

Treated in hospital 5. Died in hospital 8.

Ante-natal Care. None 4. Some 7. Sufficient 9.

Home Conditions. Well-to-do 6. Good working class 7. Poor 5. Destitute 2. Illegitimate 0.

Period of Pregnancy. Full-time 16. 36-40 weeks 2. 32-36 weeks 1. 28-32 weeks 0. 24-28 weeks 0. 20-24 weeks 0. Under 20 weeks 1.

Death was apparently inevitable in 7 cases. In 8 cases more help might have saved the patient's life. In 5 cases the patient was to blame.

GROUP II. DEATHS FROM CHILD-BEARING. Total 59.

(*a*) *Deaths from Abortions.* Total 15.

Parity. Primiparae 2. Multiparae 12. Illegitimate 1.

Age Groups. Under 20=0. 20-30=8. 30-40=5. Over 40=2.

Cause of Death.

Septicaemia	15
Haemorrhage	0

Natural abortion	8
Interference	5
Probable interference	2

Treated in hospital	12
Marked delay in treatment	4

Home Conditions. Well-to-do 1. Good working class 7. Poor 7.

Period of Pregnancy. Under 12 weeks 10. 12-16 weeks 2. 16-20 weeks 1. 20-24 weeks 2.

MATERNAL DEATHS.

(b) Deaths from Puerperal Sepsis 17
(c) Deaths from Toxaemia 11
(d) Deaths from Haemorrhage 6

	Puerperal Sepsis. (b)	Toxaemia: Eclampsia with Convulsions. (c1)	Toxaemia: No Convulsions. (c2)	Haemorrhage. (d)	Total.
TOTAL	17	5	6	6	34
AGE GROUPS.					
under 20	—	1	—	—	1
20—30	10	2	2	2	16
30—40	6	2	2	3	13
Over 40	1	—	2	1	4
PARITY.					
Primipara	8	2	3	—	13
Multipara	9	3	3	6	21
HOME CONDITIONS.					
Well-to-do	1	—	1	—	2
Good	7	2	2	2	13
Poor	9	2	3	4	18
Destitute	—	—	—	—	—
Illegitimate	—	1	—	—	1
PERIOD IN PREGNANCY.					
Full term	14	3	3	3	23
Premature	3	2	3	3	11
ANTE-NATAL CARE.					
None	—	—	1	—	1
Some	11	5	5	4	25
Sufficient	6	—	—	2	8
ATTENDANCE AT DELIVERY					
Dr. and handywoman	—	—	—	—	—
Midwife only	4	1	1	—	6
Midwife and Dr. called	2	2	—	4	8
Midwife and Dr. booked	4	—	—	—	4
Hospital	4	—	4	2	10
No attendance	3	1	—	—	4
Doctor	—	—	—	—	—
Undelivered	—	1	1	—	2
TREATED IN HOSPITAL	15	5	5	2	27

NOTES NOT INCLUDED IN ABOVE TABLE.

(*b*) *Puerperal Sepsis.* Total 17.

Method of Delivery :—

Normal=5.
Normal with injuries=2.
Normal twins, manual removal of placenta=1.
Forceps delivery with injuries=7.
Version and manual removal of placenta=1.
Breech, hydramnios and adherent placenta=1.

In addition to the above cases of puerperal sepsis there were two cases of puerperal pyrexia which developed mania. One was a twin delivery and the other a normal delivery associated with pulmonary congestion.

Contributory Causes of Death :—

Defective Nursing and asepsis	9
Delay in obtaining medical help	10
Poverty and poor resistance	1
Dirty surroundings	3
Late removal to Hospital	5
Failure of ante-natal examination to diagnose difficulty	10
Pregnancy toxaemia predisposing to sepsis	2

(*c*) *Death from Toxaemias.* Total 11.

(1) Cases with Convulsions. Total 5.

Method of Delivery.
Normal=2.
Forceps=2. (Ante-partum haemorrhage=1).
Undelivered=1.

Period of Occurrence.
Ante-partum=1.
Post-partum=4.

(2) Cases with no Convulsions. Total 6.

Method of Delivery.
Normal=1.
Forceps=1. (Ante-partum haemorrhage=1).
Induction=3.
Undelivered=1.

Period of Occurrence.
Ante-partum=4.
Post-partum=2.

Type of Case.
Uraemia=6.

(*d*) *Deaths from Haemorrhage.* Total 6.

Method of Delivery.
Normal=4.
Version=2.

Cause of Death.

Post-partum haemorrhage	3
Placenta praevia	3

(*e*) *Deaths from other Causes.* Total 10.

Cardiac Failure=4. (Following Caesarian Section=2. Craniotomy=2).

Ectopic Gestation=3. Operation was performed in 2 cases. One died on way to hospital.

Puerperal Insanity=2. (One had twins).

Ruptured Uterus=1. (Hysterectomy performed).

Table I. Vital Statistics during 1930 and Previous Years.

Year.	Population Estimated to middle of each year.	Birth-rate	Death-rate	Infant Mortality rate per 1,000 Births	Death-rates per 1,000 of Population from:—																Death-rates per 1,000 Births.				
					Enteric Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis: Respiratory	Tuberculosis: Other Forms	Cancer	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System.	Diseases of Genito-Urinary System	Suicides	Other Violence	Congenital Malformation	Congenital Debility, Premature Birth, etc.	Diarrhoea and Enteritis (under 2)	Puerperal Fever	Other Accidents of Child Birth.
1901	760,989	31.4	17.5	176	.18	—	.49	.23	.39	.16	.16	1.47	.52	.73	?	?	3.50	?	?	.11	.42	?	?	?	1.47	2.52
1902	768,757	31.2	16.3	144	.17	.01	.31	.43	.47	.24	.12	1.38	.37	.68	?	?	3.24	?	?	.08	.43	?	?	?	1.24	2.19
1903	776,604	30.9	15.8	147	.10	.02	.32	.25	.16	.23	.10	1.28	.48	.76	?	?	2.93	?	?	.11	.45	?	?	?	1.17	2.63
1904	784,532	31.0	17.7	179	.08	—	.31	.11	.75	.21	.13	1.30	.35	.74	?	?	3.36	?	?	.09	.49	?	?	?	1.40	1.98
1905	792,540	29.0	15.1	141	.06	.00	.38	.08	.26	.17	.14	1.26	.41	.81	?	?	2.92	?	?	.10	.44	?	?	?	1.31	2.22
	Average	**30.7**	**16.5**	**157**	**.12**	**.01**	**.36**	**.22**	**.41**	**.20**	**.13**	**1.34**	**.45**	**.74**	?	?	**3.19**	?	?	**.10**	**.45**	?	?	?	**1.32**	**2.31**
1906	800,631	29.4	15.9	157	.07	—	.34	.09	.44	.17	.15	1.14	.37	.83	?	?	2.80	?	?	.10	.44	?	?	?	1.11	2.98
1907	808,803	28.8	15.3	133	.09	—	.51	.15	.30	.20	.16	1.11	.43	.80	?	?	3.07	?	?	.09	.47	?	?	?	1.51	1.85
1908	817,060	29.1	15.3	130	.07	—	.08	.15	.49	.20	.31	1.24	.35	.85	?	?	2.82	?	?	.10	.44	?	?	?	.50	2.29
1909	825,400	27.4	15.1	121	.04	—	.82	.18	.23	.20	.18	1.22	.30	.82	?	?	2.95	?	?	.10	.41	?	?	?	1.02	1.55
1910	833,826	26.8	13.2	115	.04	—	.05	.14	.34	.13	.11	1.08	.32	.89	?	?	2.48	?	?	.11	.45	?	?	?	1.48	2.11
	Average	**28.3**	**15.0**	**131**	**.06**	—	**.36**	**.14**	**.36**	**.18**	**.18**	**1.16**	**.35**	**.84**	?	?	**2.82**	?	?	**.10**	**.44**	?	?	?	**1.12**	**2.16**
1911	842,337	26.1	15.0	150	.04	.00	.47	.10	.17	.13	.09	1.14	.32	.89	?	?	2.51	?	?	.12	.41	?	?	?	1.64	2.18
1912	850,947	26.1	14.1	111	.04	—	.67	.18	.39	.12	.12	1.28	.24	.93	1.36	1.33	2.68	.95	.50	.07	.45	3.9	46.1	10.8	1.22	2.03
1913	859,644	27.3	14.9	129	.02	—	.46	.20	.19	.19	.13	1.19	.34	1.02	1.37	1.53	2.48	1.68	.56	.11	.45	4.8	43.8	35.5	1.85	2.01
1914	882,534	26.4	14.8	122	.02	—	.35	.17	.35	.30	.16	1.20	.27	.88	1.35	1.74	2.69	1.49	.51	.09	.43	4.5	43.2	27.6	1.42	1.77
1915	891,234	23.8	14.4	118	.01	—	.47	.07	.14	.15	.16	1.28	.27	1.00	1.36	1.82	2.82	1.31	.48	.05	.45	4.9	38.9	27.3	1.65	1.79
	Average	**25.9**	**14.6**	**126**	**.03**	**.00**	**.48**	**.14**	**.25**	**.18**	**.13**	**1.22**	**.29**	**.94**	**1.36**	**1.60**	**2.64**	**1.36**	**.51**	**.09**	**.44**	**4.5**	**43.0**	**25.3**	**1.56**	**1.96**
1916	895,678	23.1	13.5	104	.01	—	.11	.03	.42	.13	.16	1.24	.24	1.00	1.29	1.88	2.60	1.07	.45	.05	.40	4.4	35.7	18.4	1.50	1.94
1917	900,000	19.7	12.6	101	.01	—	.37	.01	.14	.13	.11	1.30	.26	1.02	1.23	1.87	2.10	.88	.44	.06	.38	4.7	39.5	15.0	1.47	1.13
1918	870,000	19.4	15.2	99	.01	—	.08	.01	.32	.18	2.50	1.35	.25	1.02	1.18	1.76	2.85	.96	.40	.07	.35	4.0	35.5	18.5	1.72	1.31
1919	910,000	20.9	13.0	84	.01	—	.20	.05	.06	.14	1.15	1.10	.18	1.01	1.07	1.73	2.67	.66	.35	.11	.34	4.3	36.2	9.9	1.19	1.45
1920	910,000	27.6	12.6	83	—	—	.16	.12	.20	.22	.46	.93	.17	1.12	1.06	1.72	2.46	.82	.32	.11	.34	4.2	31.4	9.5	2.03	1.56
	Average	**22.1**	**13.4**	**94**	**.01**	—	**.18**	**.04**	**.23**	**.16**	**.88**	**1.18**	**.22**	**1.03**	**1.17**	**1.79**	**2.54**	**.88**	**.39**	**.08**	**.36**	**4.3**	**35.7**	**14.3**	**1.58**	**1.48**
1921	919,683	24.1	11.3	83	.01	—	.17	.04	.10	.13	.15	.97	.16	1.12	0.98	1.64	2.02	.93	.38	.10	.26	4.2	32.8	16.6	1.17	1.67
1922	927,844	21.5	12.1	86	.00	—	.09	.04	.38	.10	.48	.97	.16	1.18	1.04	1.85	2.38	.66	.37	.12	.26	4.8	32.9	8.5	1.26	1.76
1923	936,079	20.4	11.0	72	.00	—	.20	.04	.05	.15	.28	.92	.16	1.17	1.00	1.71	1.98	.70	.39	.14	.35	4.5	27.3	10.9	1.78	1.73
1924	944,386	19.2	11.6	83	.01	—	.08	.02	.19	.10	.39	.97	.13	1.30	1.00	1.91	2.15	.70	.37	.10	.31	5.4	32.7	9.2	2.01	1.90
1925	952,766	18.8	11.7	78	.00	—	.11	.02	.23	.10	.39	.98	.16	1.27	0.98	2.12	1.97	.73	.37	.11	.33	4.6	29.7	11.3	1.96	2.19
	Average	**20.8**	**11.5**	**80**	**.00**	**.00**	**.13**	**.03**	**.19**	**.12**	**.34**	**.96**	**.15**	**1.21**	**1.00**	**1.85**	**2.10**	**.74**	**.38**	**.11**	**.30**	**4.7**	**31.1**	**11.3**	**1.64**	**1.85**
1926	961,222	18.7	11.3	73	.00	—	.08	.01	.13	.12	.27	.94	.12	1.26	1.07	2.12	1.88	.73	.40	.12	.32	5.3	27.8	11.2	2.29	1.84
1927	969,752	17.8	11.6	75	.00	—	.13	.01	.07	.06	.41	.89	.17	1.36	0.95	2.28	1.89	.70	.41	.15	.36	5.1	30.9	11.5	1.45	2.14
1928	976,500	17.6	10.9	65	.00	.00	.04	.01	.17	.07	.13	.86	.13	1.35	0.94	2.41	1.56	.67	.48	.16	.40	6.0	26.5	9.3	1.86	1.97
1929	981,000	17.1	13.5	79	.00	—	.20	.01	.13	.09	1.09	.94	.15	1.34	0.98	2.76	2.26	.76	.53	.16	.42	5.8	30.6	13.9	1.55	2.44
1930	982,000	17.7	10.8	60	.01	.00	.06	.02	.11	.09	.13	.90	.13	1.43	0.88	2.57	1.32	.60	.44	.15	.40	5.7	25.7	7.6	1.55	1.84
	Average	**17.8**	**11.6**	**70**	**.00**	**.00**	**.10**	**.01**	**.12**	**.09**	**.41**	**.91**	**.14**	**1.35**	**0.96**	**2.43**	**1.78**	**.69**	**.45**	**.15**	**.38**	**5.6**	**28.3**	**10.7**	**1.74**	**2.05**

