

[Report 1932] / Medical Officer of Health, Edinburgh City.

Contributors

Edinburgh (Scotland). City Council.

Publication/Creation

1932.

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CITY AND ROYAL BURGH OF EDINBURGH

ANNUAL REPORT

OF THE

PUBLIC HEALTH DEPARTMENT
and various Sub-Departments

FOR THE YEAR 1932



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PUBLIC HEALTH DEPARTMENT,
JOHNSTON TERRACE,
EDINBURGH, *June* 1933.

MY LORD PROVOST, LADIES AND GENTLEMEN,

I have the honour to submit the Annual Report on the Health of the City for the year 1932.

The population of the City is estimated at 447,800 persons. Of these there were 202,824 males and 244,976 females. There is an increase of 4,758 persons as compared with the Census population in 1931.

The effects of the new housing areas continue to be progressively felt and the more congested areas in the centre of the town are showing a marked diminution of population, while those on the outskirts increase. In a recent survey of certain areas, which was made by this Department, the children and mothers in one of our new housing areas stood out quite distinctly as the best group. This, in spite of the fact that the financial conditions were very stringent. I attribute the beneficial effect to the work of the local authority in transplanting the families to more healthful surroundings in the suburbs. The contrast which the new housing areas make with the older and more congested areas of the City is very marked.

Births.—During the year there were 6,960 children born—3,537 males and 3,423 females. This means a birth-rate of 15·5 per 1000, and with the exception of the years 1917-18 it is the lowest birth-rate recorded for the City—the average rate for the past ten years being 17·7.

Deaths of infants under one year of age numbered 507. This gives an infantile mortality-rate of 73 per 1000 births, compared with a rate of 69 in 1931. The average infant mortality-rate for the past ten years was 81.

Deaths.—The total number of deaths during the year was 6,032—2,892 males and 3,140 females. This represents a death-rate of 13·5 per 1000, the average for the last ten years being 13·9. St. Giles Ward returned the highest general death-rate at 16·1; Gorgie and West Leith were the lowest, with 11·2.

Pulmonary Tuberculosis.—During the year we had 313 deaths from pulmonary tuberculosis, and a death-rate of ·69 per 1000. For the first time in the history of the City we had one ward without a death from pulmonary tuberculosis. This fortunate ward was Colinton. Haymarket also did extremely well with only two deaths; Corstorphine and Cramond had five, Liberton six, and Morningside nine. This rate of ·69 I have again to report is the lowest on record.

With regard to non-pulmonary tuberculosis, I regret that we have to record an increase, the number being 100 as against 85 in the previous year. I trust this is only a temporary set-back, as the trend of this form of tuberculosis has for the past decade or so been steadily downwards.

Infectious Diseases.—We were comparatively free from infectious disease, with the exception of an extensive outbreak of measles which took place in the earlier part of the year and put a severe tax on our hospital accommodation. Fortunately we had no other epidemic at the same time and this enabled us to accommodate no fewer than 809 cases.

I have to draw attention to the results of immunisation against diphtheria and scarlet fever amongst the new probationer nurses. This procedure has been a brilliant success in protecting our staff from these diseases. If we could apply the same protection to the populace generally, we would achieve similar results.

Bacteriological Services.—The close co-operation between the health services of the City and the Bacteriological Department of the University is productive of the highest results. It enables us to secure the best assistance in the many bacteriological problems which are presented to us. The volume of the work done increases year by year and its importance does not diminish.

I would draw attention to the special investigations which have been carried out partly on our behalf by the Department, viz., those investigations on Milk, Rheumatism, Whooping-Cough, Undulant Fever, etc.

Maternity and Child Welfare.—The work in this Department has pursued its usual course during the year. There are no new developments to report. As already indicated the slightly higher infant mortality for the year is due mainly to the extensive outbreak of measles, assisted by a slight epidemic of whooping-cough. Altogether 81 children under five years of age died of measles and its complications, and 52 of whooping-cough. These figures only emphasise what is already well known, viz., the seriousness of these diseases in children under five years of age. Although no new step has been taken during the year, yet there has been noted a gradual rising of the standard for the care and welfare of children.

Venereal Diseases.—The duties of this Department continue to be carried out mainly in the grounds of the Royal Infirmary. As is well known, the conditions under which the officials work are not desirable, but I have hopes that an early beginning will be made to procure premises commensurate with the amount and quality of the work done by this Department. There is nothing new to record in connection with it, but there seem to be indications that the incidence of syphilis is decreasing somewhat.

Municipal General Hospitals.—The most noteworthy point in the year's work has been the re-organisation of what are now known as the Municipal General Hospitals. The term is a little cumbersome and the word "general" is apt to create an erroneous impression. The term is used to distinguish the three hospitals from some of the specialised hospitals, such as the fever and mental hospitals. It is not used in the sense that we deal with nothing but acute cases, as the municipality has to provide for all sorts of illnesses, chronic as well as acute, and the greater bulk of our patients at present suffer from illnesses of a chronic character. In the meantime we are attempting to classify patients so that the more acute cases and those requiring operative treatment may be sent to the Western General Hospital, where all maternity cases and sick children are also treated. The Northern

and the Eastern Hospitals, which were formerly known as Pilton and Seafield, are kept for the sub-acute and chronic cases respectively. This arrangement is not necessarily permanent with regard to details, but on broad lines it is likely that the hospitals will remain in that category.

Arrangements have been completed with the University whereby we are enabled to make use of the professorial staff for the work of the hospitals. The Professors of Medicine, Surgery, Midwifery and Child Life act as the Directors of the Units for their respective subjects. This means that all surgical work is under the care of the Professor of Surgery, and the Directors of the other Units are placed in a similar position. The Professors are assisted by a suitable staff. The appointment of professors was made by a Joint Committee representing the University and the Corporation, and the assistants to the Directors were appointed by the Dean of the Medical Faculty, the Director of the Unit, and the Medical Officer of Health conjointly. Already there has been a noticeable change in the character of the hospitals, and I am hopeful that the work done will in a comparatively short time equal in amount, as it does already in quality, that of the best voluntary hospitals.

The Town Council have made payment by patients where possible obligatory. The maximum charge for patients within the City is 25s. per week, but the amount may be less, according to the means of the individual, and those unable to pay are admitted free. Already there has been a considerable number of patients admitted on a paying basis.

By the arrangement with the University we have been enabled to place at their disposal for teaching purposes some 900 beds. Although the illness of many of the patients is of an extremely chronic character, yet such patients appear to me to present an extremely valuable field for medical training and research. After all, in a voluntary hospital dealing purely with acute cases, the budding practitioner rarely sees some of the cases that he is likely to deal with later in life, viz., the senile and bed-ridden.

The nursing in the hospitals presents grave difficulties owing to the excessive number of chronic bed-ridden cases. These, because of their very chronicity, give ample scope for a part of a nurse's training, but the work is of a very arduous, trying, and even depressing character, and the undue proportion of chronic to acute cases raises nursing problems of the first magnitude.

In the meantime we are unfortunately not recognised as a teaching school for Surgery, and require to send our probationers outwith the City for surgical training, but at an early date I trust we shall have sufficient surgical work in our own hospitals to be able to secure recognition from the General Nursing Council. It is a regret to me that a reciprocity with some of the other hospitals in the City could not be achieved. As the arrangement is a little one-sided at present, the voluntary hospitals are apt to get the great bulk of the acute cases, and the municipal hospitals get practically all the chronic cases. This arrangement will, of course, cease some day. Should the time ever come when the voluntary hospitals are compelled to apply to the municipality for assistance, one of the first things that ought to be dealt with is the interchange of nurses. Before that time comes,

however, it is possible that a solution for our nursing difficulties may be found in linking together the Fever Hospitals and our General Hospitals and making a composite training. I have already had a departmental committee of my own staff considering this problem, but we have not yet reached a solution, although I am not unhopeful that we may secure this.

Mental Health Services.—The most noteworthy point with regard to Mental Health Services has been the extension of Gogarburn Certified Institution—the population having been quickly doubled by the completion of the administrative block and the two pavilions for higher-grade patients. The total number on the register at the end of the year was 313. A considerable number of mental defectives were admitted to Gogarburn Institution from Bangour Mental Hospital, and in this way the pressure on the space at Bangour was in some measure relieved.

Hospital Expenditure.—The cost of running the various hospitals is always interesting from an administrative point of view. The table on page 50 shows the expenditure, and the highest figures relate to the City Hospital, where the rate worked out at 41s. 10d. per occupied bed per week. The costs ranged from that to 22s. 4d. for Gogarburn Certified Institution—figures which I think represent careful management on the part of those more immediately responsible for the running of the institutions. The hospitals are equipped with all the essentials, but there is no unnecessary expenditure.

School Medical Service.—One of the most prominent features in the School Report is the upward trend in height and weight during the past few years of the average child in school life, and this is most marked in the case of those leaving school. Comparing those leaving school this year with those who left in the 1913-14 session, boys are now two inches taller and $10\frac{1}{2}$ lbs. heavier in weight. The girls are approximately half-an-inch taller and 8 lbs. heavier. These figures are so arresting that special enquiry was made as to their accuracy. A careful examination did not reveal any discrepancy, so we have to accept the figures as they stand. It is difficult to find an explanation and it will be interesting to see if this standard is maintained during succeeding years. One point which may not be without its influence is the fact that we have supplied over one million dinners to scholars during the session. In the year 1913-14 less than half that number were supplied. The total number of children on the food roll was over six thousand. The cost of the dinner per child was 1·96 pence. There is a marked and increasing improvement in the cleanliness of the heads and bodies and in the condition of teeth. It is gratifying to learn that the number with clean mouths and no evidence of dental caries is increasing. In the City, excluding Leith, this has increased from 12 per cent. in 1914 to approximately 23 per cent. for the year under report.

Factory and Workshop Acts.—The supervision of factories and workshops as far as sanitary matters are concerned falls to be administered by this Department. In spite of the adverse conditions brought about by the low state of trade, it is satisfactory to be able to report that considerable progress was made during the year with regard to sanitary provisions which are essential to the health and welfare of the workers. Systematic inspections of workshops were carried out, and the standard of cleanliness has been well maintained.

With regard to bakehouses, there are still 64 underground, and the number diminishes very slowly. In spite of the best attempts to create and keep good hygienic conditions in a bakehouse, an underground place is anything but ideal. The advent of new hygienic bakeries is, however, acting as a stimulus for some of the others to rise to a higher level.

Acknowledgments.—I have to thank the various heads of the Departments for the valuable assistance given me during the past year, and am indebted to all the members of the staff generally for loyal co-operation in discharge of their duties. The Public Health Officials aim at a high standard of efficiency and I think they do not fall far short of their aims.

It is not customary for an official to express opinions regarding his Committee, but I might be pardoned if I take this opportunity of acknowledging the valuable assistance which the members of the Public Health Committee have given in a year which was not without its perplexities, and to place on record my appreciation of the high ideals which the Committee have kept before them in the discharge of their public duties.

I am, My Lord Provost, Ladies and Gentlemen,

Your obedient Servant,

JOHN GUY,

M.D., D.P.H. (Camb.), F.R.F.P. & S. (Glas.), F.R.C.P. (Edin.),

Medical Officer of Health.

SUMMARY OF STATISTICS

For the Years 1928, 1929, 1930, 1931 and 1932.

	1928	1929	1930	1931	1932
Population Estimated to middle of year	433,299	435,195	437,098	443,042	447,800
Area of City—Acres	32,526	32,526	32,526	32,526	32,526
Density of Population—					
Persons per acre	13·3	13·4	13·4	13·6	13·8
Houses Inhabited	106,325	107,704	108,375	109,421	111,241
Marriages Registered	3,760	3,955	3,693	3,788	3,932
Birth - rate (Corrected for Country Births)	17·1	16·8	16·7	16·2	15·5
Death - rate (Corrected for Country Deaths)	13·6	14·8	13·8	12·9	13·5
Infantile Mortality	75	80	82	69	73
Cancer Death-rate	1·6	1·7	1·6	1·5	1·9
Phthisis Death-rate	·8	·8	·8	·7	·7
*Epidemic Diseases Death-rate	·6	·3	·7	·2	·5

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhoea and Enteritis under 2 years.

Note.—Further detailed statistics are shown in the Tables throughout this Report.

VITAL STATISTICS

AND

REPORTS RELATING TO VARIOUS SUB-DEPARTMENTS AND INSTITUTIONS.

POPULATION.

The Registrar-general for Scotland has estimated the population of the City of Edinburgh at the middle of 1932 to be 447,800. This represents an increase of 4,758 persons as compared with the Census enumeration of the previous year.

The estimate is based on the number of inhabited houses at Whitsunday, with adjustments for the movement of population due to emigration and other factors.

Taking the Registrar-General's figure as a basis of calculation, the population is distributed throughout the various districts of the City, including Institutions and Military quarters, as follows :—

Area.	Males.	Females.	Total.	Acres.	Persons Per Acre.
Edinburgh	146,381	182,552	328,933	10,877	30·2
Leith	40,614	43,970	84,584	1,641	51·5
Suburban	15,829	18,454	34,283	20,008	1·7
	202,824	244,976	447,800	32,526	13·8

Density.—The area of the City extends to 32,526 acres, and the density of population was 13·8 per acre. The density figures for the twenty-three wards of the City will be found in the table on page 6. The rates are based on the total acreage of the wards, which means that open spaces such as public parks, and ground used for agricultural, industrial, and other purposes, are included in every case.

HOUSING.

Inhabited Houses.—The accompanying table, kindly supplied by the Burgh Assessor, gives particulars regarding the housing accommodation in the City.

A comparison of the table with that of the preceding year shows that an increase of 1,820 inhabited houses took place during 1932.

NUMBER OF DWELLING-HOUSES OCCUPIED AT WHITSUNDAY 1932.									
Ward.	Under £5	£5 and under £10	£10 and under £15	£15 and under £20	£20 and under £30	£30 and under £40	£40 and under £50	£50 and upwards.	Total in each Ward.
1. Calton	8	294	1,364	1,454	1,556	493	112	213	5,494
2. Canongate	61	988	1,617	1,056	1,181	288	81	138	5,410
3. Newington	3	167	679	584	1,245	739	466	1,678	5,561
4. Morningside	1	23	43	158	1,002	2,018	1,405	1,907	6,557
5. Merchiston . . . . .	...	17	245	531	2,098	1,434	426	974	5,725
6. Gorgie	13	65	1,616	1,846	2,391	389	59	88	6,467
7. Haymarket	4	166	443	469	1,162	661	210	1,371	4,486
8. St. Bernard's	16	322	466	444	1,261	1,362	206	920	4,997
9. Broughton	5	165	545	1,010	1,120	717	247	272	4,081
10. St. Stephen's	17	511	795	837	981	563	292	650	4,646
11. St. Andrew's	23	866	724	374	280	91	58	489	2,905
12. St. Giles	47	1,272	1,581	625	751	132	61	209	4,678
13. Dalry	1	226	1,991	1,927	975	33	6	95	5,254
14. George Square	22	679	1,133	852	1,254	504	231	310	4,985
15. St. Leonard's	35	1,174	1,895	819	620	243	102	124	5,012
16. Portobello	10	198	505	903	2,232	1,329	757	619	6,553
17. South Leith	3	280	1,481	2,158	2,500	316	153	208	7,099
18. North Leith	10	862	1,735	985	523	93	31	141	4,380
19. West Leith	14	614	1,050	617	686	774	395	756	4,906
20. Central Leith . . . . .	...	271	1,597	664	482	108	16	69	3,207
21. Liberton	38	327	859	264	257	253	189	502	2,689
22. Colinton	18	226	329	184	149	334	254	707	2,201
23. Corstorphine and Cramond	24	150	234	236	500	1,250	581	973	3,948
Total	373	9,863	22,927	18,997	25,206	14,124	6,338	13,413	111,241
Edinburgh Area	266	7,133	15,642	13,889	20,109	10,996	4,719	10,057	82,811
Leith Area	27	2,027	5,863	4,424	4,191	1,291	595	1,174	19,592
Suburban Area	80	703	1,422	684	906	1,837	1,024	2,182	8,838

Housing Schemes.—I am indebted to the City Chamberlain for the information contained in the following table. The total number of houses erected by the Corporation up to 31st December 1932 was 8,513, and of these 341 are of one apartment, 1,790 of two apartments, 5,950 of three apartments, 299 of four apartments, and 133 of five apartments.