TABLE II.

CAUSES OF DEATH AT DIFFERENT AGE PERIODS IN 1930.

No.	Causes of Death.	Sex	Ages at Death.									All Ages.
			0–	1–	2–	5–	15–	25–	45–	65–	75–	
1.	Enteric Fever	M.	—	—	—	1	1	3	—	—	—	5
		F.	—	—	1	—	—	3	—	—	—	4
2.	Smallpox	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—
3.	Measles	M.	7	16	6	3	—	—	—	—	—	32
		F.	4	13	6	3	—	—	—	—	—	26
4.	Scarlet Fever	M.	—	—	1	6	—	—	—	—	—	7
		F.	—	—	3	3	1	1	—	—	—	8
5.	Whooping Cough	M.	30	13	3	1	—	—	—	—	—	47
		F.	30	14	14	5	—	—	—	—	—	63
6.	Diphtheria	M.	3	5	12	21	2	2	2	—	—	47
		F.	1	7	10	14	2	6	—	1	—	41
7.	Influenza	M.	1	1	—	2	1	8	36	8	8	65
		F.	3	—	—	—	1	9	14	15	16	58
8.	Encephalitis Lethargica	M.	—	—	—	2	—	1	2	—	—	5
		F.	—	—	1	—	5	3	—	—	—	9
9.	Meningococcal Meningitis	M.	4	3	2	—	1	—	—	—	—	10
		F.	1	2	—	1	—	1	—	—	—	5
10.	Tuberculosis of Respir. System	M.	2	—	1	3	78	191	235	31	3	544
		F.	3	3	4	10	84	158	68	10	—	340
11a.	Nervous System	M.	9	3	9	7	1	2	1	—	—	32
		F.	7	5	7	5	2	—	—	—	—	26
11b.	Intestines and Peritoneum	M.	1	—	—	2	1	1	2	—	—	7
		F.	—	—	—	1	1	2	1	—	—	5
11c.	Other Forms	M.	4	4	2	3	8	4	6	1	—	32
		F.	4	2	2	3	4	3	2	1	1	22
12a.	Cancer of Buccal Cavity	M.	—	—	—	1	2	2	35	22	9	71
		F.	—	—	—	—	—	2	8	—	3	13
12b.	Phar. Æsop., Stomach, Liver	M.	—	—	—	—	—	6	99	69	23	197
		F.	—	—	—	—	2	7	76	58	43	186
12c.	Peritoneum and Intestines	M.	—	—	—	—	—	11	83	60	27	181
		F.	—	—	—	—	1	8	55	56	36	156
12d.	Female Organs	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	23	80	20	15	138
12e.	Breast	M.	—	—	—	—	—	—	—	1	—	1
		F.	—	—	—	1	—	19	66	29	22	137
12f.	Skin	M.	—	—	—	—	—	—	1	2	1	4
		F.	—	—	—	—	—	—	1	1	3	5
12g.	Other Organs	M.	—	—	1	3	3	27	122	60	20	236
		F.	—	—	3	1	1	9	34	27	9	84
13.	Rheumatic Fever	M.	—	—	1	9	8	12	8	2	1	41
		F.	—	—	—	18	15	17	10	3	1	64
14.	Diabetes	M.	—	—	—	1	1	5	21	9	9	46
		F.	—	—	—	1	3	5	19	36	13	77
15a.	Cerebral Haemorrhage, etc.	M.	—	—	—	1	2	1	69	94	75	242
		F.	—	—	—	—	1	7	78	93	98	277
15b.	Other Diseases of Nervous System	M.	20	—	8	10	15	28	60	33	14	188
		F.	10	5	6	13	13	29	30	32	17	155
16.	Heart Diseases	M.	1	1	—	5	14	37	244	270	229	801
		F.	—	1	2	8	26	65	240	284	407	1033
17a.	Arterio Sclerosis	M.	—	—	—	—	—	4	76	122	117	319
		F.	—	—	—	—	—	4	56	82	111	253

TABLE II.—*continued.*

CAUSES OF DEATH AT DIFFERENT AGE PERIODS IN 1930.

No.	Causes of Death.	Sex.	Ages at Death.									All Ages
			0–	1–	2–	5–	15–	25–	45–	65–	75–	
17b.	Other Diseases of Circulatory System	M.	—	—	—	—	—	5	36	17	3	61
		F.	1	—	—	2	—	3	26	13	12	57
18.	Bronchitis	M.	11	1	—	—	2	12	48	48	62	184
		F.	12	1	1	—	1	3	24	62	86	190
19.	Pneumonia (all forms)	M.	82	22	13	4	21	79	183	65	28	497
		F.	59	21	10	12	4	47	71	61	43	328
20.	Other Respiratory Diseases	M.	—	1	3	2	1	6	31	10	4	58
		F.	1	1	—	—	1	4	11	10	10	38
21.	Ulcer of Stomach or Duodenum	M.	—	—	—	—	1	18	61	12	2	94
		F.	—	—	—	—	1	7	17	2	2	29
22.	Diarrhoea, etc.	M.	76	4	5	—	1	4	4	1	2	97
		F.	49	3	—	1	2	1	—	2	2	60
23.	Appendicitis and Typhlitis	M.	1	—	3	7	9	10	11	3	1	45
		F.	—	1	1	3	4	9	7	3	—	28
24a.	Cirrhosis of Liver	M.	—	—	—	—	—	2	15	8	1	26
		F.	—	—	—	—	—	4	11	4	1	20
24b.	Other Diseases of Digestive System	M.	10	—	1	3	3	12	26	19	10	84
		F.	4	1	2	3	1	14	42	23	18	108
25a.	Acute and Chronic Nephritis	M.	—	—	—	1	5	12	53	49	33	153
		F.	1	1	2	2	7	17	46	42	16	134
25b.	Other Dis. of Genito-Urinary System	M.	1	—	—	—	—	4	14	43	30	92
		F.	2	—	—	2	2	10	15	10	9	50
26.	Puerperal Sepsis	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	3	24	—	—	—	27
27.	Other Accidents and Dis. of Pregnancy and Parturition	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	4	27	1	—	—	32
28a.	Congenital Debility Malformation and Premature Birth	M.	285	1	2	1	1	2	2	—	—	294
		F.	218	3	—	1	—	1	—	—	—	223
28b.	Other Diseases of Early Infancy	M.	19	—	—	—	—	—	—	—	—	19
		F.	11	—	—	—	—	—	—	—	—	11
29.	Suicide	M.	—	—	—	—	2	21	49	17	6	95
		F.	—	—	—	—	3	23	16	8	2	52
30.	Other Deaths from Violence	M.	5	5	10	36	40	37	49	26	25	233
		F.	12	2	5	15	10	16	31	21	45	157
31.	*Other Definite Dis.	M.	26	3	4	14	17	28	76	55	98	321
		F.	14	1	10	10	14	31	63	61	162	366
32.	Causes Ill-defined or Unknown	M.	1	—	—	—	—	—	1	—	—	2
		F.	—	—	—	—	—	1	1	1	—	3
	All Causes	M.	599	83	87	149	241	597	1761	1157	841	5515
		F.	447	87	90	138	219	623	1220	1071	1203	5098
SUB ENTRIES IN ABOVE FIGURES*												
31a.	Erysipelas	M.	2	—	—	1	1	2	2	5	5	18
		F.	3	—	1	—	1	5	4	5	1	20
31b.	Poliomyelitis	M.	—	—	—	—	1	—	—	—	—	1
		F.	—	—	—	—	—	—	—	—	—	—
31c.	Polioencephalitis	M.	—	—	—	—	—	—	—	—	—	—
		F.	—	—	—	—	—	—	—	—	—	—
31d.	Venereal Diseases	M.	11	1	—	—	3	8	25	—	—	48
		F.	—	—	1	—	1	3	8	1	—	14
31e.	Old Age	M.	—	—	—	—	—	—	1	14	67	82
		F.	—	—	—	—	—	—	1	18	132	151

TABLE III. *Births and Deaths Registered in, or belonging to, each Ward during the Year ending December 31st, 1930.*

Causes of Death.		Acock's Green.	All Saints'	Aston.	Bahall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Perry Barr	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
All Causes	M.	235	236	242	238	273	239	151	120	142	95	86	181	180	118	188	76	21	214	241	335	256	180	161	106	136	156	143	196	193	188	124	65	5,515
	F.	194	194	214	209	232	192	157	128	157	103	114	160	182	107	196	70	31	215	223	248	192	191	149	115	111	149	147	181	188	172	135	42	5,098
Enteric Fever	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	1	5
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1	—	—	1	—	—	—	4
Smallpox	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	M.	—	3	—	1	2	1	—	—	1	—	—	2	—	2	—	—	—	1	2	6	6	3	—	—	—	—	—	—	1	1	—	—	32
	F.	1	1	1	—	—	1	1	2	—	—	—	2	1	1	—	—	1	1	2	1	8	—	—	—	—	—	—	—	—	1	1	—	26
Scarlet Fever	M.	2	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—	1	—	7
	F.	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	1	—	—	—	—	—	—	1	—	8
Whooping Cough	M.	4	2	1	1	5	2	2	—	—	2	—	3	3	1	—	—	1	3	4	1	5	2	1	1	—	2	1	—	—	—	—	—	47
	F.	2	6	4	1	4	2	1	2	1	1	—	1	2	2	3	—	1	6	4	3	6	7	—	—	1	—	1	2	—	—	—	—	63
Diphtheria	M.	—	2	4	2	3	1	1	—	—	1	2	—	3	—	2	1	—	1	3	2	4	3	—	—	2	2	1	1	3	3	—	—	47
	F.	2	2	2	1	2	—	2	—	1	—	1	1	2	1	1	2	—	1	4	3	—	2	2	—	3	—	1	1	1	—	2	1	41
Influenza	M.	1	1	2	5	2	4	—	5	2	—	—	1	4	—	3	1	—	4	3	3	5	1	3	3	—	1	4	1	—	5	1	—	65
	F.	5	4	2	5	1	3	1	3	4	—	1	3	1	1	1	—	—	1	2	2	1	—	2	3	3	1	1	1	1	—	5	—	58
Encephalitis Lethargica	M.	—	—	1	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	5
	F.	—	—	1	—	1	1	1	—	—	—	1	—	—	—	—	—	—	—	1	—	2	—	—	—	—	—	—	—	1	—	—	—	9
Meningococcal Meningitis	M.	—	1	1	1	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	2	—	—	1	1	—	—	—	—	—	10
	F.	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	1	—	1	—	5
Tuberculosis of Respir. System	M.	22	17	21	25	31	17	18	9	9	8	6	22	25	12	7	10	4	25	25	42	21	29	20	9	13	11	14	23	12	20	14	3	544
	F.	11	10	13	15	16	7	10	7	11	5	5	15	11	6	7	7	3	18	22	11	14	16	15	5	12	10	6	9	19	12	10	2	340
Nervous System	M.	2	1	1	2	2	—	1	1	1	1	1	—	2	—	1	—	1	2	1	2	2	2	1	1	—	—	1	—	1	1	1	—	32
	F.	1	—	—	—	—	1	3	2	1	—	—	3	—	—	—	—	1	1	1	1	6	1	2	—	—	—	1	—	—	—	1	—	26
Intest. & Peritoneum	M.	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—	—	—	—	2	—	—	—	—	—	7
	F.	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	1	—	1	—	—	—	—	—	—	5
Other Forms	M.	—	3	2	—	3	1	1	—	1	—	1	3	2	—	—	—	—	1	2	—	3	3	—	1	1	—	1	—	—	—	3	—	32
	F.	1	1	1	1	—	1	—	1	—	1	—	1	1	—	—	1	—	1	2	1	2	2	—	—	—	—	—	1	1	—	1	1	22

TABLE III. (*Continued*).

Causes of Death.		Acock's Green.	All Saints'.	Aston.	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Perry Barr	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Cancer of	M.	1	2	8	3	1	2	3	1	1	1	2	1	2	1	2	—	—	2	4	8	3	3	1	4	2	1	1	2	2	5	1	1	71
Buccal Cavity	F.	—	1	1	—	—	—	1	—	—	—	—	—	1	—	1	—	—	1	—	—	1	1	1	1	—	—	1	—	2	—	—	—	13
Phar. Æsop.,Stom.	M.	3	6	5	9	11	9	4	7	6	3	4	9	4	6	5	6	—	7	5	12	10	3	8	7	5	8	6	8	7	10	1	3	197
Liver	F.	6	6	10	5	7	7	7	3	4	8	4	3	8	4	8	3	—	6	5	14	12	6	5	3	4	4	7	7	8	5	6	1	186
Peritoneum & Intest.	M.	10	10	9	5	6	7	7	1	6	5	4	6	4	3	10	2	—	8	8	5	8	9	7	8	3	6	3	4	7	4	5	1	181
	F.	7	4	10	4	7	10	4	2	9	8	5	4	5	1	5	3	—	4	7	9	6	2	6	2	2	5	6	5	6	5	2	1	156
Female Organs	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	1	8	4	5	7	6	1	2	3	5	8	8	4	5	5	1	1	1	3	3	2	7	6	5	4	6	1	8	3	10	4	1	138
Breast	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	F.	6	3	7	6	5	10	3	2	3	2	4	1	7	1	7	3	1	7	3	5	4	3	5	7	5	4	2	5	4	7	3	2	137
Skin	M.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	1	—	—	—	—	1	—	—	—	—	—	—	4
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	—	—	1	—	—	5
Other Organs	M.	14	4	6	9	10	13	8	7	7	6	1	5	10	5	14	4	—	8	8	13	6	6	13	3	4	11	6	14	11	6	2	2	236
	F.	5	1	2	4	3	5	4	—	1	2	1	1	3	2	8	1	—	3	2	3	1	4	1	3	2	4	2	3	5	4	2	2	84
Rheumatic Fever	M.	2	—	1	2	2	3	—	1	1	—	1	2	2	—	3	—	—	2	4	2	3	—	1	—	1	4	1	1	2	—	—	—	41
	F.	5	—	—	2	4	2	3	—	4	1	—	5	2	—	1	—	—	2	4	4	3	3	1	—	3	2	2	2	3	4	2	—	64
Diabetes	M.	2	1	1	1	—	5	2	1	3	—	1	1	2	2	4	—	—	2	1	—	1	2	2	2	—	—	2	3	2	2	1	—	46
	F.	4	4	2	4	4	1	1	1	6	3	1	3	6	1	5	—	—	6	3	2	1	—	2	2	—	2	2	5	2	4	—	—	77
Cereb'l Haemorr., etc.	M.	10	10	16	9	12	10	4	5	5	3	2	8	6	3	15	2	—	6	13	6	14	6	6	3	6	8	8	11	9	16	4	6	242
	F.	11	8	12	5	11	12	8	7	7	3	3	8	3	6	12	5	—	16	13	18	13	8	10	8	10	11	10	13	7	17	2	—	277
Other Dis. of Nerv. Sys.	M.	12	9	7	13	7	9	4	7	5	3	3	9	2	3	8	4	—	4	7	7	6	5	7	5	6	8	3	4	6	7	3	5	188
	F.	8	3	10	10	3	6	1	2	7	3	3	5	5	3	10	3	4	8	3	9	3	5	3	4	1	6	5	4	5	6	4	3	155
Heart Diseases	M.	22	36	45	37	42	32	18	18	21	16	20	29	30	19	25	12	2	31	40	56	37	16	18	10	26	20	18	23	28	22	19	13	801
	F.	34	42	44	46	55	39	44	32	32	20	22	36	45	24	37	7	1	50	41	47	33	42	34	27	20	26	29	35	32	25	24	8	1033
Arterio Sclerosis	M.	12	19	13	19	16	13	8	8	11	7	6	5	9	8	14	4	—	6	12	19	10	11	8	7	9	4	13	14	11	6	12	5	319
	F.	8	9	15	11	9	6	7	7	15	9	11	1	7	5	14	4	2	11	7	6	6	6	3	7	10	5	12	9	12	5	11	3	253
Other Dis. of Circ. Sys.	M.	4	4	3	4	4	3	1	1	4	2	—	2	2	1	2	—	1	4	3	1	1	—	3	—	—	1	3	5	—	2	—	—	61
	F.	2	4	2	1	—	5	3	1	1	4	4	1	2	—	3	3	1	3	2	3	1	1	1	1	2	—	1	—	1	—	4	—	57
Bronchitis	M.	5	15	4	9	13	11	4	—	1	2	4	7	9	9	5	1	1	6	9	4	11	14	3	1	4	3	2	9	6	,7	2	3	184
	F.	5	11	4	11	8	6	2	3	6	3	7	7	8	3	4	3	—	7	6	14	8	11	5	4	4	8	5	16	2	6	1	2	190
Pneumonia (all forms)	M.	26	22	25	20	32	21	13	13	14	7	5	19	13	8	9	4	5	16	22	46	28	13	11	12	9	8	8	13	18	21	11	5	497
	F.	12	11	17	10	18	9	13	9	10	4	8	11	15	6	7	3	5	12	13	24	17	15	7	8	5	6	10	9	9	17	8	—	328
Other Respiratory Dis.	M.	3	1	1	2	3	1	2	—	1	1	3	1	—	1	2	1	—	2	1	5	4	—	2	—	2	4	2	1	5	6	1	—	58
	F.	1	1	2	2	1	—	—	2	4	—	—	—	3	1	1	—	—	2	2	1	1	—	—	1	2	2	—	2	6	1	—	—	38
Ulcer of Stom. or Duod.	M.	4	1	6	6	3	6	4	3	2	—	—	4	1	2	2	2	—	4	6	7	4	2	2	1	2	2	4	6	2	2	3	1	94
	F.	2	2	1	1	1	2	2	—	—	—	—	2	1	2	—	—	—	2	—	—	—	2	—	1	—	—	2	3	1	1	1	—	29
Diarrhoea, etc.	M.	3	2	1	4	9	4	1	5	3	1	1	2	3	1	1	2	1	3	9	7	10	6	1	1	4	—	—	3	5	2	2	—	97
	F.	4	2	1	3	6	—	—	1	—	—	2	4	—	2	1	—	—	2	8	5	4	3	—	—	1	2	1	2	2	1	1	2	60
Appendicitis & Typhlitis	M.	5	—	—	—	2	2	2	1	2	1	—	3	4	1	1	—	—	2	1	1	1	1	—	1	1	2	1	2	3	2	3	—	45
	F.	1	1	1	3	1	1	—	1	1	1	1	—	1	—	2	—	—	—	1	1	1	—	2	1	—	1	—	3	—	2	1	—	28
Cirrhosis of Liver	M.	—	2	3	—	—	—	—	1	1	1	2	2	2	—	2	—	—	—	2	—	3	1	1	—	1	—	—	1	1	—	—	—	26
	F.	—	1	—	—	—	2	—	—	1	—	—	2	1	1	2	—	—	—	1	—	1	—	—	—	—	1	—	3	2	2	—	—	20
Other Dis. of Diges. Sys.	M.	6	2	3	3	5	9	3	1	1	2	—	4	—	1	9	1	1	2	2	6	3	1	2	—	2	4	1	3	1	4	1	1	84
	F.	4	4	4	5	6	2	5	—	4	5	2	4	4	3	8	1	—	2	6	2	5	1	2	1	3	6	2	7	4	3	2	1	108