	Number of Apartments.										Totals.	
	One.		Two.		Three.		Four.		Five.			
	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.
Improvement and Reconstruction Schemes—												
Non-State-Aided	268	44	338	56	2	...	...	...	...	...	608	7.2
State-Aided . . . . .	...	...	618	32	1,326	68	1	...	...	...	1,945	23.1
Provision of New Houses—												
Non-State-Aided	73	44	79	48	12	7	1	1	...	...	165	2.0
State-Aided : 1919 Act . . . . .	...	...	179	12	956	63	244	16	133	9	1,512	18.0
1923 .. . . .	...	...	18	100	...	...	...	...	...	...	18	.2
1924 .. . . .	...	...	558	13	3,654	86	53	1	...	...	4,265	49.5
Totals	341	4	1,790	21	5,950	70	299	3	133	2	8,513	100

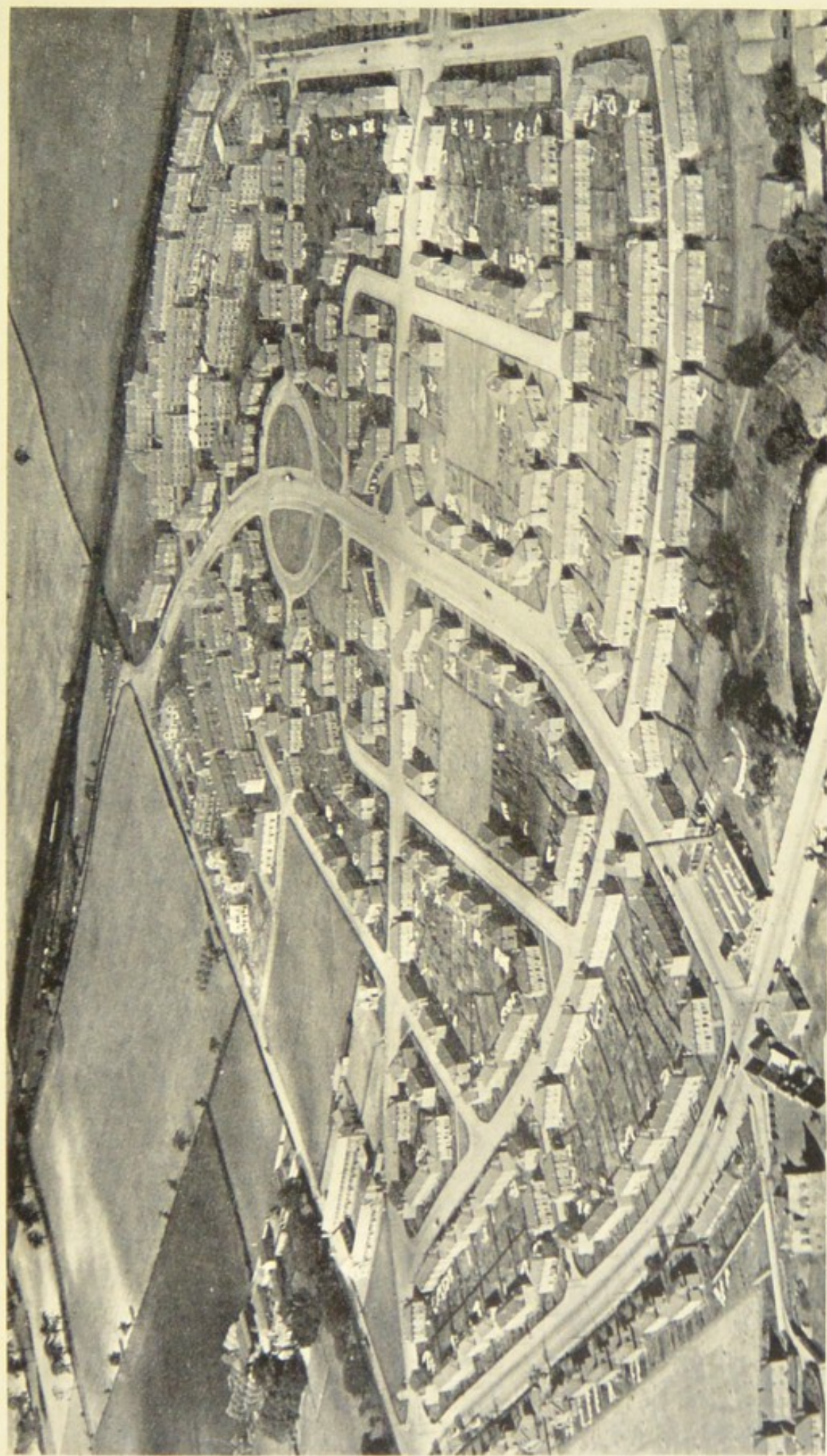
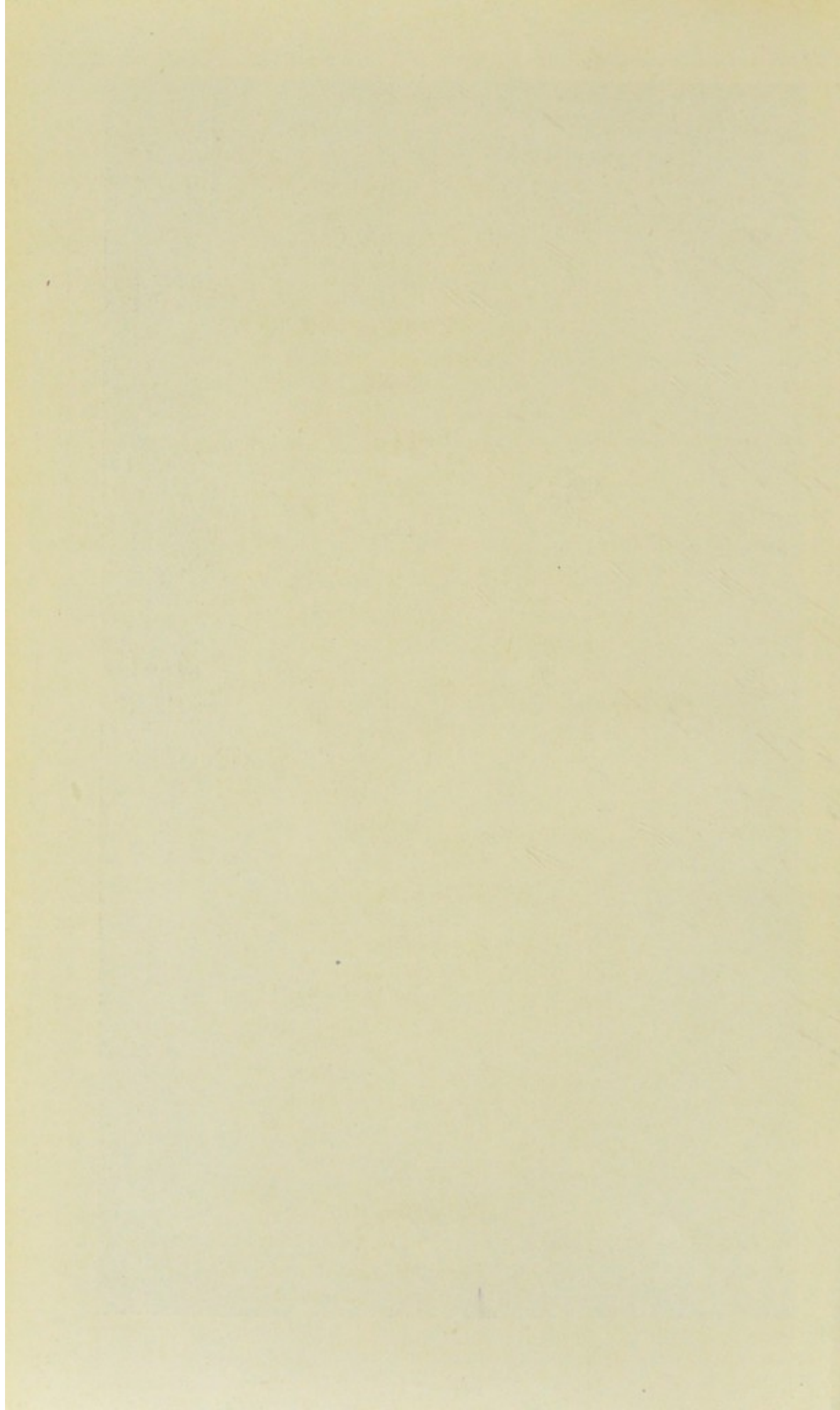


Photo. by Aerofilms, Ltd., London.

STENHOUSE HOUSING SCHEME, ON WESTERN OUTSKIRTS OF EDINBURGH.

Includes 1230 Houses, 2 Recreation Centres, 1 Shopping Centre, and School.



Since 1st January 1919 up to the end of December 1932, plans have been passed by the Dean of Guild Court for 20,421 houses.

An aerial photograph is given of the Stenhouse Housing Scheme, which includes 1,230 houses. A shopping centre and two areas for recreation are provided in central positions. A new school is seen on the left of the picture. The rents of the houses excluding rates are as follows :—

2-apartment Tenement, £16 ; 3-apartment Tenement, £21 ; 3-apartment Flatted type, £24 and £26.

VITAL STATISTICS.

The accompanying table gives a decennial survey of the increase which has taken place in the population of the City from 1861 to 1921, and a yearly survey from the latter date onwards. The births and deaths, with the rates per 1,000 of the population, are also shown, together with the Infantile Mortality rate per 1,000 births.

Year.	Population.	Deaths.	Rate per 1000.	Births.	Rate per 1000.	Infantile Mortality.
1861	170,444	3,946	23·1	5,694	33·4	135
1871	196,979	5,484	27·8	6,874	34·8	151
1881	228,346	4,308	18·8	7,360	32·2	128
1891	261,225	5,257	20·1	7,382	28·2	138
1901	316,921	5,633	17·7	7,920	24·9	143
1911	320,829	4,652	14·4	6,507	20·8	115
*1921	420,264	6,048	14·4	9,028	21·5	96
1922	422,112	6,447	15·3	8,772	20·8	91
1923	423,956	5,875	13·9	8,662	20·4	82
1924	425,802	6,312	14·8	8,404	19·7	89
1925	427,664	6,138	14·4	7,843	18·3	96
1926	429,535	5,710	13·3	7,926	18·5	80
1927	431,413	6,066	14·1	7,621	17·7	80
1928	433,299	5,872	13·6	7,420	17·1	75
1929	435,195	6,442	14·8	7,304	16·8	80
1930	437,098	6,038	13·8	7,307	16·7	82
1931	443,042	5,726	12·9	7,164	16·2	69
1932	447,800	6,032	13·5	6,960	15·5	73

* City boundaries extended.

MARRIAGES.

The number of marriages registered in the City during the year was 3,932, as compared with 3,788 in 1931, and 3,693 in 1930. Of the total marriages registered, 1,103 were contracted by declaration before the Sheriff, and as many of the contracting parties came from districts outside the City for this purpose, it is not possible to arrive at any accurate conclusion regarding the number of marriages among Edinburgh citizens.

The marriages in each quarter of the year were as follows :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
812	923	1,302	895	3,932

BIRTHS.

During the year 7,617 births were registered. After corrections had been made for outward and inward transfers, the actual number of births allocated to the City was 6,960—3,537 males and 3,423 females, and this number represents a rate of 15·5 per 1,000 of the population. With the exception of the two war years 1917 and 1918, the rate is the lowest on record.

The number of births and the birth-rates in the various municipal wards will be found in the table on page 6, while the following statement gives details regarding the corrected births registered in each quarter of the year:—

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st . . .	1,728	1,611	117	6·8
2nd . . .	1,795	1,675	120	6·7
3rd . . .	1,713	1,604	109	6·4
4th . . .	1,724	1,604	120	7·0
Totals .	6,960	6,494	466	6·7

DEATHS AND DEATH-RATES.

There were 6,830 deaths registered in the City during the year. Of this number 988 related to persons domiciled in various parts of Scotland outwith the City whose deaths were, for statistical purposes, transferred to the district of usual residence. Similarly the deaths of 190 Edinburgh citizens which occurred in other districts in Scotland, were transferred for inclusion in the mortality statistics of the City. After these adjustments had been made, the total number of deaths of Edinburgh citizens was 6,032—2,892 males and 3,140 females—being equivalent to a death-rate of 13·5 per 1000 of the population, as compared with 12·9 in 1931 and 13·8 in 1930.

The following table shows the deaths in each quarter of the year, together with the quarterly death-rates.

Quarter.	Number of Deaths.	Death-rates per 1,000.
1st . . .	1,862	16·6
2nd . . .	1,448	12·9
3rd . . .	1,231	11·0
4th . . .	1,491	13·3
Totals .	6,032	13·5

A statement showing how the deaths were distributed throughout the wards of the City, together with the mortality rates applicable to each, will be found in the table on page 6.

The particulars herewith are extracted from the Registrar-General's preliminary statement for 1932, and show the corrected death-rates for the eight large centres of population in Scotland.

Glasgow	Rate per 1000 of Population.	14·5	Paisley	Rate per 1000 of Population.	13·8
Edinburgh	13·5	Greenock	14·6		
Dundee	13·8	Motherwell and Wishaw	12·5		
Aberdeen	13·5	Clydebank	10·4		
SCOTLAND		13·5			

Ward Mortality.—The table on page 6 contains a summary of the principal statistics relating to the wards in the City. The highest general death-rate was recorded in St. Giles Ward (16·1), and the lowest in Gorgie (11·2) and West Leith (11·2). In the wards which had death-rates above the figure for the City as a whole (13·5), bad housing features were especially prevalent. This was the case in such wards as St. Giles (16·1), St. Andrew's (15·1), St. Stephen's (15·1), and Broughton (14·6), in all of which there are many old houses where fresh air and sunlight are not as plentiful as they should be. Even in relatively unhealthy areas, however, improvement is noted as compared with the conditions prevailing ten years ago. The death-rate in St. Giles ward was 19·8 in 1922 and 16·1 in 1932; in the same period St. Andrew's has dropped from 17·8 to 15·1; and St. Leonard's from 17·3 to 14·3.

Environment can hardly be held accountable for the relatively high death-rate of 16·0 returned in the residential ward of Morningside, and the explanation would appear to lie in the fact that a large proportion of elderly people live in retirement there. More than 68 per cent. of the deaths occurring in Morningside ward related to persons over 65 years of age.

The infantile mortality figures were highest in St. Andrew's ward (119), Central Leith (107), Broughton (92), and North Leith (88). Here again the high rates are found in districts in which the need for housing improvements is clamant.

On the other hand, the figures in some cases represent a substantial improvement when compared with the conditions of ten years ago. Thus in St. Giles ward the infantile mortality rate was 141 in 1922 and 83 in 1932. Canongate's figure fell from 109 to 71, and St. Leonard's from 92 to 76. North Leith Ward's return declined from 140 to 88 and Central Leith from 128 to 107. In St. Andrew's Ward, however, the rate for the past year was 119 as compared with 91 ten years ago. Over a period of ten years, the average infantile mortality in the ward has been 102, as compared with 81 in the City as a whole. The problem of relieving this badly congested district remains very acute.

The improvement noted in the infantile mortality rate in St. Leonard's Ward was well maintained. There were 394 births in the ward during the year, and 30 deaths of infants under the age of one year, giving an infantile mortality rate of 76 per 1000 births, as compared with 104 in 1931, and 102 in 1930. From these figures it is apparent that the slum clearance schemes in this area are having beneficial results. Portobello Ward has some unsatisfactory housing features which, so far as mortality statistics are concerned, are balanced to some extent by the growth of suburban colonies in the ward. The general death-rate in the ward was 12·6 and the infantile mortality rate 82.

The four Leith wards returned figures which agreed in their main features with previous years. The North and Central Wards, which embrace a considerable number of old and congested habitations, showed general death-rates of 14·5 and 13·1, and infantile mortality rates of 88 and 107 respectively.

The general death-rates in the three suburban wards were:—Liberton 11·4, Colinton 12·0, and Corstorphine and Cramond 13·8.

Table showing the Population, etc., also the Births and Deaths in each Ward during 1932.

WARD.	Population.	Area in Acres.	Density of Population per Acre.	BIRTHS.		INFANTILE MORTALITY.		DEATHS.			
				Number.	Rate per 1000.	Deaths.	Rate per 1000 Births.	* EPIDEMIC DISEASES.		ALL CAUSES.	
								Number.	Rate per 1000.		Number.	Rate per 1000.
Calton	21,956	228	96.3	329	15.0	27	82	9	.4	300	13.7
Canongate	21,552	965	22.3	379	17.6	27	71	12	.6	250	11.6
Newington	21,290	891	23.9	238	11.2	14	59	8	.4	283	13.3
Morningside	21,635	1,358	15.9	130	6.0	3	23	2	.1	346	16.0
Merchiston	20,232	677	29.9	164	8.1	9	55	3	.1	294	14.5
Gorgie	26,025	676	38.5	485	18.6	31	64	8	.3	292	11.2
Haymarket	17,588	959	18.3	142	8.1	11	77	3	.2	211	12.0
St. Bernard's	17,785	1,250	14.2	264	14.8	13	49	6	.3	203	11.4
Broughton	15,379	472	32.6	251	16.3	23	92	7	.5	224	14.6
St. Stephen's	17,428	190	91.7	266	15.3	22	83	8	.5	263	15.1
St. Andrew's	11,189	296	54.3	177	15.8	21	119	8	.7	169	15.1
St. Giles	20,563	266	77.3	422	20.5	35	83	20	1.0	332	16.1
Dairy	21,145	187	113.1	365	17.3	26	71	8	.4	249	11.8
George Square	21,003	248	84.7	295	14.0	23	78	14	.7	294	14.0
St. Leonard's	20,486	104	197.0	394	19.2	30	76	23	1.1	292	14.3
Portobello	26,276	2,200	11.9	461	17.5	38	82	9	.3	332	12.6
South Leith	29,487	819	36.0	543	18.4	38	70	10	.3	374	12.7
North Leith	20,189	218	92.6	420	20.8	37	88	17	.8	292	14.5
West Leith	19,146	462	41.4	294	15.4	13	44	5	.3	214	11.2
Central Leith	14,188	142	99.9	253	17.8	27	107	8	.6	186	13.1
Liberton	10,834	6,339	1.7	268	24.7	15	56	9	.8	124	11.4
Collinton	7,025	5,602	1.3	90	12.8	5	56	3	.2	84	12.0
Corstorphine and Cramond	12,434	8,067	1.5	149	12.0	9	60	8	.4	171	13.8
Institutions	11,059	...	...	138	...	9	...	...	...	245	...
Military Quarters	1,906	...	...	43	...	1	...	...	...	8	...
Totals	447,800	32,526	13.8	6,960	15.5	507	73	208	.5	6,032	13.5

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhoea and Enteritis under 2 years.

NOTE.—The Ward populations have been adjusted by deducting the population resident in the principal institutions and military quarters. Births and deaths occurring in institutions are allocated to Wards, except in cases where a permanent domicile cannot be established.

TABLE showing the number of Deaths transferred from other districts) and the Death-rates per 1000 of the Population during 1932 from all causes and from certain specified causes ; also the Population, the number of Deaths and the Death-rates per 1000, at all ages and certain age-periods.

	Annual Death-rate per 1000	All Ages	Under 1 Year	1 and under 5 Years	Total under 5 Years	5 and under 10 Years	10 and under 15 Years	15 and under 25 Years	25 and under 35 Years	35 and under 45 Years	45 and under 55 Years	55 and under 65 Years	65 and under 75 Years	75 Years and upwards	Total above 5 Years
Age Distribution of Population	...	447,800	6,696	26,570	33,266	35,961	32,335	82,221	71,363	58,926	55,295	44,074	24,977	9,382	414,534
Deaths from all Causes	...	6,082	507	248	755	88	51	204	263	352	558	991	1,378	1,392	5,277
Annual Death-rate per 1,000	13.5	13.5	75.7	9.3	22.7	2.4	1.6	2.5	3.7	6.0	10.1	22.5	55.2	148.4	12.7
Enteric Fever	.01	3	1	...	1	...	...	...	1	...	1	...	...	...	2
Measles	.20	88	28	53	81	4	...	2	...	...	...	...	1	...	7
Scarlet Fever	.02	8	3	3	3	3	1	...	...	1	...	...	...	...	5
Whooping Cough	.12	52	24	28	52	9	2	...	...	...	...	...	...	...	...
Diphtheria and Croup	.06	27	3	13	16	...	...	...	...	...	...	...	...	...	11
Influenza (Sole Cause)	.03	15	...	...	...	...	...	...	...	...	...	...	...	...	15
Erysipelas	.03	15	...	...	...	...	...	...	...	...	...	...	...	...	15
Encephalitis Lethargica	.02	7	...	...	...	...	...	...	...	...	...	...	...	...	7
Cerebro-Spinal Meningitis	.06	26	...	...	...	...	...	...	...	...	...	...	...	...	11
Tuberculosis of Respiratory System	.69	313	3	5	8	2	2	50	90	59	52	31	19	...	305
Tuberculous Meningitis	.09	41	9	14	23	6	2	7	2	...	1	...	...	...	18
Tuberculosis of Intestines and Peritoneum	.04	17	...	...	...	...	...	...	...	...	...	...	...	...	16
Other Tuberculous Disease	.09	42	4	7	11	1	6	4	3	3	2	3	6	...	31
Malignant Disease	1.89	849	...	2	2	1	1	5	8	38	117	251	270	156	847
Rheumatic Fever	.03	14	1	1	1	2	5	2	...	2	...	...	1	...	13
Meningitis	.03	15	3	1	4	...	1	1	...	2	4	3	...	...	11
Cerebral Haemorrhage, Embolism, Thrombosis	1.48	663	...	...	...	...	...	...	...	14	43	122	247	230	663
Other Nervous Diseases	.32	146	15	13	28	3	6	11	8	13	16	20	20	21	118
Heart Disease	2.14	957	...	...	...	1	3	13	15	42	87	209	286	301	957
Other Diseases of Circulatory System	.35	157	...	2	2	...	...	...	...	5	13	24	47	66	155
Bronchitis	.71	319	27	2	29	...	...	...	...	6	19	45	86	130	290
Pneumonia (all forms)	.98	438	88	51	139	10	1	16	29	34	27	46	68	68	299
Other Diseases of Respiratory System	.23	101	5	4	9	2	2	1	1	7	6	14	29	30	92
Gastric and Duodenal Ulcer	.13	60	...	...	...	...	...	...	...	7	12	20	18	...	60
Diarrhoea and Enteritis (under 2 years)	.07	30	23	7	30	...	...	...	...	...	...	...	...	...	...
Appendicitis	.09	43	...	1	1	4	2	4	6	5	5	8	6	2	42
Diseases of Liver and Gall Bladder	.08	38	...	...	...	...	...	...	...	2	7	9	11	7	38
Other Diseases of Digestive System	.26	116	8	8	16	3	3	7	7	10	17	8	23	24	100
Nephritis—Acute and Chronic	.39	173	1	1	5	1	...	5	11	13	23	36	51	32	172
Other Genito-Urinary Diseases	.18	79	4	1	5	...	...	2	1	2	7	9	28	25	74
Puerperal Sepsis	.03	14	...	...	...	...	...	4	7	3	...	...	...	...	14
Other Diseases associated with Childbirth	.07	33	...	...	...	...	...	1	19	12	1	...	...	...	33
Diseases of Early Infancy and Malformations	.52	233	229	2	231	...	1	1	...	...	...	...	...	...	2
Violent Deaths	.62	279	8	12	20	16	7	33	20	28	33	50	35	37	259
All Other Causes	1.39	621	13	13	26	11	6	24	18	40	54	75	115	252	595

CAUSES OF DEATH.

The table on page 7 shows the principal causes of death tabulated according to disease groups and age-periods.

Principal Epidemic Diseases.—Included in this group are enteric fever, measles, scarlet fever, whooping-cough, diphtheria, and diarrhœa and enteritis in children under the age of two years. There were 208 deaths from these diseases, compared with 82 in 1931. The increase was due to an outbreak of measles in the early part of the year. Over the twelve months measles and whooping-cough together accounted for 140 deaths as compared with 23 in the preceding year.

Further particulars regarding the notification of the diseases included in this group will be found under the heading "Infectious Diseases," on page 11.

Influenza.—There was an outbreak of influenza in the early part of the year, but only in 15 cases was it certified as the sole cause of death. In another 139 instances, however, influenza was stated to have been a contributory cause, and of these latter deaths, 70 were complicated with pneumonia, 24 with heart disease, 15 with bronchitis, and 30 with various other causes.

Tuberculosis.—The deaths from all forms of tuberculosis numbered 413—217 males and 196 females. The death-rate for the year was equal to .9 per 1000 of the estimated population. This disease is more fully dealt with in the report by the Tuberculosis Officer on page 16.

Cancer.—A further increase in the number of deaths from cancer has to be recorded. The number was 849, as compared with 686 in 1931. Of the total deaths, 682 were certified as "carcinoma," 25 as "epithelioma," 31 as "sarcoma," and 111 as "malignant disease." A large proportion of the cases was connected with the alimentary tract, viz., stomach and œsophagus 195, intestines and rectum 163, liver and gall bladder 51, pancreas 23, and pylorus 7.

Malignant disease of the genital organs was the cause of 73 deaths among women. In 43 of these the uterus was stated to be the part affected, while the ovaries and vagina were given as the site in 30 instances. The female breast was affected in 69 cases.

Diseases of the Nervous System.—The deaths under this heading numbered 824, of which cerebral hæmorrhage, apoplexy, and hemiplegia accounted for 663. Meningitis, other than tuberculous or cerebro-spinal, accounted for 15 deaths. Of the total deaths, 518 or 62·9 per cent. were persons over the age of 65 years.

Diseases of the Circulatory System accounted for 1,114 deaths. Endocarditis and valvular disease were responsible for 260 deaths, diseases of the myocardium for 448, while 249 were due to other heart affections. Diseases of the blood vessels accounted for 157 deaths, 124 being classified as arterio sclerosis and gangrene, and 33 as aneurysm.

Diseases of the Respiratory System.—The deaths from respiratory diseases other than those in the influenzal group numbered 858. All forms of pneumonia caused 438 deaths, and bronchitis 319. In the respiratory group there were 177 deaths of children under the age of five years, no fewer than 120 being infants in their first year. Of these latter deaths, 88 were due to pneumonia and 27 to bronchitis.

Diseases of the Digestive System.—The diseases associated with this group accounted for 257 deaths. This number does not include 30 deaths from diarrhœa and enteritis, under 2 years of age, which have been allocated to the principal epidemic diseases group. Non-malignant diseases of the liver caused 38 deaths, ulceration of the duodenum 31, ulceration of the stomach 29, and appendicitis 43.

Diseases of the Genito-Urinary System caused 252 deaths, and of these 173 were certified as nephritis, 46 as diseases of the prostate, and 33 to other conditions.

Deaths by Violence.—The deaths certified as due to violence numbered 279, and of these 185 were males and 94 females.

INFECTIOUS DISEASES.

The various diseases falling to be dealt with under this heading are :—

- (1) Diseases which are notified in terms of Section 6 of the Infectious Disease (Notification) Act, 1889.
- (2) Diseases which have been added to the list by Orders made by the Department of Health for Scotland under Section 78 of the Public Health (Scotland) Act, 1897.
- (3) Measles and whooping-cough, which have been made temporarily notifiable by the Local Authority.

The following table shows the number of notifications for each month of the year :—

Disease.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Diphtheria and Membranous Croup	58	49	79	67	55	52	46	53	59	47	62	35	662
Erysipelas	24	30	47	43	38	26	21	17	10	37	19	28	340
Scarlet Fever	46	68	52	56	96	87	76	87	100	154	128	130	1080
Typhoid Fever	3	...	...	...	2	1	3	4	1	1	6	5	26
Puerperal Fever	19	9	18	10	8	8	2	7	5	12	12	6	116
Puerperal Pyrexia	11	6	6	5	5	3	3	4	3	5	9	8	68
Cerebro-spinal Fever	3	5	10	6	6	3	5	6	2	3	3	2	54
Tuberculosis, Pulmonary	40	49	51	42	55	54	45	32	34	40	35	36	513
Tuberculosis, other forms	18	27	24	20	23	24	23	30	12	27	26	18	272
Ophthalmia Neonatorum . . . . .	...	3	...	4	5	5	2	3	3	3	2	...	30
Malaria . . . . .	...	1	2	1	...	2	3	...	3	2	1	1	16
Dysentery	2	3	2	...	1	...	1	2	...	17	7	5	40
Acute Primary Pneumonia	52	66	75	65	35	38	27	33	35	36	90	55	607
Acute Influenzal Pneumonia	7	56	63	6	...	1	2	...	1	3	4	19	162
Measles	378	1868	3932	1863	426	102	44	19	5	57	51	41	8786
Whooping Cough	46	97	125	117	85	111	102	148	95	55	105	119	1205
Polio-myelitis . . . . .	...	...	...	...	...	...	...	...	...	1	2	3	6
Polio-encephalitis	1	...	...	...	...	...	...	...	...	...	...	...	1
Encephalitis Lethargica	1	1	1	...	...	...	...	...	...	...	...	1	4
Chickenpox	231	145	109	73	52	37	56	22	28	49	135	188	1125
Totals	940	2483	4596	2378	892	554	461	467	396	549	697	700	15,113

Enteric Fever.—During the year, 26 cases of enteric fever were reported to the Department. It was ascertained that in four of these the infection had been contracted outwith the City.