TABLE III. *Continued.*

Causes of Death.		Acock's Green.	All Saints'	Aston.	Bolsall Heath.	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Perry Barr	Rotton Park	St. Bartholomew's	St. Martin's	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Soho	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Acute & Chronic Nephritis	M.	4	6	6	8	3	8	2	1	4	2	5	8	4	5	5	—	—	8	9	10	7	5	6	4	3	9	5	4	5	2	2	3	153
	F.	7	7	4	11	7	8	5	5	3	2	1	1	4	3	3	—	—	5	12	7	6	3	3	5	—	2	5	—	5	5	5	—	134
Other Dis. Gen.-Urin. Sys.	M.	4	4	2	4	3	8	2	—	4	—	—	1	2	5	3	2	—	7	3	5	4	4	—	4	—	1	3	9	4	1	1	2	92
	F.	1	—	2	4	3	4	—	1	1	1	—	—	3	2	4	—	—	4	2	4	—	—	1	—	3	1	4	—	2	3	—	—	50
Puerperal Sepsis	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	1	4	1	4	1	—	—	—	2	—	1	2	—	1	—	—	—	2	1	3	—	—	2	—	—	1	—	1	—	—	—	—	27
Other Acc. and Dis. of	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Preg. and Parturition	F.	1	—	1	—	3	1	—	3	—	—	1	3	1	1	2	—	—	—	3	1	1	—	1	1	1	—	—	—	5	1	1	—	32
Congenital Debility, Mal-	M.	18	9	12	6	12	11	13	9	4	5	3	6	8	5	10	4	3	15	9	21	5	18	13	4	7	10	8	12	11	9	13	1	294
formation & Prem. Birth	F.	5	14	13	7	12	6	11	6	4	2	3	9	5	4	2	3	7	10	11	15	8	14	7	1	1	6	3	4	10	5	11	4	223
Other Dis. Early Infancy	M.	—	1	1	3	2	—	2	—	—	—	—	1	—	—	—	1	—	3	—	1	1	—	—	—	—	—	—	—	1	—	—	2	19
	F.	1	—	—	—	—	—	1	—	—	—	—	1	1	—	1	1	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	2	11
Suicide	M.	3	6	8	4	5	5	3	1	3	2	—	—	1	2	2	2	1	1	4	3	3	3	1	1	3	6	1	4	10	4	3	—	95
	F.	4	3	3	4	4	1	—	1	—	1	1	—	1	2	2	1	3	1	1	3	1	1	1	1	1	4	—	1	3	1	2	—	52
Other deaths from Violence	M.	11	17	11	10	8	8	6	8	10	5	3	4	9	4	11	4	—	10	8	13	6	3	12	5	4	6	7	6	6	8	9	1	233
	F.	7	4	6	4	7	6	3	8	4	2	1	3	3	3	10	2	—	9	7	7	6	8	5	2	4	5	9	5	4	2	10	1	157
*Other Definite Dis.	M.	19	17	12	10	13	13	11	5	8	6	6	10	12	7	11	4	—	17	9	17	19	5	5	7	16	11	10	9	11	10	5	6	321
	F.	18	12	8	13	15	18	9	11	7	7	11	9	15	10	19	12	—	10	13	14	8	16	10	9	3	15	14	15	18	16	6	5	366
Causes ill-defined or un-	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	2
known	F.	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	3
Sub Entries in above figures*																																		
Erysipelas	M.	1	1	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	2	—	2	1	—	—	1	2	2	—	1	—	2	—	1	18
	F.	—	—	1	2	3	—	—	1	—	—	2	—	—	1	1	2	—	—	—	—	—	—	—	1	—	—	—	4	—	2	—	—	20
Poliomyelitis	M.	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Polioencephalitis	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Venereal Diseases	M.	1	4	4	2	1	3	1	2	—	—	1	2	3	2	3	—	—	4	—	2	5	2	—	2	1	—	1	—	—	1	—	1	48
	F.	—	—	—	1	1	—	—	—	—	—	—	1	—	—	2	—	—	—	1	4	—	1	—	—	—	1	1	—	—	1	—	—	14
Old Age	M.	5	5	1	5	6	2	2	1	3	3	1	3	3	2	1	1	—	5	5	6	1	—	2	1	1	3	2	4	2	3	2	1	82
	F.	11	6	1	2	7	11	2	2	2	4	6	1	4	5	7	4	—	4	4	3	5	5	7	3	1	10	7	5	9	9	2	2	151
Deaths Under 1 Year		47	49	43	37	60	32	41	25	16	13	11	39	27	25	23	15	18	45	57	80	56	59	31	8	19	22	20	28	36	23	28	13	1,046
Births		1134	730	706	539	893	416	762	492	337	244	306	530	506	283	472	398	285	709	772	880	761	649	573	213	389	530	308	513	712	620	513	242	17,417

TABLE IV. DEATH-RATES FROM ALL CAUSES IN WARDS.