An outbreak of *B. Paratyphosus B.* occurred in a ward of the Royal Infirmary in the latter part of the year, as a result of which nine patients were removed to the City Hospital. The infection was traced to a patient who was admitted to the Infirmary from a village outside Edinburgh.

Four deaths occurred among the notified cases, representing a death-rate of 15·4 per cent. of the total.

Diphtheria.—The notifications of diphtheria numbered 662, as compared with 901 for the previous year, and 1,102 in 1930. The disease was of a mild type generally, and was not specially confined to any particular ward of the City.

While the intimations showed a substantial reduction as compared with the preceding year, the mortality rate (4·1 per cent.) was slightly below the average for the past five years (4·6).

Scarlet Fever.—The number of scarlet fever notifications received during the year was 1,080, as compared with 647 in 1931. Portobello Ward (141) returned the highest total, but there was no localised outbreak. Eight deaths were registered, giving a death-rate of .7 per cent. of the total notifications.

Cerebro-spinal Meningitis.—There were 54 cases of cerebro-spinal meningitis and of these 39 died, representing a fatality rate of 72.2 per cent. Twelve deaths were of persons whose domicile was outwith the City boundaries and who had been sent to Edinburgh for treatment at the Royal Infirmary or other institution, where they were subsequently diagnosed as cases of cerebro-spinal meningitis and removed to the City Hospital.

Erysipelas.—Throughout the year, 340 persons were reported to the Department as suffering from erysipelas, and 16 deaths were certified as being due to the disease, giving a death-rate of 4.7 per cent. In the preceding year there were 280 notifications and eight deaths, representing a death-rate of 2.9 per cent.

Puerperal Fever and Pyrexia.—The number of puerperal fever cases was 116, and of puerperal pyrexia 68, as compared with 113 and 90 respectively in 1931.

Reference to these diseases is made by the Child Welfare Medical Officer in his report on page 51.

Ophthalmia Neonatorum.—The notifications of 30 cases of ophthalmia neonatorum were recorded during the year. The disease is dealt with by the Child Welfare and Venereal Diseases Medical Officers in their reports on pages 51 and 66 respectively.

Measles.—During the year there occurred one of the worst epidemics of measles experienced in the City, and a total of 8,786 notifications was received by the Department. As these represent only the first case of the disease occurring in a household, the total number affected must have been at least double this figure.

The increased incidence was noted at the beginning of January, and the notifications increased steadily until the peak of the epidemic was reached at the end of the third week of March. During this week 1,015 intimations were received. The numbers subsequently decreased rapidly, but it was not until June that the normal level was reached.

The monthly notifications during the epidemic period were as follows :—

January	378	April	1,863
February	1,868	May	426
March	3,932		
		Total	<u>8,467</u>

The wards most severely affected in this period were Gorgie (700), South Leith (669), Portobello (617), Canongate (497), North Leith (477), and Dalry (466), and it is interesting to record the progress of the epidemic from ward to ward each month. During January the greatest number of cases occurred in Dalry and Gorgie Wards, while in February the epidemic spread to George Square and South Leith. March was the month in which most cases were notified, and the disease

was seen to spread from South Leith to Portobello, while Gorgie was still heavily affected. The Central areas were now also involved and a large number of notifications were received from Canongate and St. Bernard's. In April, the North, South, and Central Wards of Leith were specially involved, while cases were still numerous in Portobello, Canongate and Calton. The epidemic terminated in May, the districts in which the disease still lingered being North and South Leith, Portobello, Canongate and Calton.

The age incidence is shown in the following table :—

Age-Periods.	0-4.	5-9.	10-14.	15 and over.	Total.
Cases	4,768	3,531	257	230	8,786
Percentage of total	54.3	40.2	2.9	2.6	100.0
Deaths	82	4	0	3	89

This table shows that the majority of the cases (54.3 per cent.) were of children under the age of 5 years, and that 82 deaths, representing a percentage of 92.1 of the total, occurred in this age-group. This indicates the severity of the disease in children under school age.

At the beginning of the epidemic two nurses were specially detailed to assist the Enquiry Officers in visiting certain houses from which notifications were received, and in February an additional nurse was engaged for this work. Mothers were assisted by advice in regard to the management of affected children, and were encouraged when necessary to seek medical aid. Severe cases with complications were reported to the Department for removal to hospital.

Whooping Cough.—There were 1,205 "first" cases of whooping-cough notified during the year, but the disease was not unduly prevalent in any particular month, the average monthly notifications being 100. The deaths numbered 52, and were all of children under the age of 5 years.

Tuberculosis.—A decrease in the number of notifications of pulmonary tuberculosis is noted as compared with the previous year, 513 cases being intimated, as against 565 in 1931.

Notifications of non-pulmonary forms of the disease, however, showed a slight increase over the preceding year, the number being 272, as compared with 254 in 1931.

On page 16 will be found a report by the Tuberculosis Officer on the work of his Department.

Other Diseases.—Other infectious diseases not dealt with here are tabulated on page 11. No special comment is called for regarding these.

Notifications of and deaths from the Principal Epidemic Diseases throughout the various wards in the City are shown in the table on page 14, while on page 15 a statement is given regarding the type of house occupied by the infected persons.

TABLE showing the Infectious Disease Notifications and Deaths (except Phthisis) in each Ward during 1932.

No.	WARD.	ENTERIC FEVER.		PUERPERAL FEVER.		DIPHTHERIA.		SCARLET FEVER.		ERYSIPELAS.		CEREBRO-SPINAL FEVER.		MEASLES.		WHOOPING COUGH.		PNEUMONIA (all Forms).	
		Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.
1	Calton	1	...	3	1	38	1	56	...	16	...	1	1	363	1	63	6	45	20
2	Canongate	...	...	3	1	42	1	49	1	17	1	...	...	514	5	71	6	40	20
3	Newington	1	...	5	...	29	1	53	...	8	2	...	...	237	4	34	2	31	19
4	Morningside	...	...	...	...	23	1	29	1	11	...	...	...	210	...	8	...	11	22
5	Merchiston	1	...	...	1	14	1	39	...	4	...	1	1	222	...	23	1	15	15
6	Gorgie	...	...	3	...	24	...	48	...	18	1	3	3	763	3	97	4	30	23
7	Haymarket	1	1	1	...	13	...	23	...	6	...	...	...	291	1	31	...	12	16
8	St. Bernard's	...	...	3	...	12	...	45	...	8	...	1	1	368	2	66	3	30	15
9	Broughton	...	...	5	1	21	...	32	...	16	1	...	...	285	4	49	1	21	21
10	St. Stephen's	...	...	7	2	27	1	38	1	24	...	1	1	352	3	38	...	22	18
11	St. Andrew's	1	1	3	1	14	1	24	...	10	...	4	3	200	4	22	2	23	15
12	St. Giles	1	...	8	...	50	1	31	...	11	1	5	2	361	7	68	10	44	24
13	Dalry	1	...	6	...	37	2	42	1	16	...	3	3	481	2	47	1	24	26
14	George Square	...	...	5	...	33	3	38	...	13	2	1	1	362	7	45	2	38	21
15	St. Leonard's	2	...	6	...	42	1	56	...	12	...	4	4	406	12	75	4	47	20
16	Portobello	2	1	7	3	30	3	141	...	16	1	1	...	637	4	62	1	70	21
17	South Leith	1	...	5	...	51	...	88	...	27	...	2	...	704	6	91	4	58	21
18	North Leith	...	...	5	2	21	1	38	1	17	1	3	1	496	11	81	4	58	31
19	West Leith	...	...	2	1	23	2	27	1	15	...	2	1	357	1	81	1	29	17
20	Central Leith	...	...	...	...	13	1	35	...	19	...	2	2	399	3	64	2	33	19
21	Liberton	...	...	4	1	48	3	30	...	5	...	1	1	310	4	17	...	22	9
22	Collinton	...	...	1	...	12	...	14	...	2	...	...	...	87	...	2	...	2	4
23	Corstorphine and Craigmund	...	...	3	1	19	...	18	...	7	1	...	...	184	2	27	1	13	10
	Military Quarters	...	...	...	...	3	...	8	...	1	...	...	...	40	...	14	...	7	1
	Institutions	14	1	29	3	23	2	78	2	41	5	19	12	157	3	29	1	44	10
	Totals	26	4	116	*17	662	27	1,080	8	340	16	54	†39	‡8,786	‡89	‡1,205	56	769	438
	Case- and Death-rates (per 1000 population) for year	·06	·01	·26	·04	1·48	·06	2·41	·02	·76	·04	·13	·09	19·62	·20	2·69	·13	1·72	·98
	Case- and Death-rates (per 1000 population) for 1931	·03	·00	·26	·05	2·03	·06	1·46	·01	·63	·02	·11	·08	1·8	·01	1·9	·04	1·5	1·10

The deaths in this Table represent those actually occurring among the cases notified although taking place after 31st December.

* Includes 3 deaths transferred out.

† Includes 1 death transferred out.

‡ Only first case in household notifiable.

TABLE showing the Notifications of Infectious Diseases, classified according to size of house in which the infected persons resided.

DISEASE.	1 Apartment.		2 Apartments.		3 Apartments.		4 Apartments.		5 Apartments.		Over 5 Apartments.		Institutions and Military Quarters.		Total Cases.
	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	
Diphtheria	54	8.2	236	35.7	203	30.7	50	7.5	22	3.3	71	10.7	26	3.9	662
Erysipelas	26	7.6	109	32.1	70	20.6	43	12.6	31	9.1	19	5.6	42	12.4	340
Scarlet Fever	60	5.5	280	25.9	357	33.1	122	11.3	54	5.0	121	11.2	86	8.0	1,080
Typhoid Fever	1	3.9	3	11.5	3	11.5	1	3.9	1	3.9	3	11.5	14	53.8	26
Puerperal Fever and Puerperal Pyrexia	13	7.1	59	32.1	52	28.3	15	8.1	5	2.7	2	1.1	38	20.6	184
Cerebro-spinal Meningitis	7	13.0	16	29.6	8	14.8	3	5.5	...	...	1	1.9	19	35.2	54
Totals	161	6.9	703	30.0	693	29.5	234	9.9	113	4.8	217	9.3	225	9.6	2,346

TUBERCULOSIS.

REPORT BY TUBERCULOSIS OFFICER.

I have the honour to submit the Annual Report of the Tuberculosis Department for the year 1932.

Whilst no changes of a dramatic nature have resulted it is felt that some progress has been achieved in the past year. The progressive decline in the death-rate has been maintained and the figure for 1932 constitutes the lowest on record for the City, being equivalent to $\cdot 69$ per 1000 of the estimated population as compared with $\cdot 74$ per 1000 for the preceding year.

In certain districts of the City the mortality rate from pulmonary tuberculosis has shown an encouraging decline, *e.g.*, in George Square Ward the rate has dropped from 1.2 per 1000 in 1931 to $\cdot 8$ for the year 1932, whilst in North Leith for the corresponding period the death-rate has been more than halved—from 1.3 per 1000 in 1931 to $\cdot 5$ in 1932. In the Colinton Ward no deaths from phthisis were recorded. In St. Andrew's Ward, on the contrary, which contains many old and overcrowded houses, the mortality rate has increased from $\cdot 5$ per 1000 in 1931 to 1.1 in 1932.

The number of cases notified during the year as suffering from pulmonary tuberculosis is 52 less than in 1931, representing an incidence rate of 1.1 per 1000 as compared with 1.3 in 1931.

It is to be regretted that an actual increase has to be reported in the number of deaths from the non-pulmonary forms of tuberculosis for the past year, 100 deaths having occurred as compared with 85 in 1931. There was also an increase in the number of notifications of non-pulmonary tuberculosis cases, representing an incidence of $\cdot 7$ per 1000 as compared with $\cdot 6$ per 1000 for the year 1931.

Repeated bacteriological researches have everywhere abundantly confirmed the fact that the large majority of cases of non-pulmonary or so-called surgical tuberculosis are due to infection with the bovine type of tubercle bacillus contained in the milk of tuberculous cows. The evil is everywhere acknowledged, the remedy is simple—a tubercle-free milk supply.

The figures for the past year are a grim reminder that we are yet far from having attained that consummation. In cities where compulsory pasteurisation of milk is in force, the results obtained in the prevention of disease and death from the various forms of surgical tubercle bear eloquent testimony to the efficacy of the measure, and when we contemplate the mortality and notification incidence in Edinburgh for the past year, it leaves room for grave doubt as to whether the time has not yet come when more stringent measures should be enforced to ensure a steady and progressive betterment in the present unsatisfactory position.

Constant consideration is being devoted to the therapeutic aspect of the tuberculosis problem and every new remedy offering any hope of curative effect is given

a thorough trial in hospital on suitably selected cases. There is ample evidence that artificial pneumothorax treatment still constitutes one of the most powerful therapeutic measures we possess in the treatment of pulmonary tuberculosis, and this form of therapy is being steadily pursued in an increasing number of cases, with very gratifying results. Occasionally it is found necessary to combine the pneumothorax therapy with other forms of treatment such as sanocrysin or phrenicectomy.

It is very encouraging to note that the number of patients being referred to the Dispensary by private practitioners for purposes of diagnosis is steadily increasing and every effort is made to encourage and extend this practice.

A more detailed account of the work of the various tuberculosis institutions will be found in the following pages.

It is my duty and privilege to acknowledge my sincere thanks and indebtedness to all the members of the tuberculosis staff for their loyal and ever ready assistance in the work of the Department.

I have the honour to be, Sir,

Your obedient Servant,

H. C. ELDER.

Tuberculosis Officer.

PULMONARY TUBERCULOSIS.

Notifications.—All notifications of persons who may have come to Edinburgh for advice at one or other of the many public Institutions in the City are transferred to the respective areas in which the patients reside. The same system of transfer applies to Edinburgh citizens who may be certified during temporary absence from their homes. Duplicate intimations are excluded. After these adjustments had been made, the number of cases of pulmonary tuberculosis allocated to the City for the year 1932 was 513, representing an incidence rate of 1.1 per 1000 of the estimated population.

The sex and age classification of the persons notified is set out in the following table. The males numbered 298 and the females 215, as compared with 300 and 265 in 1931. Of the total cases, 32 per cent. referred to persons under the age of 25 years, while 68 per cent. were classified in the age groups over 25 years.

Sex.	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70 and over.	Total
Male .	13	5	8	17	34	39	29	24	28	26	28	18	14	9	6	298
Female .	6	7	9	21	44	32	27	15	15	10	11	5	6	5	2	215
Total .	19	12	17	38	78	71	56	39	43	36	39	23	20	14	8	513

In the next table the notifications are arranged according to municipal wards :—

	Notifi- cations.	Rate per 1000.		Notifi- cations.	Rate per 1000.
Calton	28	1·3	George Square	33	1·6
Canongate	33	1·5	St. Leonard's	22	1·1
Newington	22	1·0	Portobello	28	1·1
Morningside	14	·6	South Leith	22	·7
Merchiston	12	·6	North Leith	30	1·5
Gorgie	27	1·0	West Leith	19	1·0
Haymarket	13	·7	Central Leith	17	1·2
St. Bernard's	13	·7	Liberton	11	1·0
Broughton	19	1·2	Colinton	6	·9
St. Stephen's	13	·7	Corstorphine and Cramond	4	·3
St. Andrew's	26	2·3	Institutions (other than		
St. Giles	50	2·4	Sanatoria)	24	...
Dalry	24	1·1	Military Quarters	3	...

The incidence of pulmonary tuberculosis varies from year to year in the respective wards. It should be noted, however, that a large proportion of cases still emanate from the older districts of the City, viz. :—St. Giles, George Square, Canongate, Calton and St. Andrew's. The aggregate number of notifications received from these five wards was 170 or fully 33 per cent. of the total for the whole City.

The notifications are tabulated herewith to show the type of house occupied by the infected persons :—

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging- Houses.	Institu- tions, Etc.	Total.
50	144	149	114	29	27	513

Deaths.—The deaths allocated to the City, after corrections for transfers had been made, numbered 313. Of these, 4 deaths of Edinburgh citizens occurred at Bangour Mental Hospital, while 7 deaths were reported from various other districts in Scotland. The death-rate was equivalent to ·69 per thousand of the estimated population and this represents the lowest rate from respiratory tuberculosis that has yet been recorded for the City.

The death-rates for the last five years were as follows :—

Year	1928.	1929.	1930.	1931.	1932.
Death-rate	·79	·83	·76	·74	·69

The accompanying table shows the distribution of the deaths according to wards :—

WARDS.	Number of Deaths.	Rate per 1000.	Sex.		Age-periods.															
			Male.	Female.	Under 15 years.		15 and under 20 years.		20 and under 25 years.		25 and under 35 years.		35 and under 45 years.		45 and under 55 years.		55 and under 65 years.		65 yrs. and upwards.	
					M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Calton	15	·7	10	5	...	1	...	...	2	2	2	1	2	1	3	...	...	...	1	...
Canongate	19	·9	11	8	...	1	...	...	2	1	3	3	1	1	3	2	...	...	2	...
Newington	12	·6	5	7	...	...	...	...	...	...	1	5	2	...	...	...	2	1	...	1
Morningside	9	·4	4	5	...	...	...	...	...	...	1	3	...	...	2	...	...	1	1	1
Merchiston	13	·6	8	5	1	...	...	...	1	1	1	2	...	...	4	1	1	...	...	1
Gorgie	17	·7	11	6	...	...	...	...	...	...	6	4	3	2	1	...	1	...	...	...
Haymarket	2	·1	1	1	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
St. Bernard's	12	·7	5	7	...	...	...	...	1	2	1	3	1	1	...	1	2	...	...	...
Broughton	14	·9	6	8	1	1	...	1	1	2	...	3	2	...	1	1	...	...	1	...
St. Stephen's	12	·7	7	5	...	...	1	1	1	...	2	1	2	3	...	...	1	...	...	...
St. Andrew's	12	1·1	7	5	1	...	1	...	1	...	1	4	...	...	3	...	...	1	...	...
St. Giles	37	1·8	27	10	...	...	...	2	1	2	5	3	7	1	6	2	6	...	2	...
Dalry	19	·9	12	7	...	...	...	2	...	3	2	3	2	3	...	...	2	1	1	1
George Sq.	17	·8	13	4	...	...	1	...	1	...	3	1	2	2	1	...	3	...	2	1
St. Leonard's	13	·6	6	7	1	1	...	2	...	2	1	...	2	...	2	1	...	...	...	1
Portobello	18	·7	11	7	...	1	...	3	...	6	...	1	4	...	2	...	...	1	...	...
South Leith	18	·6	2	16	...	1	...	...	2	1	6	1	3	...	...	...	3	...	...	1
North Leith	11	·5	5	6	...	...	...	...	...	...	4	2	...	3	1	...	1	...	...	...
West Leith	11	·6	6	5	...	...	...	1	3	2	...	2	1	1	1	...	...	...	...	...
Central Leith	12	·8	4	8	...	...	...	1	3	1	3	1	1	...	1	1	...	1	...	...
Liberton	6	·6	3	3	...	2	...	...	...	1	...	1	...	1	1	...	...	...	...	...
Colinton . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Corstorphine & Cramond	5	·4	1	4	...	...	...	...	...	1	...	...	1	...	1	...	2	...	...	...
Institutions (other than Sanatoria).	9	...	5	4	...	...	...	1	...	1	...	...	...	3	1	2	...	...	...	1
Military Qrs. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	313	·7	170	143	4	8	3	7	18	22	42	48	36	23	37	15	19	12	11	8
Edin. Area	241	·7	144	97	4	5	3	6	16	13	36	35	29	17	29	10	16	5	11	6
Leith Area	52	·6	17	35	...	1	...	...	2	8	4	13	6	5	4	2	1	5	...	1
Suburban A.	11	·4	4	7	...	2	...	...	...	...	2	...	1	1	1	2	...	2	...	...
Institutions	9	...	5	4	...	...	...	1	...	1	...	...	...	3	1	2	...	...	...	1
Military Qrs. . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Deaths in Relation to Notifications.—The deaths from pulmonary tuberculosis since 1921 are tabulated to show the lapse of time between notification and death. It will be seen from this table that 55 or 18 per cent. of the deaths related to cases which had not been previously notified. It is regrettable that so many cases should first come to the knowledge of the Department through information received from the weekly death returns. I have referred to this subject in previous reports, and again I would direct the attention of the medical profession to the Tuberculosis Regulations, 1912, which state that "every Medical Practitioner attending or called in to visit any person, shall, within 48 hours after first becoming aware that such person is suffering from pulmonary tuberculosis, complete, sign and transmit a notification in the form set forth in Schedule A of these Regulations, to the Medical Officer of Health of the district in which the person is residing."

Year.	Within 1 month	From 1 to 3 months	From 3 to 6 months	From 6 months to 1 year	From 1 to 2 years	Over 2 years & under 3	Over 3 years & under 4	From 4 years upwards	Notified after Death	Total.
1921	45	47	29	60	43	21	7	19	110	381
1922	38	37	43	56	53	23	13	25	79	367
1923	51	49	30	45	49	35	13	38	87	397
1924	49	48	49	51	67	34	21	49	56	424
1925	57	47	35	38	48	28	14	47	87	401
1926	49	42	36	38	42	27	11	42	69	356
1927	46	41	28	47	60	30	14	47	68	381
1928	56	41	23	26	47	26	14	51	61	345
1929	53	33	39	36	52	23	11	53	62	362
1930	56	34	26	29	53	14	14	39	68	333
1931	47	33	27	25	43	26	20	50	55	326
1932	38	42	25	28	37	33	7	48	55	313

NON-PULMONARY TUBERCULOSIS.

Notifications.—The total number of new cases of non-pulmonary tuberculosis reported to the Department during the year was 272, representing an incidence of .7 per 1000 of the estimated population. The figures for 1930 and 1931 were 295 and 254 respectively, and the incidence rates .7 and .6 per 1000.

The age incidence of the notified cases is shown in the accompanying table :—

Sex.	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70 and over.	Total
Male .	41	24	12	11	8	5	8	3	2	5	5	2	1	4	...	131
Female .	22	27	9	20	18	12	6	5	4	5	4	4	2	2	1	141
Totals .	63	51	21	31	26	17	14	8	6	10	9	6	3	6	1	272

It will be seen from the above table that young children formed a very large proportion of the cases notified. Of the 272 cases intimated, 114 or 41.9 per cent. referred to children under 10 years of age. In 1922 there were 485 cases reported and 50.3 per cent. referred to children under 10 years.

In the accompanying list the cases are classified to show the part of the body affected by the disease.

Glands	82	Thigh	2
Abdomen	63	Rib	2
Meninges and Brain	40		— 13
Spine	23	Joints—	
Genito-Urinary	12	Hip	13
General	4	Knee	7
Lupus	1	Ankle	3
	— 225	Elbow	1
			— 24
Bones (except Spine)—		Others	10
Foot	7		
Hand	2	Total	272

Deaths.—The deaths from all forms of non-pulmonary tuberculosis allocated to the City during the year numbered 100, as compared with 85 in 1931 and 90 in 1930.

Particulars regarding the sex, age at death, and the organ or region affected by the disease are given herewith :—

Cause of Death.	All Ages.			Age Periods.											
	Both Sexes.	Males.	Females.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75 and over	
Tuberculous Meningitis	41	21	20	9	14	6	2	7	2	...	1	...	...	...
Tuberculosis of Intestines and Peritoneum	17	2	15	...	1	5	...	6	1	...	2	2	...	...
" " Vertebral Column	7	5	2	...	...	...	1	...	...	...	2	2	...	...
" " Other Bones and Joints	3	1	2	...	...	...	...	...	...	...	2	1	...	...
" " Skin . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" " Lymphatic System	2	2	...	1	1	...	...	...	...	...	...	...	...	...
" " Genito-urinary System	4	3	1	...	...	...	1	...	...	1	...	...	2	...
Disseminated Tuberculosis, acute & chronic	19	10	9	3	5	1	4	3	1	1	...	...	1	...
Other Non-pulmonary Tuberculosis	7	3	4	...	1	...	...	1	2	1	1	...	1	...
Totals	100	47	53	13	22	12	8	17	6	3	8	5	6	...	

The undernoted death-rates taken from the Registrar-General's preliminary report for 1932 enables a comparison to be made of the incidence of tuberculosis in Edinburgh and other large centres of population.

Town.	Death-rate per 1000.		Town.	Death-rate per 1000.	
	Pulmonary Tuberculosis.	All forms of Tuberculosis.		Pulmonary Tuberculosis.	All forms of Tuberculosis.
Glasgow . . . . .	.87	1.15	Paisley . . . . .	.60	.84
Edinburgh . . . . .	.69	.91	Greenock . . . . .	.67	1.03
Dundee . . . . .	.61	.79	Motherwell and Wishaw . . . . .	.41	.56
Aberdeen . . . . .	.47	.73	Clydebank . . . . .	.73	1.00

INSTITUTIONAL TREATMENT.

The total number of beds provided for the residential treatment of tuberculosis patients at the various municipal hospitals is as follows:—

Royal Victoria Hospital, Pulmonary Tuberculosis	76 beds.
Polton Farm Colony	18 „
Colinton Mains Hospital	148 „
„ „ „ Non-pulmonary Tuberculosis	73 „
Total	<u>315 beds.</u>

Royal Victoria Hospital.—There is always a demand for admission to this institution, and a careful selection of patients is made so as to ensure that the maximum benefit will be derived from a period of residence. The accommodation is reserved for the treatment of those patients who are in the early stages of pulmonary tuberculosis. On discharge, most of the patients showed a marked improvement in health, and in many cases the disease was definitely arrested.

The accompanying table shows the number of patients passing through the hospital in the course of the year:—

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Men	33	52	55	1	29
Women	34	58	61	...	31
Children	3	15	9	...	9
Totals	70	125	125	1	69

Of the 125 patients discharged from the institution, 12 had been admitted for observation purposes and were finally diagnosed to be suffering from respiratory conditions other than pulmonary tuberculosis. The remaining 113 patients were definitely recognised as cases of tuberculosis, and it is only these that are classified in the following age groups:—

	Under 5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	Over 60	Total.
Males	2	1	8	17	13	9	5	1	56
Females	1	1	17	20	16	2	...	...	57
Totals	3	2	25	37	29	11	5	1	113

The average length of residence of the discharged patients was 207 days.

Carefully graded and suitable forms of light work are provided, under medical supervision, for the adult patients, with satisfactory results.

Colinton Mains Hospital.—Accommodation is available for all forms of tuberculosis at this hospital, there being 148 beds reserved for pulmonary cases and 73 for non-pulmonary cases.

Pulmonary Tuberculosis.—The patients admitted to the wards for the treatment of pulmonary tuberculosis are as a rule in an advanced state of the disease. In many cases there is little hope of complete recovery, but, on the other hand, a period of residence under open-air conditions and with a nourishing diet, is often attended by marked improvement in the health of the patient. In view of the condition of the patients on admission to hospital, it is not surprising that 35 per cent. of the cases died during the year. Of the 261 discharged, however, many benefited greatly from their stay in the institution.

The following table shows the number of patients treated during the year :—

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Men . . .	78	259	162	88	87
Women . . .	50	131	85	51	45
Children . . .	5	13	14	2	2
Totals . . .	133	403	261	141	134

In the course of the year, 261 patients were discharged and 141 died. Of these 402 cases, 18 were found to be suffering from diseases other than tuberculosis.

The average duration of treatment of the discharged patients was 131 days.

The age and sex distribution of the remaining 384 patients were as under :—

	Under 5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	Over 60	Total.
Males	2	3	3	16	62	52	56	36	17	247
Females	2	1	7	20	41	34	19	12	1	137
Totals	4	4	10	36	103	86	75	48	18	384

Non-pulmonary Tuberculosis.—During the year 70 cases of non-pulmonary tuberculosis were admitted to the hospital wards, and in 18 or 25·7 per cent., the disease was localised in the spine. In 9 or 12·9 per cent. of the cases the hip joint was the part affected, while 14 or 20·0 per cent. of the patients suffered from abdominal tuberculousis.

The following table shows the number of patients dealt with during the year :—

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Males	37	41	34	7	37
Females	37	29	24	6	36
Totals	74	70	58	13	73

The sex and age distribution of patients admitted was :—

	Under 5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	Over 60	Total.
Males	6	4	8	8	4	2	5	3	1	41
Females	3	3	...	6	12	2	1	1	1	29
Totals	9	7	8	14	16	4	6	4	2	70

The part affected by the disease in the 70 patients admitted to hospital was as under :—

Part Affected.	Males.	Females.	Part Affected.	Males.	Females.
Spine	10	8	Leg, foot	1	3
Abdomen	9	5	Genito-Urinary	2	4
Glands	6	1	Wrist	1	1
Hip	8	1	Dactylitis	1	...
Knee . . . . .	...	6	Multiple lesions	1	...
Rib	2	...			
			Totals	41	29

The results with regard to patients discharged or dying were as under :—

Parts Affected on Admission.	Males.	Apparently Cured.	Improved.	Not Improved.	Died.	Females.	Apparently Cured.	Improved.	Not Improved.	Died.	Totals.
Abdomen	3	1	1	...	1	10	1	3	2	4	13
Foot	2	1	...	...	1	1	...	1	...	...	3
Glands	4	3	1	...	...	1	1	...	...	...	5
Hip	7	1	5	...	1	6	...	5	1	...	13
Knee	3	2	...	...	1	1	...	...	...	1	4
Spine	12	...	7	3	2	6	...	5	...	1	18
Rib	2	2	...	...	...	...	...	...	...	...	2
Shoulder	1	...	1	...	...	...	...	...	...	...	1
Elbow	1	...	1	...	...	1	...	1	...	...	2
Dactylitis	1	...	1	...	...	...	...	...	...	...	1
Genito-Urinary	5	...	4	...	1	4	...	4	...	...	9
Totals	41	10	21	3	7	30	2	19	3	6	71

The parts affected by the disease in patients who died, together with the ultimate cause of death were :—

Part Affected.	Ultimate Cause of Death.
Males—	
Spine	2 T.B. Meningitis (2).
Foot	1 Spontaneous Pneumothorax.
Knee	1 T.B. Meningitis.
Hip	1 Generalised T.B. and Toxæmia.
Abdomen	1 T.B. Meningitis.
Genito-Urinary	1 T.B. Meningitis.
Females—	
Abdomen	4 T.B. Peritonitis (2).
	2 T.B. Meningitis (2).
Knee	1 T.B. Peritonitis.
Spine	1 Subacute Parenchymatous Nephritis.