YEAR.	St. Paul's	St. Mary's	Duddeston and Nechells	St. Bartholomew's	St. Martin's	Market Hall	Ladywood	Central Wards	Lozells	Aston	Washwood Heath	Saltley	Small Heath	Sparkbrook	Balsall Heath	Edgbaston	Rotton Park	All Saints'	Middle Ring	Soho	Sandwell	Handsworth	Perry Barr	Erdington North	Erdington South	Yardley	Acock's Green	Sparkhill	Moseley and King's Heath	Selly Oak	King's Norton	Northfield	Harborne	Outer Ring
1912	19.6	26.0	22.0	20.2	18.2	16.6	17.1	20.0	13.7	14.4	13.4	11.3	10.5	11.9	12.3	10.8	13.4	14.9	12.7	11.0	8.3	10.4	?	9.8	9.8	11.4	11.0	9.5	9.9	11.0	10.5	8.8	10.2	10.1
1913	20.1	24.6	21.4	24.0	22.0	19.1	17.1	21.2	13.2	16.5	13.6	13.3	13.1	13.2	12.7	12.0	17.1	15.3	14.0	13.9	9.6	9.5	?	9.4	9.4	9.8	12.5	9.7	9.0	12.2	8.6	8.9	9.9	10.2
1914	21.4	24.9	21.2	20.2	21.2	20.1	19.6	21.2	14.3	16.6	12.9	11.7	11.2	13.4	12.6	12.3	15.8	15.1	13.6	12.5	10.6	11.2	?	11.7	9.7	11.1	11.8	8.8	9.7	11.3	9.8	10.0	10.3	10.7
1915	22.5	24.5	18.6	21.8	20.6	16.6	17.0	20.2	13.6	15.0	12.0	12.3	11.2	13.0	13.4	12.0	14.5	14.5	13.2	13.6	11.5	11.0	?	11.4	9.8	9.3	10.8	10.2	9.9	12.2	10.6	12.7	11.5	11.1
Average	**20.9**	**25.0**	**20.8**	**21.5**	**20.5**	**18.1**	**17.7**	**20.6**	**13.7**	**15.6**	**13.0**	**12.1**	**11.5**	**12.9**	**12.7**	**11.8**	**15.2**	**14.9**	**13.4**	**12.7**	**10.0**	**10.5**	?	**10.6**	**9.7**	**10.4**	**11.5**	**9.5**	**9.6**	**11.7**	**9.9**	**10.1**	**10.5**	**10.5**
1916	18.7	22.4	19.7	17.0	21.2	16.5	14.9	18.6	12.4	13.7	11.8	12.2	11.5	12.4	12.5	12.1	13.7	13.3	12.6	12.2	9.9	9.8	?	12.7	7.9	10.8	11.0	9.7	9.8	10.5	9.1	10.6	9.9	10.3
1917	18.2	19.7	17.2	16.8	17.2	15.0	14.4	16.9	12.9	12.6	10.2	11.0	11.3	11.8	12.2	11.5	12.7	12.7	11.9	10.6	9.5	10.3	?	9.1	8.8	9.3	10.9	9.1	10.6	8.6	8.0	7.5	10.1	9.4
1918	20.0	22.7	19.7	20.8	20.3	20.9	19.4	20.5	15.5	16.3	12.0	13.4	14.8	14.5	15.6	13.7	15.8	15.7	14.7	13.3	11.1	11.7	?	9.8	11.7	10.8	12.3	11.9	11.2	11.8	9.3	11.5	12.5	11.5
1919	16.8	17.9	15.8	16.5	18.6	14.0	16.1	16.5	13.1	13.4	11.8	10.7	11.1	13.1	13.3	12.8	13.2	12.5	12.5	11.1	10.6	11.4	?	11.1	10.7	10.3	9.5	10.0	11.6	11.1	9.3	8.0	11.3	10.5
1920	16.9	20.4	16.3	16.6	17.6	12.8	17.5	16.9	11.8	11.9	11.4	11.1	11.0	12.0	12.8	11.1	13.7	12.7	12.0	11.6	9.4	9.5	?	9.5	9.3	10.4	10.4	10.0	10.0	10.0	9.0	8.2	10.2	9.8
Average	**18.1**	**20.6**	**17.7**	**17.5**	**19.0**	**15.8**	**16.5**	**17.9**	**13.1**	**13.6**	**11.4**	**11.7**	**11.9**	**12.8**	**13.3**	**12.2**	**13.8**	**13.4**	**12.7**	**11.8**	**10.1**	**10.5**	?	**10.4**	**9.7**	**10.3**	**10.8**	**10.1**	**10.6**	**10.4**	**8.9**	**9.2**	**10.8**	**10.3**
1921	14.7	17.4	13.7	14.2	13.6	14.6	12.6	14.4	11.7	12.1	10.9	9.2	10.5	10.2	11.4	10.7	11.2	11.3	10.9	10.1	11.3	10.1	?	9.3	10.2	8.0	8.3	9.1	10.5	7.6	7.8	8.7	8.2	9.2
1922	15.1	15.5	13.2	15.9	16.7	15.1	14.8	15.2	12.3	12.6	10.4	10.1	10.9	12.2	12.8	11.8	11.8	11.8	11.7	12.2	9.1	9.6	?	10.7	10.1	9.2	9.6	10.6	12.3	10.4	7.8	9.5	10.1	10.1
1923	13.7	17.1	13.7	13.5	14.0	12.1	12.5	13.8	11.8	11.6	10.1	8.4	9.7	10.4	10.9	10.6	10.7	11.4	10.6	10.3	8.9	9.8	?	8.9	8.1	8.3	8.7	9.4	11.0	8.8	8.1	7.9	9.8	9.1
1924	14.1	15.5	13.4	14.9	15.4	14.9	13.1	14.5	12.3	12.2	8.9	10.1	10.8	10.8	13.0	10.8	11.4	11.8	11.2	11.8	8.9	9.8	?	10.6	8.9	9.5	10.0	10.0	10.1	9.0	10.0	8.9	10.4	9.8
1925	14.9	17.7	13.2	14.5	15.4	13.4	12.6	14.5	12.8	14.1	9.7	9.2	9.7	11.8	11.9	11.3	12.5	12.8	11.6	12.0	8.1	9.3	?	9.3	8.1	9.6	8.8	9.8	10.4	8.6	8.3	9.3	9.5	9.3
Average	**14.5**	**16.6**	**13.4**	**14.6**	**15.0**	**14.0**	**13.1**	**14.5**	**12.2**	**12.5**	**10.0**	**9.4**	**10.3**	**11.1**	**12.0**	**11.0**	**11.5**	**11.8**	**11.2**	**11.3**	**9.3**	**9.7**	?	**9.8**	**9.1**	**8.9**	**9.1**	**9.8**	**10.9**	**8.9**	**8.4**	**8.9**	**9.6**	**9.5**
1926	14.6	16.9	12.8	14.0	14.6	13.2	12.3	14.1	12.7	12.3	9.3	7.3	9.0	10.9	12.0	11.9	11.3	12.1	10.9	10.9	9.8	9.6	?	8.1	9.3	7.3	8.6	9.2	9.8	8.2	8.6	10.0	10.3	9.2
1927	16.2	16.6	13.1	13.4	14.8	12.5	13.2	14.3	11.5	12.1	9.7	8.8	8.6	11.2	13.2	11.2	12.4	12.5	11.1	11.7	9.7	10.6	?	9.4	7.9	8.8	8.8	10.0	10.6	9.7	8.9	9.2	10.7	9.7
1928	14.7	17.5	12.3	12.9	14.1	13.3	12.9	14.0	12.5	11.6	9.7	9.3	9.9	11.7	12.2	9.7	10.7	10.5	10.8	10.7	9.3	9.8	3.2	8.2	9.2	7.8	8.3	7.9	9.5	9.1	9.7	10.2	8.7	8.7
1929	17.3	18.1	16.8	16.0	18.7	16.7	15.3	17.0	15.7	15.4	12.1	10.3	10.5	14.0	15.1	13.9	15.1	14.4	13.6	14.8	11.8	13.0	6.8	10.0	10.2	9.7	9.5	10.6	11.8	10.8	9.8	10.3	11.8	10.8
1930	12.9	14.9	12.2	12.5	14.4	14.0	12.5	13.3	11.8	12.2	9.0	7.8	9.0	11.3	12.6	12.7	11.1	10.9	10.8	11.2	10.9	10.4	5.0	7.6	9.1	8.8	8.0	8.9	10.6	8.3	8.2	7.8	10.2	8.9
Average	**15.1**	**16.8**	**13.4**	**13.8**	**15.3**	**13.9**	**13.2**	**14.5**	**12.8**	**12.7**	**10.0**	**8.7**	**9.4**	**11.8**	**13.0**	**11.9**	**12.1**	**12.1**	**11.4**	**11.9**	**10.3**	**10.7**	?	**8.7**	**9.1**	**8.5**	**8.6**	**9.3**	**10.5**	**9.2**	**9.0**	**9.5**	**10.3**	**9.5**

TABLE V. DEATHS UNDER 1 PER 1,000 BIRTHS IN WARDS.

YEAR.	St. Paul's	St. Mary's	Duddeston and Nechells	St. Bartholomew's	St. Martin's	Market Hall	Ladywood	Central Wards	Lozells	Aston	Washwood Heath	Saltley	Small Heath	Sparkbrook	Balsall Heath	Edgbaston	Rotton Park	All Saints'	Middle Ring	Soho	Sandwell	Handsworth	Perry Barr	Erdington North	Erdington South	Yardley	Acock's Green	Sparkhill	Moseley and King's Heath	Selly Oak	King's Norton	Northfield	Harborne	Outer Ring
1912	134	194	180	134	136	138	123	148	102	105	97	109	85	90	81	87	112	98	97	76	87	78	?	62	97	109	79	61	74	57	80	60	87	77
1913	162	229	179	205	180	155	159	181	100	136	114	94	113	98	99	109	137	124	112	104	79	69	?	68	82	67	102	60	60	82	78	63	54	74
1914	153	195	173	167	148	166	166	167	115	138	87	109	89	102	80	72	134	135	106	89	64	94	?	104	74	83	95	75	54	70	78	90	53	79
1915	170	187	158	180	157	123	126	157	102	128	123	86	86	87	91	82	118	108	101	92	106	94	?	84	69	56	73	55	64	94	87	123	81	83
Average	**155**	**201**	**172**	**171**	**155**	**145**	**143**	**163**	**105**	**127**	**105**	**99**	**93**	**94**	**88**	**87**	**125**	**116**	**104**	**90**	**84**	**84**	?	**79**	**80**	**79**	**87**	**63**	**63**	**76**	**81**	**84**	**69**	**78**
1916	160	159	164	139	150	139	121	147	82	114	93	79	69	70	62	98	96	96	86	94	68	91	?	80	39	83	76	55	76	83	61	59	69	72
1917	115	168	136	132	112	89	112	123	93	105	96	97	94	110	83	73	93	122	97	74	37	71	?	74	80	95	75	90	41	66	77	50	44	67
1918	156	148	104	137	120	152	104	132	111	113	70	100	69	99	86	80	101	88	92	83	64	72	?	57	57	67	82	66	66	58	60	70	89	69
1919	109	103	105	102	95	120	100	105	79	93	90	64	67	60	64	61	97	88	76	97	71	63	?	39	79	83	47	36	44	76	69	43	79	64
1920	112	121	93	111	102	85	105	104	80	78	83	72	80	80	98	64	79	78	79	55	75	51	?	61	47	54	64	73	53	64	43	28	50	55
Average	**130**	**140**	**120**	**124**	**116**	**117**	**108**	**122**	**89**	**101**	**86**	**82**	**76**	**84**	**79**	**75**	**93**	**94**	**86**	**81**	**63**	**70**	?	**62**	**60**	**76**	**69**	**64**	**56**	**69**	**62**	**50**	**66**	**65**
1921	106	116	104	113	85	117	96	105	87	82	91	75	57	60	62	75	78	104	77	57	72	69	?	44	68	43	62	67	69	47	60	97	42	61
1922	105	117	102	115	107	113	102	109	58	84	69	82	68	92	81	75	101	90	80	66	68	51	?	54	69	55	79	56	81	69	41	58	58	62
1923	104	103	99	81	93	80	79	91	60	85	68	59	62	59	54	51	67	79	64	54	57	45	?	48	58	73	49	34	49	53	76	21	46	51
1924	87	123	103	119	110	81	86	101	68	87	62	95	85	64	83	67	85	80	77	63	67	49	?	70	52	62	50	58	69	74	59	54	57	60
1925	120	100	101	106	107	119	73	104	87	104	69	65	58	77	64	70	53	92	74	66	39	64	?	54	32	45	53	55	39	51	66	39	42	50
Average	**104**	**112**	**102**	**107**	**100**	**102**	**87**	**102**	**72**	**88**	**72**	**75**	**66**	**70**	**69**	**68**	**77**	**89**	**74**	**61**	**61**	**56**	?	**54**	**56**	**56**	**59**	**54**	**61**	**59**	**60**	**54**	**49**	**57**
1926	106	122	79	98	86	106	81	97	52	77	66	43	48	70	52	59	63	65	59	76	98	53	?	46	52	56	48	70	54	69	65	68	90	65
1927	115	115	104	81	89	85	78	95	78	80	73	64	34	73	87	66	89	82	73	81	44	47	?	59	49	66	36	71	42	61	44	45	78	56
1928	71	101	73	89	84	100	69	84	63	57	62	71	59	56	62	46	75	46	60	74	68	34	0	62	40	43	49	47	41	82	54	46	65	50
1929	120	111	125	98	108	73	108	106	80	86	92	69	50	45	51	84	82	72	71	92	46	43	0	56	49	65	68	74	38	76	54	60	58	56
1930	89	75	67	74	91	88	74	80	53	61	37	54	42	55	69	77	63	67	58	65	38	47	63	54	51	55	41	51	49	49	36	38	53	49
Average	**100**	**105**	**90**	**88**	**92**	**90**	**82**	**92**	**65**	**72**	**66**	**60**	**47**	**60**	**64**	**66**	**74**	**66**	**64**	**78**	**59**	**45**	?	**55**	**48**	**57**	**48**	**63**	**45**	**67**	**51**	**51**	**69**	**55**

Table VI. Birth-Rates in Wards.