The treatment of non-pulmonary tuberculosis by ultra-violet ray therapy has been continued at the Hospital by means of open arc lamps provided in both the male and female wards. The results obtained have been most encouraging. In various tuberculous conditions, especially where glands or the abdomen are affected, the patients received material benefit.

Polton Farm Colony.—This Institution, pleasantly situated in a wooded valley about eight miles from Edinburgh, is used for the further treatment of pulmonary tuberculosis patients discharged from hospitals under the control of the Department. Only those who are likely to benefit by a course of occupational treatment are selected for admission. A model piggery and poultry farm are carried on, and in addition there is an extensive market garden. The grounds altogether extend to about 50 acres. The patients, both male and female, engage in outdoor occupations under the supervision of a qualified farm grieve, from whom they receive instruction which will prove useful in after life. During the year 16 patients were in residence at the Colony.

The expenditure for the upkeep of the institution and the farm for the year to 15th May 1932 was £2,756, 8s., while the revenue from the sale of pigs, poultry, eggs, etc., for the same period amounted to £1,437, 6s. 7d.

This represents a nett loss of £1,319, 1s. 5d. It is felt that in these times of severe economic stress a considerable saving might be effected on this item, for a prolonged and intimate association with the so-called Farm Colony treatment of pulmonary tuberculosis has given rise, in my mind, to grave doubts as to whether the results justify the means.

TUBERCULOSIS DISPENSARIES.

There are two dispensaries in connection with the scheme, and these are conveniently situated to meet the requirements of residents in different districts in the City.

The principal centre is the Royal Victoria Dispensary, Spittal Street, Edinburgh, while the Leith residents are catered for at South Fort Street. The former centre, which is equipped with X-ray apparatus and an installation of lamps for ultra-violet ray treatment, is open every afternoon from Monday to Friday, and also on Thursday evenings, while the Leith Dispensary is open on two afternoons of the week.

A staff of qualified nurses and medical men attend at the dispensaries, and are at the call of medical practitioners and citizens who seek their aid. Medical practitioners in the City continue to refer many doubtful cases for diagnosis, and close co-operation is maintained with the Child Welfare and School Medical Departments so that delicate and weakly children may receive timely advice and treatment.

The following table shows the number of attendances at each of the dispensaries during the year :—

	New cases.		Old Cases.	
	Edinburgh	Leith.	Edinburgh.	Leith.
Men	656	69	3441	726
Women	727	106	3874	793
Children	978	206	4106	854
Totals	<u>2361</u>	<u>381</u>	<u>11,421</u>	<u>2373</u>

Home Visitation.—The visitation of tuberculosis patients in their homes is carried out by the Medical Officers and nurses attached to the dispensaries.

During the year 13,818 such visits were paid, and the number in each month is detailed below :—

	Insured.	Not Insured.	Total.		Insured.	Not Insured.	Total.
January . . .	583	695	1,278	August . . .	433	450	883
February . . .	622	734	1,356	September . . .	292	338	630
March . . .	510	675	1,185	October . . .	534	620	1,154
April . . .	448	481	929	November . . .	596	710	1,306
May . . .	686	676	1,362	December . . .	599	733	1,332
June . . .	663	660	1,323				
July . . .	529	551	1,080	Totals . . .	6,495	7,323	13,818

Patients discharged from hospital after treatment for tuberculosis are strongly advised to attend at the dispensaries periodically for supervision and treatment, if necessary, but unfortunately this advice is not always acted upon. An improvement, however, has been noted in the number of attendances during the year, and educational effort would appear to be having some result.

Artificial Sunlight Treatment.—During the year 340 patients, 213 medical and 127 surgical, were treated at the Ultra-Violet Ray Clinic conducted at the Royal Victoria Dispensary. The installation consists of four arc lamps and one mercury vapour lamp, and a specially trained nurse is in charge of the clinic. The period of treatment generally extends from one to six months, and in all, 14,649 exposures were made throughout the year. The School Medical Department take advantage of this clinic for the treatment of children suffering from debility and other conditions. Many excellent results have been noted.

Extra Nourishment.—In 1916 Local Authorities were empowered to provide extra nourishment in their own homes to patients suffering from tuberculosis. This "domiciliary" treatment consists of a regulated supply of milk, fresh eggs and butter, and is granted to those in reduced financial circumstances and where the Tuberculosis Officer is satisfied that a general improvement in health is likely to result. The cases are reviewed periodically and instructions given to continue the supplies when necessary.

Drugs.—Patients attending the two dispensaries receive all necessary drugs and medicines free of charge. In addition, the Public Health Department bears the cost of medicines prescribed by private medical practitioners to tuberculosis patients throughout the City. These prescriptions are dispensed by panel chemists and priced by the Central Checking Bureau for Scotland to secure uniformity in pricing. There were 1,840 such prescriptions issued during the year and the cost amounted to £187, 9s. 10d.

CITY HOSPITAL FOR INFECTIOUS DISEASES.

REPORT BY MEDICAL SUPERINTENDENT.

I have the honour to present the Annual Report of the City Hospital for the year 1932. During the year there were 4,262 patients admitted to the Wards, of whom 470 were suffering from tuberculosis. The above total includes cases admitted from districts outwith the City boundaries. The greatest number treated in hospital on any one day was 659. The average daily number under treatment was 500.

Scarlet Fever and Diphtheria.—The number of scarlet fever and diphtheria cases admitted to the wards was about the average. Fatality rates of 0·62 per cent. in scarlet fever and ·3·4 per cent. in diphtheria indicate mild types of disease.

Laryngeal Diphtheria.—Further experience of treatment by aspiration and visual intubation confirms the very favourable opinion expressed in the previous Annual Report. Excluding one death which occurred within five minutes of admission to hospital the fatality rate for laryngeal cases was 9·0 per cent.

Health of Staff.—Twenty-two nurses suffered from influenza, sixteen from rubella, and ten from infective jaundice. A single case of each of the following diseases occurred:—diphtheria, measles, chickenpox, mumps, erysipelas, and pulmonary tuberculosis.

Immunization against Diphtheria and Scarlet Fever.—The success of immunization is strikingly indicated by the complete absence of scarlet fever. One successfully immunized nurse contracted a very mild attack of diphtheria. Pre-hospital immunization has been a success.

Training of Nurses.—Thirty nurses completed their training during the year. Of these twenty-one went to various hospitals for general training, and six obtained posts as staff nurses. Twenty-eight passed the State Examination.

Teaching.—Two hundred and thirty-five undergraduates attended clinics at the hospital. These were divided into six sections entailing 72 hours instruction. Two courses were held for candidates for the Diploma in Public Health. These courses were attended by 26 graduates. Three meetings were held during the summer vacation for post-graduate instruction. Including lectures to the nursing staff, 220 hours were devoted to teaching during the course of the year.

Medical Staff.—Owing to illness the services of Dr. W. T. Gardiner were not available during the latter half of the year. This has been a serious loss to the hospital. In his absence Mr J. P. Stewart carried on this very essential work in a most capable manner. Tonsils and adenoids were removed in 187 patients and mastoidectomy performed in twenty cases.

We are indebted to Mr Frank Jardine, F.R.C.S., for advice in surgical problems and for performing major operations.

Dr. A. L. K. Rankin is a most capable and experienced Senior Assistant. The Junior Resident Medical Officers have carried out their duties in a conscientious and satisfactory manner.

Laboratory.—During the year 8,817 reports were issued from the hospital laboratory. Mr Craig, the laboratory assistant, deserves praise for the work he has performed. We are greatly indebted to Professor Mackie and his Assistants at the Bacteriological Department of the University for carrying out virulence tests and other specialised examinations.

Nursing and General Staff.—It is with pleasure that I acknowledge my indebtedness to the Matron, Sisters and nursing staff for their loyal support and assistance in all difficulties. They have one and all given of their best to the patients under their care. The various officials responsible for the kitchen, laundry, and dispensary, have in no small measure contributed to the general efficiency of the hospital. The engineer, joiner, gardener, motor ambulance attendants, and porters have all carried out their duties in a very satisfactory manner.

Mr Stirling has carried out his duties as Steward in a most efficient manner.

Additional Requirements.—Additional balcony accommodation and the provision of waiting-rooms for visitors are desirable. The admission of approximately 150 cases of puerperal infection each year justifies the appointment of a visiting gynæcologist. The accommodation for smallpox cases is inadequate for the population served.

I append the usual reports relating to the various infectious diseases treated in the hospital.

I have the honour to be, Sir,

Your obedient Servant,

W. T. BENSON,

M.D. (Ed.), B.Sc. (St. And.), D.P.H. (Camb.),

D.T.M. & H. (Lond.), F.R.C.P. (Ed.).

Medical Superintendent.

DIPHTHERIA.

Of 923 cases admitted to the diphtheria pavilions, 644 were finally diagnosed as suffering from diphtheria. The addition of one case erroneously diagnosed as cerebro-spinal meningitis brings the diphtheria total to 645.

Of the remainder 156 were "carriers," and 122 were found to be suffering from diseases other than diphtheria. Various forms of tonsillitis and other septic and ulcerative conditions of the throat and mouth accounted for 80 cases; nasopharyngeal catarrh, laryngitis, bronchitis or pneumonia was present in 24; 4 patients were found to be suffering from scarlet fever; measles, rubellæ, paratyphoid B., syphilitic ulceration of the fauces, and various other morbid conditions were noted in the remainder.

Sixteen of the diphtheria patients were suffering from an intercurrent infection, namely, measles in 5, scarlet fever in 4, rubella in 2, chickenpox in 2, chickenpox and measles in 1, whooping-cough in 1 and Vincent's angina in 1.

There were 22 deaths ascribed to diphtheria. The mortality calculated on actual clinical cases was 3·4 per cent. Excluding laryngeal cases the death-rate was 2·7 per cent. The mortality of 44 laryngeal cases was 11·4 per cent.

Toxic myocarditis was the cause of death on the eleventh and eighth days of disease respectively in two laryngeal cases. Respiratory obstruction had been relieved by aspiration in both patients. A child of one year eleven months died of tracheo-bronchial infection. Two tracheotomy cases died. One, tracheotomied prior to admission, died within a few minutes of entry to the ward. A child of three years which had contracted diphtheria during convalescence from measles was admitted on the seventh day of disease and died fourteen days later with symptoms suggesting a cerebral lesion—encephalitis.

Nineteen patients were treated by aspiration only; one died. Ten were intubated following aspiration; one died. No operation was required in thirteen cases, one of which died. One case was tracheotomied and died. Another case, mentioned above, tracheotomied previous to admission, was moribund and died on entry to hospital. The operative death-rate, including treatment by suction—excluding case tracheotomied prior to admission—was 10 per cent. The fatality rate for cases subjected to intubation or tracheotomy—excluding one case—was 18·2 per cent.

The paralysis rate, excluding cardiac involvement was 4 per cent. Serum rashes were noted in 61 cases or 9·5 per cent. of the diphtheria patients treated.

Of the 22 deaths from diphtheria, 6 occurred within 24 hours of admission of the patient to hospital. Fourteen deaths (63·6 per cent.) occurred in patients who first came under treatment on or after the fourth day of disease.

Table showing age and sex of diphtheria patients:—

Age-period in years.	0-1 yrs.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50 yrs.	Totals.	
Recovered {	Males . . .	...	7	15	22	25	108	44	13	19	9	1	...	263
	Females . .	4	7	6	28	33	133	48	34	39	17	7	4	360
Died {	Males . . .	...	...	...	1	2	5	2	...	...	...	...	...	10
	Females . .	1	1	...	2	2	4	2	...	...	...	...	...	12
Totals . . .	5	15	21	53	62	250	96	47	58	26	8	4	645	

Hospital death-rate 3·4 per cent.

SCARLET FEVER.

During the year there was 1,086 cases admitted to the hospital notified as suffering from scarlet fever. The diagnosis was confirmed in 954 cases. The addition of 7 cases, 3 erroneously diagnosed as suffering from measles and 4 from diphtheria brings the scarlet fever total to 961. Amongst the 132 cases erroneously diagnosed the following diseases were noted:—Rubella (65), tonsillitis or erythema (34), measles (3), primary pneumonia (3), and whooping-cough (1).

There were 6 deaths. The case mortality was 0·62 per cent. One toxic case died. Death also resulted in a septic case. Of the remaining deaths, two were complicated by empyema, one by lobar pneumonia and one by pneumococcal peritonitis.

The following are the principal complications which were noted :—

Rhinitis	136 cases or 14.15 per cent.
Adenitis	109 .. 11.34 ..
Otorrhœa	56 .. 5.82 ..
Arthritis, myofibrositis	49 .. 5.09 ..
Nephritis	21 .. 2.18 ..
Vaginitis	7 .. 0.73 ..
Pyelitis	2 .. 0.21 ..

Table showing age and sex of scarlet fever patients :—

Age-period in years.	0-1 yr.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5-9 yrs.	10-14 yrs.	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60+ yrs.	Totals.	
Recovered	Males .	1	14	24	33	49	168	70	27	23	6	1	1	...	417
	Females	7	18	28	32	47	210	78	43	52	12	7	3	1	538
Died	Males .	...	1	...	...	...	...	...	...	...	1	...	...	...	2
	Females	...	...	1	...	...	3	...	...	...	...	...	...	...	4
Totals .	8	33	53	65	96	381	148	70	75	19	8	4	1	961	

Hospital death-rate, 0.62 per cent.

There were 26 alleged "infecting cases" or 2.71 per cent. of the total number of scarlet fever convalescents discharged. Of the 26 alleged "infecting cases" 17 were "clean cases" whilst in hospital. The 26 "infecting cases" were responsible for 31 "return cases." The return case rate was 3.23 per cent.

Antitoxic serum was administered to 23.13 per cent. of the scarlatinal patients.

Relapse occurred in 16 or 1.66 per cent.

ENTERIC FEVER.

The diagnosis was confirmed in 23 out of 36 cases admitted to the wards notified as suffering from enteric fever. The following diseases were noted in the group of 13 cases, either wrongly diagnosed as enteric fever, or sent in for observation :—primary pneumonia (2), dysentery (2), influenzal pneumonia, streptococcal septicæmia, erythema multiforme, hepatic cirrhosis, infective endocarditis, pulmonary tuberculosis, bronchitis, tubercular meningitis and pneumococcal septicæmia. In addition there were three cases of enteric fever misdiagnosed as dysentery, malaria, and diphtheria, bringing the enteric total to 26.