Year.	St. Paul's	St. Mary's	Duddeston and Nechells	St. Bartholomew's	St. Martin's	Market Hall	Ladywood	Central Wards	Lozells	Aston	Washwood Heath	Saltley	Small Heath	Sparkbrook	Balsall Heath	Edgbaston	Rotton Park	All Saints'	Middle Ring	Soho	Sandwell	Handsworth	Perry Barr	Erdington North	Erdington South	Yardley	Acock's Green	Sparkhill	Moseley and King's Heath	Selly Oak	King's Norton	Northfield	Harborne	Outer Ring
1912	30.6	33.6	36.0	33.4	32.1	24.7	28.1	31.2	23.0	30.5	29.4	27.7	23.6	25.3	23.3	17.0	28.9	29.7	25.8	22.2	21.0	18.9	?	22.7	21.6	23.2	25.1	19.2	17.8	27.1	23.1	20.6	23.9	22.0
1913	32.1	35.9	38.4	35.9	33.5	25.8	30.6	33.2	24.0	32.5	30.9	31.6	24.3	25.7	23.4	15.9	30.2	31.1	27.0	22.7	22.9	20.1	?	23.7	22.5	26.0	29.6	18.2	18.4	27.4	24.3	22.8	23.3	23.2
1914	34.3	36.0	37.3	34.3	33.7	26.3	29.8	33.1	22.5	31.2	29.3	27.6	22.6	25.6	24.0	16.4	27.8	28.5	25.5	23.0	22.1	19.7	?	22.0	22.4	22.6	26.5	18.2	16.3	25.5	20.9	24.2	20.6	21.8
1915	31.8	32.8	34.6	31.0	30.0	22.2	25.7	29.7	21.6	27.7	23.3	26.1	20.8	24.3	21.8	16.2	24.7	26.4	23.3	19.8	19.7	18.0	?	21.6	19.4	20.2	24.0	15.7	15.4	23.5	21.5	20.7	20.1	20.0
Average	**32.2**	**34.6**	**36.6**	**33.6**	**32.3**	**24.7**	**28.5**	**31.8**	**22.8**	**30.5**	**28.2**	**28.2**	**22.8**	**25.2**	**23.1**	**16.4**	**27.9**	**28.9**	**25.4**	**21.9**	**21.4**	**19.2**	?	**22.5**	**21.5**	**23.0**	**26.3**	**17.8**	**17.0**	**25.9**	**22.4**	**22.1**	**22.0**	**21.7**
1916	28.9	29.3	30.9	28.8	28.0	19.8	25.8	27.4	20.8	28.8	23.8	26.0	21.8	23.0	19.5	15.3	23.8	26.6	22.9	19.3	19.3	18.0	?	19.4	19.8	19.4	22.7	17.6	15.7	24.0	21.3	19.1	19.0	19.6
1917	26.7	23.3	27.5	28.5	24.5	18.8	23.2	24.6	19.4	23.1	20.4	20.2	19.9	19.2	18.1	13.4	20.7	22.1	19.7	13.2	16.5	15.0	?	14.9	17.4	19.9	19.7	12.8	13.4	19.2	14.5	16.2	16.4	16.1
1918	24.7	24.1	29.2	27.3	24.3	21.6	23.9	25.0	19.2	21.3	20.0	20.1	18.6	18.0	18.2	13.8	21.0	22.4	19.3	14.7	12.5	14.4	?	16.2	15.9	18.8	18.7	13.0	13.5	18.1	16.3	20.9	14.0	15.9
1919	29.1	28.6	29.5	29.0	29.1	21.5	26.6	27.6	18.5	24.4	21.2	19.3	17.7	19.8	18.5	15.0	22.0	23.3	20.0	17.3	14.7	16.0	?	17.2	19.2	18.1	18.2	14.5	14.8	21.1	15.0	17.2	15.3	16.8
1920	37.6	37.2	39.6	35.9	34.9	30.2	33.5	35.6	25.2	32.0	27.9	28.6	23.4	25.9	25.1	18.8	30.2	31.3	26.8	23.8	21.7	21.4	?	24.7	22.8	26.4	24.4	19.3	19.9	26.7	21.3	22.9	19.6	22.7
Average	**29.4**	**28.5**	**31.3**	**29.9**	**28.2**	**22.4**	**26.6**	**28.0**	**20.6**	**25.9**	**22.7**	**22.8**	**20.3**	**21.2**	**19.9**	**15.3**	**23.5**	**25.1**	**21.7**	**17.7**	**16.9**	**17.0**	?	**18.5**	**19.0**	**20.5**	**20.7**	**15.4**	**15.5**	**21.8**	**17.7**	**19.3**	**16.9**	**18.2**
1921	31.8	35.7	32.9	32.3	30.8	28.0	30.8	31.8	21.8	28.7	23.8	23.9	20.5	23.8	22.5	15.2	24.8	25.0	23.0	20.1	16.4	17.7	?	21.1	20.0	20.5	21.0	19.3	14.8	20.8	18.0	19.6	20.2	19.2
1922	29.7	30.8	27.5	28.5	28.6	20.8	25.4	27.3	18.3	25.4	21.9	20.6	18.3	20.2	21.5	14.1	22.6	23.6	20.7	18.7	15.0	15.4	?	20.7	15.7	18.9	18.0	17.4	14.3	17.6	17.6	17.5	15.5	17.1
1923	28.2	30.3	27.5	29.0	27.0	20.7	25.8	26.9	18.4	23.1	22.1	21.6	15.5	18.5	18.6	13.5	21.7	21.9	19.5	16.0	14.1	14.2	?	18.1	16.8	17.4	17.0	17.1	13.2	17.7	17.1	20.8	13.0	16.3
1924	28.0	28.1	27.0	26.8	24.1	20.7	21.9	25.2	17.4	23.1	20.6	18.4	14.1	16.9	18.4	13.3	19.3	20.6	18.2	15.1	12.7	12.8	?	17.1	17.7	15.0	16.7	16.2	12.8	15.7	14.5	19.8	14.5	15.4
1925	23.5	28.3	25.3	25.1	24.6	19.5	22.2	24.1	16.7	22.5	19.7	19.7	14.6	16.4	17.0	12.0	19.9	20.1	17.9	16.3	12.4	12.6	?	20.3	14.9	16.3	16.7	17.1	11.5	16.0	14.2	17.7	11.0	15.2
Average	**28.2**	**30.6**	**28.0**	**28.3**	**27.0**	**21.9**	**25.2**	**27.1**	**18.5**	**24.6**	**21.6**	**20.8**	**16.6**	**19.2**	**19.6**	**13.6**	**21.7**	**22.2**	**19.9**	**17.2**	**14.1**	**14.5**	?	**19.5**	**17.0**	**17.6**	**17.9**	**17.4**	**13.3**	**17.6**	**16.3**	**19.1**	**14.8**	**16.6**
1926	25.4	27.8	24.8	24.8	23.8	18.9	22.9	24.1	17.6	20.4	18.8	19.8	15.3	15.4	17.0	12.1	18.0	19.4	17.4	14.2	12.6	11.0	?	20.8	14.8	16.5	14.3	17.1	12.5	14.1	14.1	16.5	11.5	14.6
1927	25.4	25.8	23.1	23.3	22.0	19.2	20.4	22.7	16.4	19.9	17.7	17.7	15.2	15.3	16.0	11.6	16.5	17.6	16.4	14.1	12.2	11.7	?	20.3	14.8	18.9	14.3	16.2	15.4	13.6	13.6	18.3	11.2	15.0
1928	24.0	27.3	22.4	21.5	22.2	18.4	18.9	22.1	16.1	19.8	17.5	17.7	15.2	15.3	16.5	11.4	17.1	18.2	16.5	13.1	11.5	10.2	8.4	18.5	15.2	19.9	18.8	17.7	12.6	13.2	13.3	15.3	12.5	14.3
1929	23.8	25.6	20.4	21.5	22.3	19.1	19.8	21.8	15.3	17.8	16.4	17.4	14.9	14.4	14.2	11.0	15.8	17.0	15.4	11.5	10.9	12.0	16.8	18.6	16.8	18.1	20.0	16.0	12.8	13.0	13.4	16.0	12.6	14.9
1930	22.5	25.3	21.6	20.9	21.8	17.6	19.5	21.3	16.4	18.8	15.6	14.4	15.6	15.4	15.2	12.3	18.4	18.4	16.0	11.8	10.5	11.7	27.7	18.9	18.1	17.5	21.1	16.7	13.1	13.1	12.6	21.3	12.5	16.2
Average	**24.2**	**26.4**	**22.5**	**22.4**	**22.4**	**18.6**	**20.3**	**22.4**	**16.4**	**19.3**	**17.2**	**17.4**	**15.2**	**15.2**	**15.8**	**11.7**	**17.2**	**18.1**	**16.3**	**12.9**	**11.5**	**11.3**	?	**19.4**	**15.9**	**18.2**	**17.7**	**16.7**	**13.3**	**13.4**	**13.4**	**17.5**	**12.1**	**15.0**

TABLE VII.

Cases of Infectious Disease notified during the Year 1930. *Classified according to sex and ages.*

DISEASE.	Sex.	AGES. 0–	1–	2–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75 up.	TOTALS.
Enteric Fever	M.	—	—	1	6	1	2	5	6	2	4	2	—	—	29
	F.	—	—	2	6	6	5	1	2	5	2	4	—	—	33
Scarlet Fever	M.	4	29	201	543	194	56	38	24	7	4	1	—	—	1,101
	F.	6	23	209	581	279	94	40	43	12	8	1	—	—	1,296
Diphtheria	M.	13	41	168	308	138	36	22	27	4	3	1	1	1	763
	F.	10	28	163	352	156	65	77	52	21	10	3	1	—	938
Erysipelas	M.	4	4	10	10	7	18	13	22	40	45	53	23	11	260
	F.	11	5	8	8	14	9	19	36	41	63	52	29	14	309
Pulmonary Tuberculosis	M.	—	2	6	16	26	76	80	130	119	153	59	26	1	694
	F.	—	1	9	22	25	83	94	122	75	77	31	7	2	548
Tubercular Meningitis	M.	2	2	1	1	—	—	—	1	—	1	—	—	—	8
	F.	3	3	2	4	2	1	—	—	—	—	—	—	—	15
Tuberculosis of Peritoneum and Intestines	M.	—	—	3	3	3	1	2	1	—	—	—	—	—	13
	F.	—	—	1	4	2	4	—	—	1	1	—	—	—	13
Other forms of Tuberculosis	M.	—	8	15	27	7	18	10	9	6	2	4	1	—	107
	F.	1	4	11	15	18	7	5	15	4	1	2	1	1	85
Encephalitis Lethargica	M.	—	—	—	1	1	—	—	1	—	2	—	—	—	5
	F.	—	—	1	—	—	—	2	1	1	—	—	—	—	5
Cerebro-Spinal Fever	M.	4	2	2	—	—	—	1	—	—	—	—	—	—	9
	F.	1	2	—	1	—	—	—	—	1	—	—	—	—	5
Pneumonia	M.	71	104	119	156	50	85	71	165	160	154	114	47	17	1,313
	F.	43	83	122	91	36	37	36	68	63	64	62	63	27	795
Puerperal Fever	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	3	33	58	22	—	—	—	—	116
Puerperal Pyrexia	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	F.	—	—	—	—	—	3	30	66	32	—	—	—	—	131
Ophthalmia Neonatorum	M. F.	596													596
TOTAL		769	341	1,054	2,155	965	603	579	849	616	594	389	199	74	9,187

Malaria—4 Males ; Smallpox—1 Male ; Dysentery—2 Males, 6 Females ; Poliomyelitis—3 Males, 6 Females.

TABLE VIII.

Cases of Infectious Diseases notified during the Year 1930. Classified according to Wards.

Disease.	Acock's Green.	All Saints'	Aston.	Balsall Heath	Duddeston and Nechells	Edgbaston	Erdington (North)	Erdington (South)	Handsworth	Harborne	King's Norton	Ladywood	Lozells	Market Hall	Moseley and King's Heath	Northfield	Perry Barr	Rotton Park	St. Bartholomew's	St. Martin's and Deritend	St. Mary's	St. Paul's	Saltley	Sandwell	Selly Oak	Small Heath	Sobo	Sparkbrook	Sparkhill	Washwood Heath	Yardley	Not Located	City
Enteric Fever	4	—	—	—	—	4	5	—	—	—	1	—	—	—	2	3	—	1	—	—	—	1	8	—	1	20	1	2	5	—	4	—	62
Continued Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	2	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4
Trench Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Scarlet Fever	161	110	104	71	136	30	86	90	52	23	42	83	75	19	46	32	28	53	95	88	111	107	105	118	41	42	52	46	99	101	58	93	2397
Diphtheria	66	52	68	30	95	39	72	36	23	27	21	48	60	11	43	21	13	52	82	55	96	43	60	21	50	50	36	30	99	78	82	142	1701
Dysentery	1	—	—	—	—	—	—	—	—	3	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1	8
Erysipelas	11	24	34	18	63	14	11	8	10	4	9	11	16	8	14	3	4	20	26	31	25	17	18	6	7	23	3	23	15	23	13	57	569
Pulmonary Tuberculosis	63	55	71	54	72	22	50	30	29	9	14	56	53	25	21	17	5	50	52	71	50	59	37	21	30	39	24	29	34	46	35	19	1242
Tubercular Meningitis	4	—	—	—	3	1	2	1	—	—	—	—	—	—	—	—	—	1	1	—	2	3	1	1	—	—	1	1	—	—	1	—	23
Tuberculosis of Peritoneum and Intestines	1	1	1	2	3	2	—	—	1	—	—	—	—	—	—	3	—	—	1	2	1	—	1	—	3	—	—	2	1	1	—	—	26
Tuberculosis of Spinal Column	2	—	2	—	—	1	2	—	—	—	1	—	—	—	2	1	—	1	3	1	4	2	1	—	—	2	1	—	—	2	2	4	34
Tuberculosis of Joints	2	1	4	1	1	—	—	5	1	—	—	2	2	2	1	1	—	4	6	6	3	2	3	—	3	—	1	3	2	3	7	—	66
Tuberculosis of Other Organs	4	6	6	1	7	2	6	2	1	1	2	2	4	—	1	3	1	4	5	3	2	—	6	1	1	2	1	3	3	3	2	—	85
Disseminated Tuberculosis	—	1	—	—	—	—	1	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	—	1	—	—	—	1	—	—	—	—	7
Encephalitis Lethargica	1	—	—	—	1	—	—	—	—	1	1	1	—	—	—	—	—	1	—	1	2	—	1	—	—	—	—	—	—	—	—	—	10
Cerebro-Spinal Fever ...	—	1	1	1	—	1	1	—	—	—	—	—	—	1	—	—	—	—	2	—	—	—	3	—	—	1	—	—	1	—	1	—	14
Poliomyelitis	—	—	—	1	—	—	1	—	—	1	1	—	—	—	—	—	—	—	—	3	—	1	—	—	—	—	—	—	—	1	—	—	9
Polio-encephalitis ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	113	72	136	90	207	59	59	68	34	27	23	67	45	40	53	19	10	88	100	148	111	69	70	8	47	65	19	51	54	58	42	56	2108
Puerperal Fever ...	6	14	5	7	8	—	3	1	2	—	1	4	1	2	3	3	1	6	7	7	3	4	2	—	1	5	2	1	4	3	3	7	116
Puerperal Pyrexia ...	10	6	4	6	14	1	1	6	3	2	3	5	5	—	4	4	1	7	8	6	4	5	5	1	4	1	—	2	6	4	1	2	131
Ophthalmia Neonatorum	13	26	22	10	49	7	17	11	12	—	9	15	19	7	10	2	8	19	67	39	54	35	19	4	3	29	11	28	11	24	16	—	596
Total	462	369	458	292	661	184	318	258	168	98	129	294	282	115	200	113	71	307	456	461	468	348	340	182	191	280	152	222	335	347	267	381	9209

TABLE IX. PULMONARY TUBERCULOSIS. CASE-RATES IN WARDS.

YEAR.	St. Paul's	St. Mary's	Duddeston and Nechells	St. Bartholomew's	St. Martin's	Market Hall	Ladywood	Central Wards	Lozells	Aston	Washwood Heath	Saltley	Small Heath	Sparkbrook	Balsall Heath	Edgbaston	Rotton Park	All Saints'	Middle Ring	Soho	Sandwell	Handsworth	Perry Barr	Erdington North	Erdington South	Yardley	Acock's Green	Sparkhill	Moseley and King's Heath	Selly Oak	King's Norton	Northfield	Harborne	Outer Ring
1912	7.64	7.63	6.70	9.76	7.22	6.92	7.47	7.62	4.53	4.92	4.18	5.87	6.14	4.28	5.82	3.94	4.75	6.30	5.07	2.53	2.37	3.46	?	1.61	3.08	3.49	5.08	4.84	3.32	3.24	3.24	1.78	3.63	3.21
1913	5.13	7.14	6.44	10.63	8.49	7.29	6.05	7.31	3.22	4.85	3.79	5.35	4.85	4.97	5.84	3.91	4.81	5.18	4.68	2.70	1.70	2.79	?	1.23	2.43	3.66	4.37	3.87	2.86	2.95	2.90	1.18	2.89	2.73
1914	4.53	5.74	5.13	6.88	6.16	4.21	5.42	5.44	2.59	3.52	3.64	2.87	4.06	4.28	4.12	2.71	4.72	4.56	3.71	2.76	2.32	2.17	?	2.29	2.05	2.18	2.67	2.56	1.73	1.42	2.74	1.93	2.36	2.24
1915	5.25	5.44	4.94	4.89	6.07	3.92	4.14	4.95	3.22	3.02	3.19	3.48	3.86	3.67	3.82	2.40	3.24	4.34	3.42	2.11	1.68	2.30	?	1.81	1.56	2.82	2.22	2.27	1.43	2.24	2.70	1.65	2.13	2.07
Average	**5.64**	**6.49**	**5.80**	**8.04**	**6.98**	**5.58**	**5.77**	**6.33**	**3.39**	**4.08**	**3.70**	**4.39**	**4.73**	**4.30**	**4.90**	**3.24**	**4.38**	**5.09**	**4.22**	**2.52**	**2.02**	**2.68**	?	**1.73**	**2.28**	**3.04**	**3.59**	**3.38**	**2.33**	**2.46**	**2.89**	**1.63**	**2.75**	**2.56**
1916	5.11	6.75	6.64	6.66	5.66	4.33	4.30	5.64	3.87	3.53	3.99	4.19	4.44	3.67	3.15	2.81	4.05	3.94	3.76	2.86	2.35	2.78	?	1.66	2.17	2.50	2.65	2.53	1.64	2.27	2.14	1.87	1.19	2.20
1917	5.26	5.67	4.52	6.32	4.36	6.13	4.12	5.20	3.47	3.03	3.42	2.29	3.34	2.85	3.12	2.16	3.62	3.77	3.11	2.17	2.61	2.59	?	2.25	2.21	2.31	3.58	2.81	1.33	2.79	1.97	1.82	1.85	2.33
1918	5.46	4.42	4.34	5.33	5.32	5.66	6.80	5.33	3.13	3.09	2.72	2.08	3.40	3.56	2.97	2.81	4.04	3.35	3.12	1.38	1.98	3.48	?	2.24	2.46	2.15	2.66	2.49	2.12	2.53	1.35	3.33	1.80	2.31
1919	4.30	4.94	4.13	4.00	4.45	3.99	4.14	4.28	3.30	3.22	2.05	1.99	2.30	2.62	2.79	2.22	4.02	2.89	2.74	2.55	1.35	2.89	?	2.14	2.36	1.90	2.70	2.23	1.22	2.34	1.66	1.90	1.81	2.08
1920	3.63	4.91	4.09	4.23	4.13	2.62	4.12	3.96	2.56	2.95	2.39	2.48	2.11	2.61	2.75	1.50	4.16	3.20	2.67	2.81	1.48	2.84	?	2.41	2.19	2.18	2.13	2.03	1.83	2.43	1.65	2.04	1.78	2.14
Average	**4.75**	**5.34**	**4.74**	**5.31**	**4.78**	**4.55**	**4.70**	**4.88**	**3.27**	**3.16**	**2.91**	**2.61**	**3.12**	**3.06**	**2.96**	**2.30**	**3.98**	**3.43**	**3.08**	**2.35**	**1.95**	**2.92**	?	**2.14**	**2.28**	**2.21**	**2.74**	**2.42**	**1.63**	**2.47**	**1.75**	**2.19**	**1.69**	**2.21**
1921	3.13	3.49	3.41	2.51	3.01	2.80	2.55	2.99	2.20	2.65	2.11	1.76	1.58	2.21	2.00	1.28	2.33	2.26	2.04	1.54	1.08	2.09	?	1.44	1.46	1.81	1.47	2.05	1.62	1.41	0.77	0.83	1.39	1.46
1922	2.23	3.20	2.80	2.47	3.42	2.40	2.21	2.68	1.59	1.74	1.81	1.17	1.44	1.41	2.17	1.21	1.63	1.81	1.60	1.15	0.62	1.17	?	1.71	1.40	1.45	1.20	1.88	0.84	1.74	0.67	1.81	1.44	1.31
1923	2.13	3.14	3.20	2.51	3.88	2.46	1.97	2.76	1.90	1.95	1.79	1.41	1.69	1.88	2.22	1.40	2.28	1.60	1.81	1.40	0.61	1.31	?	1.52	1.39	1.39	1.35	1.57	1.31	1.04	1.09	1.22	1.08	1.25
1924	2.16	3.02	2.69	2.40	4.39	2.11	2.10	2.70	1.65	2.43	1.88	1.62	1.54	1.32	2.09	1.01	2.20	1.62	1.74	1.38	0.76	1.31	?	0.92	1.52	1.27	1.34	1.25	1.11	0.93	1.34	1.28	1.53	1.23
1925	1.54	2.37	2.22	2.44	3.41	1.90	1.85	2.25	1.59	2.05	1.37	1.34	1.44	1.09	1.58	1.09	1.62	1.10	1.43	1.19	0.97	1.47	?	1.49	0.92	0.99	1.06	1.34	0.75	1.14	1.01	1.47	0.81	1.12
Average	**2.24**	**3.04**	**2.86**	**2.47**	**3.62**	**2.33**	**2.14**	**2.68**	**1.79**	**2.16**	**1.79**	**1.46**	**1.54**	**1.58**	**2.01**	**1.20**	**2.01**	**1.68**	**1.72**	**1.33**	**0.81**	**1.47**	?	**1.42**	**1.34**	**1.38**	**1.28**	**1.62**	**1.13**	**1.25**	**0.98**	**1.32**	**1.25**	**1.27**
1926	2.28	2.50	2.21	1.89	2.52	1.46	1.62	2.07	1.62	1.98	1.86	1.30	0.83	1.22	1.85	0.97	1.33	1.13	1.41	0.64	0.96	1.27	?	0.95	1.03	0.78	0.88	1.02	0.67	1.21	0.83	2.06	1.32	1.05
1927	2.01	2.87	2.14	1.97	2.24	1.90	1.90	2.15	1.36	1.69	1.05	1.45	0.95	1.14	1.53	1.02	1.52	1.35	1.30	1.43	0.87	0.61	?	0.63	0.72	0.87	0.53	0.91	0.87	1.33	1.16	1.30	0.70	0.92
1928	1.90	2.52	2.28	1.80	2.52	1.55	1.89	2.07	1.48	1.82	1.06	0.98	1.12	1.29	1.10	0.92	1.34	1.56	1.27	1.23	1.08	1.25	0.00	0.92	1.17	1.25	0.73	0.93	0.71	1.32	1.00	1.33	0.81	0.98
1929	2.08	1.90	2.45	1.50	1.98	2.07	1.46	1.92	1.27	1.92	0.95	0.97	0.92	1.17	1.27	0.75	1.54	1.55	1.23	1.09	0.80	0.97	2.50	1.09	0.83	1.47	1.00	0.78	0.60	0.70	0.56	1.30	0.96	1.05
1930	2.05	1.66	1.74	1.41	1.76	1.55	2.06	1.75	1.72	1.89	1.16	0.93	1.15	0.87	1.53	0.65	1.30	1.39	1.26	0.92	1.03	1.01	0.49	1.24	1.10	1.19	1.17	0.80	0.58	1.01	0.58	0.91	0.46	0.89
Average	**2.06**	**2.29**	**2.16**	**1.71**	**2.20**	**1.71**	**1.79**	**1.99**	**1.49**	**1.86**	**1.22**	**1.13**	**0.99**	**1.14**	**1.46**	**0.86**	**1.41**	**1.40**	**1.29**	**1.06**	**0.97**	**1.02**	?	**0.97**	**0.97**	**1.11**	**0.86**	**0.89**	**0.69**	**1.11**	**0.83**	**1.38**	**0.85**	**0.98**