The infecting organism was the bacillus typhosus in 5 patients, and the bacillus paratyphosus B. in 21 cases.

The single death occurred in the paratyphoid B. group, being due to myocarditis.

Table showing the age and sex of enteric fever patients :—

Age-period in years	0-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40-49 years.	50-59 years.	60+ years.	Totals.
Recovered	Males .	3	...	1	...	1	1	...	...	6
	Females	3	1	2	2	4	3	1	2	19
Died	Males .	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	...	...	1	...	1
Totals .	6	1	3	2	5	4	1	3	1	26

Hospital death-rate 3.84 per cent.

ERYSIPELAS.

There were 208 cases admitted to the wards notified as suffering from erysipelas. The diagnosis was confirmed in 163 patients.

The corrected diagnosis in 45 cases was as follows:—cellulitis (12), dermatitis (11), erythema (4), herpes facialis (3), eczema (3), abscess (4), dacryo-cystitis (2), septic parotitis, lymphangitis, furunculosis, phlebitis, septic wound and puerperal infection.

The case mortality was 8.58 per cent. Of the 14 deaths 8 were due to erysipelas and 6 to complications—mitral disease (2), bronchitis, nephritis, diabetes, and traumatic cerebral hæmorrhage.

The inflammation primarily affected the face in 147 out of the 163 cases. Twenty patients (12.3 per cent.) had suffered from a previous attack. Five patients (3.1 per cent.) suffered from one or more relapses while still under treatment in hospital.

Table showing age and sex of erysipelas patients:—

Age-period in years		0-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50-59 years.	60-69 years.	70+ years.	Totals.
Recovered	Males . . .	4	1	3	9	9	13	13	9	...	61
	Females . . .	1	4	8	16	11	15	20	8	5	88
Died	Males . . .	...	...	...	1	...	2	4	3	1	11
	Females . . .	...	...	...	...	...	1	1	...	1	3
Totals . . .		5	5	11	26	20	31	38	20	7	163

Hospital death-rate 8.58 per cent.

CEREBRO-SPINAL MENINGITIS.

Seventy-seven suspected cases of cerebro-spinal fever were admitted to hospital of which 47 proved to be meningococcal infections. In addition there were two cases misdiagnosed as encephalitis, and scarlet fever, making the total number of patients suffering from cerebro-spinal meningitis 49.

The following diseases were noted in the group of 30 misdiagnosed cases:—lobar pneumonia (8), tubercular meningitis (3), streptococcal meningitis (2), pneumococcal meningitis (2), influenzal meningitis, aseptic meningitis, acute epidemic encephalitis and acute anterior poliomyelitis.

Thirty-four cases of meningococcal meningitis died.

Excluding infants the death-rate was 58.0 per cent.

Table showing age and sex of patients suffering from cerebro-spinal meningitis:—

Age-period in years		Under 1 yr.	1-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40-49 years.	50+ years.	Totals.
Recovered	Males . . .	...	...	2	...	2	2	...	...	...	6
	Females . . .	2	3	1	1	...	2	...	...	...	9
Died	Males . . .	13	3	1	...	2	1	3	1	2	26
	Females . . .	3	4	1	...	...	...	...	...	...	8
Totals . . .		18	10	5	1	4	5	3	1	2	49

Hospital death-rate 69.38 per cent.

P U E R P E R A L I N F E C T I O N .

Of 166 cases notified as puerperal fever or puerperal pyrexia the diagnosis of puerperal infection was confirmed in 143. Thirty-seven of these cases were admitted from districts outwith the City boundaries. The addition of 3 cases, 1 erroneously diagnosed as suffering from erysipelas, 1 from mumps and 1 from diphtheria brings the puerperal infection total to 146.

Twenty-one of the 146 cases died, a mortality rate of 14·4 per cent.

Fifty-eight patients were primiparæ and 88 multiparæ. There were 4 deaths (6·9 per cent.) among the primiparæ and 17 (19·3 per cent.) among the multiparæ.

The corrected diagnosis in 23 patients was as follows :—secondary anæmia (4), pyelitis (3), mastitis (3), influenzal pneumonia (2), constipation and sapræmia (2), lobar pneumonia and pyelitis (1), broncho-pneumonia (1), pleurisy (1), pyonephrosis (1), influenza (1), tonsillitis and melancholia (1), pulmonary tuberculosis (1), septic cæsarean wound (1), nil (1). There were two deaths in this group.

Pyelitis, cystitis or bacilluria was present in 40 patients (27·4 per cent.).

Table showing age of puerperal infection patients :—

Age-period in years	15-19 years.	20-29 years.	30-39 years.	40+ years.	Totals.
Recovered	4	79	36	6	125
Died . . . . .	...	10	10	1	21
Totals	4	89	46	7	146

Hospital death-rate, 14·4 per cent.

Forty-nine per cent. of the cases were admitted on or before the third day of illness. This compares favourably with 44 per cent. in the previous year.

The average day of illness on which the patient first received treatment in hospital was the fifth.

One or more blood cultures were examined in every case. *Streptococcus hæmolyticus* was isolated from the blood in 21 patients (14·4 per cent.) and from the uterus in 86 cases (58·9 per cent.).

P N E U M O N I A .

There were 93 patients admitted to the wards notified as suffering from primary or lobar pneumonia, or influenzal broncho-pneumonia. The presence of pneumonia was confirmed in 77 cases. The addition of 37 cases—9 erroneously diagnosed as suffering from cerebro-spinal meningitis, 8 from whooping-cough, 5 from measles, 4 from puerperal infection, 3 from diphtheria, 3 from enteric, 3 from scarlet fever, 1 from rubella and 1 from encephalitis—brings the total number of cases of pneumonia to 114.

Forty-nine cases were finally diagnosed as primary or lobar pneumonia, 45 as influenzal broncho-pneumonia, and 20 as broncho-pneumonia.

Eight deaths occurred from lobar pneumonia, 21 from influenzal pneumonia, and 16 from broncho-pneumonia.

The corrected diagnosis in 16 cases was as follows:—bronchitis (4), influenza and bronchitis (3), pulmonary tuberculosis (3), influenza (2), and one each influenza and streptococcal empyema, otitis media and mastoid, cellulitis of neck and staphylococcal septicæmia, and carbuncle. Four deaths occurred in this group from influenza and bronchitis (1), septicæmia (2) and carbuncle (1).

Table showing age and sex of pneumonia patients:—

Age-period in years . . .	0-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40-49 years.	50+ years.	Totals.	
Recovered {	Males . . .	9	5	2	7	10	3	3	5	44
	Females . . .	3	3	1	2	5	4	5	2	25
Died {	Males . . .	6	1	...	...	2	5	4	5	23
	Females . . .	7	1	...	3	5	1	2	3	22
Totals . . .	25	10	3	12	22	13	14	15	114	

Hospital death-rate, 39·47 per cent.

MEASLES.

There were 809 cases admitted to the wards notified as suffering from measles. The diagnosis was confirmed in 737 patients. In addition there were 14 cases of measles misdiagnosed as follows:—whooping-cough (5), diphtheria (4), scarlet fever (3), rubella (1) and cerebro-spinal meningitis (1). This makes the total of cases suffering from measles 751. The corrected diagnosis in 70 cases was as follows:—rubella (31), bronchitis (12), erythema (9), broncho-pneumonia (7), catarrh (4), scarlet fever (3), streptococcal septicæmia (1), pityriasis rubra (1), adenitis (1), and tonsillitis and otorrhœa (1).

There were 68 deaths due to complications:—broncho-pneumonia (61), enteritis (2), pulmonary tuberculosis (2), acute bronchitis (1), encephalitis (1), diphtheria (1).

The following complications were noted:—

Broncho-Pneumonia	111 cases or 14·5 per cent.
Otitis media	90 „ 11·9 „
Rhinitis	17 „ 2·3 „
Enteritis	15 „ 2·0 „
Adenitis	10 „ 1·3 „

Table showing age and sex of measles patients:—

Age-period in years .	0-1 years.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40+ years.	Totals.	
Recovered {	Males . . .	26	68	57	41	35	48	6	7	16	2	1	307
	Females . . .	28	71	50	49	36	62	7	16	38	16	3	376
Died {	Males . . .	9	16	5	2	2	4	...	...	...	...	...	38
	Females . . .	10	13	2	2	...	...	...	1	1	...	1	30
Totals . . .	73	168	114	94	73	114	13	24	55	18	5	751	

Hospital death-rate, 9·1 per cent.

W H O O P I N G - C O U G H .

The number of patients admitted to the wards notified as suffering from whooping-cough was 202. The diagnosis was confirmed in 172 cases. The addition of three cases notified as scarlet fever (1), whooping-cough and encephalitis (1), measles and primary pneumonia (1) brings the total to 175. Of the 30 erroneously diagnosed cases 11 were found to be suffering from bronchitis, 6 from broncho-pneumonia, 5 from measles, 2 from lobar pneumonia, 1 from bronchitis and measles, 1 from broncho-pneumonia and measles, 1 from miliary tuberculosis, 1 from pulmonary tuberculosis and 2 from no disease. Forty-seven cases were complicated by broncho-pneumonia on admission, three had concurrent measles, two measles and broncho-pneumonia, two rubella and one scarlet fever.

Of the 38 deaths, 31 were caused by broncho-pneumonia (81·6 per cent.).

Table showing age and sex of whooping-cough patients :—

Age-period in years	0-1 years.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-10 years.	Over 10 yrs.	Totals.
Recovered {	Males	11	17	6	9	9	5	57
	Females	11	17	23	7	8	14	80
Died {	Males	6	5	...	2	1	...	14
	Females	11	7	3	3	...	...	24
Totals	39	46	32	21	18	19	...	175

Hospital death-rate, 21·7 per cent.

C H I C K E N P O X .

The diagnosis was confirmed in 57 out of 61 patients admitted to the wards notified as suffering from chickenpox.

The corrected diagnosis in four cases was scabies, seborrhœa, erythema and cellulitis. The latter died from a hypostatic pneumonia complicating the illness.

No deaths occurred.

Table showing age and sex of chickenpox patients :—

Age-period in years	0-1 years.	1+ years.	2+ years.	3+ years.	4+ years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40+ years.	Totals
Recovered {	Males	1	3	8	6	3	9	3	...	1	...	34
	Females . . . . .	...	...	4	2	4	8	1	...	3	1	23
Died {	Males . . . . .	...	...	...	...	...	...	...	...	...	...	...
	Females . . . . .	...	...	...	...	...	...	...	...	...	...	...
Totals	1	3	12	8	7	17	4	...	4	1	...	57

RUBELLA.

The diagnosis was confirmed in 89 out of 95 cases notified as rubella. In addition there were 97 cases actually suffering from rubella which were notified as scarlet fever (65), measles (31), and diphtheria (1). This makes a total of 186 cases of rubella. One case had concurrent whooping-cough.

Table showing age and sex of rubella patients:—

Age-period in years	0-1 years.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30+ years.	Totals.	
Recovered	Males	...	1	10	6	9	30	10	2	6	2	76
	Females	...	2	14	8	9	41	12	8	15	1	110
Died	Males	...	...	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	...	...	...	...	...	...	...
Totals	...	3	24	14	18	71	22	10	21	3	186	

BACILLARY DYSENTERY.

There were 36 cases notified as dysentery. The diagnosis was confirmed in 31. In addition there were two cases actually suffering from dysentery which were erroneously diagnosed as enteric. This makes a total of 33 cases of bacillary dysentery (*B. dysenteriae* Flexner).

Table showing age and sex of bacillary dysentery patients:—

Age-period in years	0-1 years.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30+ years.	Totals.	
Recovered	Males	1	4	2	...	1	4	1	...	1	2	16
	Females	...	3	5	...	1	6	1	...	...	1	17
Died	Males	...	...	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	...	...	...	...	...	...	...
Totals	1	7	7	...	2	10	2	...	1	3	33	

OTHER DISEASES.

Epidemic Parotitis.—Ten cases were admitted as suffering from mumps. The diagnosis was confirmed in five patients all of whom recovered.

Epidemic Encephalitis.—Seven cases were notified as suffering from epidemic encephalitis and in none was the diagnosis confirmed. The corrected diagnosis were encephalitis following whooping-cough (1), meningism (1), cerebral glioma with hæmorrhage (1), cerebro-spinal meningitis (1), primary pneumonia (1), uræmia (1) and tubercular meningitis.

One case notified as cerebro-spinal meningitis was finally diagnosed as epidemic encephalitis. This was a female, aged 26 years, who died.

Typhus Fever.—One case was notified as typhus fever, but the diagnosis was not confirmed, the case being one of ulcerative angina with septicæmia and exfoliative dermatitis.

Anthrax.—One case was notified as suffering from anthrax. The patient was found to be suffering from a carbuncle with septicæmia.

Acute Anterior Poliomyelitis.—One case was notified and the diagnosis was confirmed. A second case was admitted misdiagnosed as cerebro-spinal meningitis. The latter, a boy aged 12, died; while the former, a female aged 26, recovered.

Undulant Fever.—Two cases of undulant fever were notified. Infection with *Br. abortus* was confirmed in both. Recovery ensued.

Malaria.—One case notified as malaria was found to be suffering from enteric fever.

LABORATORY ANNUAL REPORT.

Nature of Specimen.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Throat Swabs for <i>B. diphtheriæ</i>	496	439	442	458	414	435	405	316	360	323	400	334	4822
Sputum for <i>B. tuberculosis</i>	95	97	111	97	134	109	118	127	131	130	134	127	1410
Urines	51	31	29	18	26	22	36	41	43	57	41	62	457
Stools	18	18	16	14	12	10	9	14	30	58	21	25	245
Blood Cultures (each reported three times)	35	26	23	24	16	20	13	15	7	23	22	19	243
Uterine Cultures for <i>S. hæmolyticus</i>	34	20	18	22	13	19	13	15	8	24	22	6	214
Throat Cultures for <i>S. hæmolyticus</i>	44	46	79	71	43	39	54	95	59	55	70	41	696
Cerebro-spinal Fluid	24	26	125	81	79	30	31	39	21	22	34	35	547
Blood for Widal	5	1	3	0	1	2	6	3	3	4	3	1	32
Others	13	12	9	14	11	9	17	14	18	16	7	11	151
Totals	815	716	855	799	749	695	702	679	680	712	754	661	8817

Sixteen post-mortem examinations were performed.

BACTERIOLOGICAL SERVICES.