TABLE X.

Meteorology and Mortality in each week of the year 1930.

Week.		Total Deaths.	Deaths under 1 year.	Deaths from						Temperature of the Air.			Temperature of Ground	Horizontal Movement of Air in Miles.	Hours of Sunshine.	Rainfall in Inches.
No.	Ending. 1930.			Measles.	Whooping Cough.	Diarrhoea and Enteritis under 2.	Pulmonary Tuberculosis.	Other Forms of Tuberculosis.	Respiratory Diseases.	Highest in Shade.	Lowest in Shade.	Mean of Daily Maxima and Minima.	Highest 4 feet Deep.			
1	Jan. 4	249	21	1	1	4	18	4	37	52°	35°	43.6°	45.6°	2525	11.9	0.88
2	,, 11	239	16	—	2	—	27	—	36	49	32	39.4	45.7	2329	17.7	0.86
3	,, 18	244	31	—	3	1	18	4	41	53	31	42.8	45.6	2131	4.6	1.18
4	,, 25	197	18	—	7	2	18	2	24	57	34	43.9	45.4	1550	16.8	0.87
5	Feb. 1	228	26	—	1	1	32	3	33	43	30	37.1	45.4	1442	5.9	1.72
6	,, 8	218	34	—	3	4	14	—	29	43	31	37.0	44.9	1660	0.5	0.22
7	,, 15	233	28	—	—	3	18	1	33	42	29	36.0	44.3	1551	12.6	0.13
8	,, 22	243	27	1	3	5	19	4	36	42	27	33.9	43.6	1521	18.2	0.00
9	Mar. 1	278	23	—	7	2	18	4	41	45	28	37.1	43.0	1440	2.3	0.16
10	,, 8	250	26	—	7	4	24	1	50	53	34	44.5	43.4	1523	16.7	0.34
11	,, 15	244	25	—	3	3	15	—	43	47	31	37.6	43.7	1380	12.2	2.06
12	,, 22	245	23	—	7	1	18	5	41	49	22	35.6	43.4	1514	23.0	0.17
13	,, 29	258	27	1	4	3	14	6	53	56	32	45.0	43.0	1609	25.9	0.11
14	April 5	237	26	—	5	2	25	3	40	63	35	46.0	44.3	2030	11.9	1.06
15	,, 12	248	30	—	5	6	15	3	45	60	35	46.8	44.5	1251	24.1	0.22
16	,, 19	212	23	—	4	3	22	—	25	50	35	42.9	44.6	2340	17.5	1.03
17	,, 26	210	18	1	—	3	11	3	29	66	35	47.9	44.7	973	19.7	0.40
18	May 3	215	24	1	3	2	16	1	23	59	37	48.1	45.7	1801	44.9	0.01
19	,, 10	230	22	—	5	1	20	2	25	61	33	46.6	46.2	1611	31.9	1.41
20	,, 17	207	23	2	2	3	12	3	26	63	41	51.9	46.5	1629	34.1	0.18
21	,, 24	224	24	2	5	2	16	2	26	63	43	51.1	47.3	1933	26.7	0.14
22	,, 31	160	16	1	3	1	12	1	18	67	47	55.5	48.3	1358	21.7	0.32
23	June 7	194	19	5	3	1	11	5	23	78	47	58.6	49.3	1191	49.9	0.09
24	,, 14	166	18	3	2	3	6	3	21	69	46	58.6	50.3	1415	36.4	0.51
25	,, 21	165	24	3	—	6	10	6	16	74	48	61.8	51.4	1405	30.9	0.13
26	,, 28	146	11	1	—	1	18	4	11	70	47	57.1	51.7	1411	59.5	0.41
27	July 5	190	13	2	3	2	23	6	14	78	47	63.1	52.3	1448	67.0	0.32
28	,, 12	166	13	—	2	5	19	4	10	71	49	59.9	52.6	1866	43.6	0.02
29	,, 19	172	19	1	2	2	20	3	10	70	48	57.5	53.4	1703	18.2	0.96
30	,, 26	203	19	1	1	2	14	6	17	70	48	54.7	53.0	1981	8.7	2.25
31	Aug. 2	153	13	1	1	1	19	—	9	68	50	59.4	52.7	1635	33.9	1.52
32	,, 9	162	15	—	1	1	10	2	7	71	47	57.5	52.9	1311	43.3	0.86
33	,, 16	163	10	1	—	1	9	2	13	67	49	58.3	53.2	2060	39.5	0.34
34	,, 23	160	17	1	—	3	9	1	10	66	47	56.5	53.1	1905	37.2	1.46
35	,, 30	201	16	1	1	3	14	4	24	88	49	68.1	54.2	1039	64.1	0.11
36	Sept. 6	150	6	—	1	2	12	—	15	69	49	59.6	55.0	1014	36.7	0.55
37	,, 13	156	18	1	2	2	12	1	9	68	52	57.9	54.8	1122	19.1	0.80
38	,, 20	161	23	1	1	1	13	3	11	64	45	54.6	54.6	1881	17.8	2.33
39	,, 27	171	14	—	—	3	11	1	11	68	44	55.6	54.1	2186	28.6	0.33
40	Oct. 4	167	17	1	3	1	14	2	11	63	44	52.2	53.8	1581	7.5	0.53
41	,, 11	180	12	1	—	—	29	1	18	56	38	49.3	53.0	2005	39.5	0.53
42	,, 18	195	17	—	—	6	17	4	19	67	41	54.6	52.2	1984	26.9	0.39
43	,, 25	197	22	1	1	5	16	—	20	59	38	47.1	52.3	1914	26.7	1.00
44	Nov. 1	192	19	2	1	3	15	1	14	58	37	48.9	51.7	1489	10.2	0.52
45	,, 8	199	13	2	1	5	18	1	23	54	31	42.9	51.0	1894	31.8	0.77
46	,, 15	185	12	2	1	3	14	—	23	59	37	45.9	50.0	1728	16.2	0.11
47	,, 22	222	24	3	2	5	17	3	28	54	26	42.2	49.3	1702	8.3	0.75
48	,, 29	190	17	2	—	1	21	3	20	52	33	41.6	48.4	1705	9.1	1.51
49	Dec. 6	214	11	2	—	1	15	2	29	46	31	39.7	48.0	828	0.1	0.00
50	,, 13	212	23	3	1	4	20	2	21	49	29	37.4	47.4	1273	5.7	1.36
51	,, 20	233	24	2	2	3	26	2	20	51	32	40.6	46.3	981	6.3	0.25
52	,, 27	218	32	3	—	4	11	3	36	51	35	40.7	46.0	1232	4.8	0.36
53	1931 Jan. 3	257	21	3	2	2	29	1	34	49	31	38.2	45.9	1519	7.2	1.11

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