Carried out by the Bacteriology Department of the University, from January to December 1932 :—

ROUTINE BACTERIOLOGICAL EXAMINATIONS.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Throat, nasal and aural swabs for <i>Bacillus diphtheriae</i> :—													
Total	434	375	530	457	439	367	362	433	365	438	496	367	5063
Positive	72	43	87	68	60	38	40	59	44	51	59	34	655
Negative	362	332	443	389	379	329	322	374	321	387	437	333	4408
Cultures for <i>Bacillus diphtheriae</i> :—													
Total	20	23	23	19	39	24	17	12	22	5	8	14	226
Positive	12	4	8	11	20	15	5	9	2	0	2	6	94
Negative	8	19	15	8	19	9	12	3	20	5	6	8	132
Cultures for <i>Bacillus diphtheriae</i> Virulence Test :—													
Total	11	25	13	12	15	6	7	10	4	5	12	7	127
Positive	2	6	2	9	3	4	5	9	3	0	5	3	51
Negative	9	19	11	3	12	2	2	1	1	5	7	4	76
Throat swabs for organisms of Vincent's Angina :—													
Total	1	3	9	1	4	2	2	...	4	1	...	...	27
Positive	0	0	3	1	2	2	2	...	1	1	...	...	12
Negative	1	3	6	0	2	0	0	...	3	0	...	...	15
Throat swabs for Hæmolytic Streptococci :—													
Total	98	...	133	12	20	9	2	1	5	22	5	6	313
Positive	11	...	30	6	8	7	1	0	4	8	3	5	83
Negative	87	...	103	6	12	2	1	1	1	14	2	1	230
Vaginal swabs for Gonococcus :—													
Total	1	...	1	1	...	3	...	1	1	1	...	...	9
Positive	0	...	0	0	...	0	...	0	0	0	...	...	0
Negative	1	...	1	1	...	3	...	1	1	1	...	...	9
Sputum for <i>Bacillus tuberculosis</i> :—													
Total	156	197	253	197	192	175	111	124	118	116	177	229	2045
Positive	18	26	33	14	26	18	19	18	18	19	12	21	242
Negative	138	171	220	183	166	157	92	106	100	97	165	208	1803
Urine for <i>Bacillus tuberculosis</i> :—													
Total	1	...	...	...	1	...	1	...	...	1	2	2	8
Positive	0	...	...	...	0	...	0	...	...	0	0	0	0
Negative	1	...	...	...	1	...	1	...	...	1	2	2	8
Blood for agglutination tests (including Widal Reaction) :—													
Total	4	5	4	1	12	2	7	5	5	6	5	1	57
Positive	1	0	1	1	4	0	2	1	1	2	0	0	*13
Negative	3	5	3	0	8	2	5	4	4	4	5	1	44
Blood for Syphilis Flocculation Test :—													
Total	1	...	...	...	1	...	1	...	1	...	19	7	30
Positive	0	...	...	...	0	...	0	...	0	...	5	0	5
Negative	1	...	...	...	1	...	1	...	1	...	14	7	25
Fæces and Urine for organisms of Enteric and Dysentery Groups :—													
Total	6	1	5	1	3	7	1	1	7	47	4	20	103
Positive	0	0	1	1	1	1	0	0	2	9	3	1	†19
Negative	6	1	4	0	2	6	1	1	5	38	1	19	84
‡ Rats examined for Plague Infection :—													
Total	4	...	9	2	...	2	6	...	7	...	4	12	46
Positive	0	...	0	0	...	0	0	...	0	...	0	0	0
Negative	4	...	9	2	...	2	6	...	7	...	4	12	46

* Classified as follows — *B. typhosus*, 2; *B. paratyphosus B*, 1; *B. abortus*, 10 (this figure includes repeated examinations of 5 cases).

† " " *B. dysenteriae* (Flexner-Y), 1; *B. dysenteriae* (atypical), 17; Enteric, 1.

‡ These were carcasses of rats caught in docks or on board ships arriving from foreign ports and were examined as a precautionary measure.

Other Examinations Jan. Feb. Mar. Apr. May. June. July. Aug. Sept. Oct. Nov. Dec.
 12 11 10 23 14 28 21 11 23 50 21 24

Classified as follows :—

NATURE OF SPECIMEN.	EXAMINATION REQUESTED.	TOTAL.
Throat, nasal and ear swabs	General Bacteriological Examination	33
Throat swab	For pneumococcus	1 (pos.)
Throat swab	For <i>Bacillus pertussis</i>	2
Sputum	General Bacteriological Examination	4
Sputum	For Type of Pneumococcus	1
Sputum	For Asbestosis	1
Ear swab	For Pneumococcus	1
Swab from teeth and gums	For Vincent's Angina	1 (pos.)
Blood films	For Malaria organisms	4 (1 pos.)
Blood culture	General Bacteriological Examination	1
Blood culture	For Streptococci	1
Blood culture	For <i>Bacillus abortus</i>	1
Blood culture	Identification of organism present	3
Blood culture	For Enteric Group	1
Blood	For Weil-Felix reaction	1
Urine	General Bacteriological Examination	13
Urine	For <i>Bacillus abortus</i>	1
Urine	For <i>Bacillus coli</i>	1
Fæces	For Salmonella group (food-poisoning)	1
Fæces	General Bacteriological Examination	1
Pus	General Bacteriological Examination	16
Pus	For <i>Bacillus tuberculosis</i>	2
Pus	For hæmolytic streptococci	3 (1 pos.)
Cerebro-spinal Fluid	General Bacteriological Examination	2
Cerebro-spinal Fluid	For Wassermann Reaction	5 (2 pos.)
Pleural Fluid	General Bacteriological Examination	5
Pleural Fluid	For <i>Bacillus tuberculosis</i>	2
Pleural Fluid	Cytological Examination	1
Fluid from ankle joint	General Bacteriological Examination	1
Stomach contents	For <i>Bacillus tuberculosis</i>	1
Culture	Identification of Organisms	6
Plate cultures from cases of suspected Whooping Cough	For <i>Bacillus pertussis</i>	8 (2 pos.)
Urethral smears	General Bacteriological Examination	3
Smears and swab from cervix uteri	General Bacteriological Examination	3
Vaginal smear and swabs	General Bacteriological Examination	3
Swabs from Cervix and Urethra	For Gonococcus	7 (1 pos.)
Films of Urethral Discharge	For Gonococcus	6
Swab from conjunctiva	For Gonococcus	1
Films of conjunctival exudate	For Gonococcus	2
Naso-Pharyngeal swab	For Meningococcus	1
Throat swabs	For non-hæmolytic streptococci	2 (pos.)
Smear from scalp lesion	For Actinomyces	1
Diphtheria Prophylactic	Sterility Test	3
Human Milk	General Bacteriological Examination	1
3 months ovum and scraping of decidua	For <i>Bacillus tuberculosis</i>	1
Exudate	For Type of Pneumococcus	1
Milk	General Bacteriological Examination	1
Water specimens	General Bacteriological Examination	58
Ice Cream specimens	<i>Bacillus coli</i> content and Bacterial Count	25
	Autogenous vaccines prepared	4
		248
	TOTAL	8,302

During the year a number of laboratory examinations were carried out for the recently re-organised municipal hospitals. A tabular statement of such work is given below. The number of examinations shown represents only a part of those which may be anticipated during a full year as very few specimens were received from these institutions till the month of June.

It will be noted that the serological test for the diagnosis of syphilis employed on blood specimens received from Bangour Mental Hospital is the flocculation

test. Selected sera from the Venereal Diseases Department of the City have been examined by this method in parallel with the Wassermann reaction in recent years. In the opinion of clinicians it is as sensitive as the latter test and provides additional information of value in treated cases. The flocculation test is more economical in time and material than the complement-fixation reaction and as it employs only two biological reagents as compared with the five required for the Wassermann test, the possibility of fallacy is correspondingly less. No satisfactory technique for the flocculation reaction is yet available in testing specimens of cerebro-spinal fluid and the Wassermann reaction continues to be used.

LABORATORY EXAMINATIONS FOR MUNICIPAL HOSPITALS.

Northern General Hospital.

	Total.	Positive.	Negative.
Throat swabs for <i>B. diphtheriae</i>	22	3	19
Sputa for <i>B. tuberculosis</i>	14	1	13
Throat swabs for organisms of Vincent's Angina	1	1	0
Throat swabs for Hæmolytic streptococci	3	3	0
	<hr/> 40	<hr/> 8	<hr/> 32

Western General Hospital.

	Total.	Positive.	Negative.
Throat swabs for <i>B. diphtheriae</i>	63	1	62
Nasal swabs for <i>B. diphtheriae</i>	23	3	20
Swab from Gums for General Bacteriological Examination	4	...	...
Pus from Eye for General Bacteriological Examination	2	...	...
Vaginal swabs for Gonococcus	2	0	2
Throat swabs for Hæmolytic streptococci	2	0	2
Virulence tests on cultures of <i>B. diphtheriae</i>	3	1	2
Syphilis flocculation test	1	0	1
Sputum for <i>B. tuberculosis</i>	4	1	3
Pleural fluid for General Bacteriological Examination	2	...	...
Pus from Abscess for General Bacteriological Examination	8	...	...
Pus from Bone for General Bacteriological Examination	1	...	...
Urine for <i>B. tuberculosis</i>	1	0	1
Aural swab for <i>B. diphtheriae</i>	1	0	1
Fæces for <i>B. dysenteriae</i>	47	*8	39
	<hr/> 164	<hr/> 14	<hr/> 133

Eastern General Hospital.

	Total.	Positive.	Negative.
Throat swab for <i>B. diphtheriae</i>	3	0	3

Bangour Mental Hospital.

	Total.	Positive.	Negative.
Blood for Syphilis flocculation test	25	5	20
Cerebro-spinal fluid for Wassermann reaction	5	2	3
Fæces for <i>B. dysenteriae</i>	4	†1	3
	<hr/> 34	<hr/> 8	<hr/> 26

Royal Victoria Dispensary.

	Total.	Positive.	Negative.
Sputum for <i>B. tuberculosis</i>	1294	149	1145
Fæces for <i>B. dysenteriae</i>	1	1	0
Pleural fluid for <i>B. tuberculosis</i>	1	0	1
Animal inoculation test for <i>B. tuberculosis</i> in sputum	1	0	1
Throat swabs for <i>B. diphtheriae</i>	4	0	4
	<hr/> 1301	<hr/> 150	<hr/> 1151

Gogarburn Certified Institution.

	Total.	Positive.	Negative.
Throat swab for <i>B. diphtheriae</i>	1	0	1
Sputum for <i>B. tuberculosis</i>	1	0	1
Fæces for General Bacteriological Examination	1	...	...
Fæces for organisms of enteric group	1	0	1
Blood for Widal Reaction	1	0	1
Blood for agglutination test with <i>B. abortus</i>	1	1	0
	<hr/> 6	<hr/> 1	<hr/> 4

Total Examinations for Municipal Hospitals other than City Fever Hospital 1548

* All strains of *B. dysenteriae* isolated were of the Flexner-Y type.

† *B. dysenteriae* (Sonne) was isolated.

SPECIAL INVESTIGATIONS.

INVESTIGATION INTO THE PREVALENCE OF THE TUBERCLE BACILLUS IN MARKET MILK.

The investigation, commenced in October 1930, was completed during 1932. In the reports of the Medical Officer of Health for 1930 and 1931 will be found details of the scope of the investigation, the technique employed, and the results of tests completed during those years.

At 31st December 1931 the samples of which the examination was still incomplete were as follows:—

Farm Milk	17	
Ordinary Retailed Milk	18	
Pasteurised Milk	34	
Total	69	

The results of examination of the above samples were:—

Farm Milk	Positive	1		
	Negative	14		
	*Inconclusive	2		
		—	17	
Ordinary Retailed Milk	Positive	4		
	Negative	14		
	Inconclusive	0		
		—	18	
Pasteurised Milk	Positive	0		
	Negative	32		
	Inconclusive	2		
		—	34	
Total			69	

* Owing to death of inoculated animals from intercurrent infection.

The final figures for the section of the joint milk investigation carried out in the University Bacteriology Department may now be summarised.

Farm Milk—

Total samples		192
Inconclusive		6
		186
Total valid examinations		
Positive	21	
Negative	165	
Percentage positive		11.3

Ordinary Retailed Milk—

Total samples		204
Inconclusive		6
		198
Total valid examinations		
Positive	27	
Negative	171	
Percentage positive		13.6

Pasteurised Milk—

Total samples		329
Inconclusive		11
		318
Total valid examinations		
Positive	8	
Negative	310	
Percentage positive		2.5

These results are of considerable interest and importance in view of the large numbers of samples in each group. A rigid technique was maintained throughout and conclusions based on the figures submitted may be regarded as significant from the statistical point of view. The difference between the results of examination of Farm and Retailed milks may be accounted for by the bulking of milk in the course of retail distribution.

The 8 pasteurised samples in which tubercle bacilli could be demonstrated consisted of 5 from plants operating on the "Flash" method and 3 from one plant of the "Holder" type. No positive result was obtained in samples from other "Holder" plants. The "Flash" method is generally recognised to be insufficient to kill pathogenic bacteria, its use being rather to increase the keeping qualities of the milk: it is not approved and its use does not constitute "pasteurisation" as defined by the Milk (Special Designations) Order.

It should be noted that bulking of milk takes place in connection with pasteurisation to an even greater extent than in the ordinary distribution of retailed milk. The effectiveness of the Holder process, if well regulated, in destroying tubercle bacilli is therefore emphasised by the results of the investigation.

The importance of inoculating two guinea-pigs (examined after 4 and 8 weeks respectively) for each sample instead of a single animal examined after 4 weeks, as is sometimes done, is shown by a study of the figures available as a result of this investigation. Approximately one-third of the samples of raw milk examined and shown to contain tubercle bacilli would have been reported as negative if only one animal had been used.

A question of some interest in connection with the presence of *B. tuberculosis* in milk is whether any seasonal periodicity is present. This investigation showed that no particular season is associated with a high incidence of positive samples of raw milk.

The inquiry probably has its chief value in providing a standard according to which any future results may be judged. Comparison of the findings of any future investigation with those now submitted will show clearly whether measures directed towards providing a safe milk supply are effective.

ACUTE RHEUMATISM.

During 1932, with the co-operation of the Physicians of the Royal Hospital for Sick Children, the Royal Infirmary, the Astley-Ainslie Institution and the Western General Hospital, work has been continued on the clinical and bacteriological investigation of cases of acute rheumatism. In the Report of the Medical Officer of Health for 1931 the most recent conception of the ætiology of the disease, viz., as a manifestation of allergy to the products of the hæmolytic streptococcus, was described. During the year a series of 200 cases of acute rheumatism and 242 non-rheumatic control cases have been studied bacteriologically and clinically. The controls were taken from the same environment as the rheumatic cases and were of the same age-group. Throat swabs revealed the presence of the hæmolytic streptococcus in 35·5 per cent. of rheumatics and in 33·1 per cent. of controls. The

difference is of no significance in view of the fact that the controls, by reason of their shorter stay in hospital were, on the average, examined less frequently than the rheumatic cases. The strains isolated from the rheumatic cases were in no way characteristic. The high incidence in both groups, as exemplifying a sample of a hospital population, is of some interest.

Intradermal reactions to extracts of hæmolytic streptococci showed that 68 per cent. of rheumatics gave positive reactions as compared with 55 per cent. of controls. This test, which probably indicates a state of allergy resulting from a previous infection with *Streptococcus pyogenes* does not, therefore, provide any clear-cut distinction between the two groups. The Dick reaction was positive in 25·8 per cent. of controls and 19 per cent. of rheumatic cases. It may be noted that several cases of active rheumatic disease did not at any time yield hæmolytic streptococci on culture even when swabs were repeated at frequent intervals over a period of several months. The results of this controlled study suggest that the hæmolytic streptococcus is not a primary factor in the ætiology of acute rheumatism. On the other hand, it appears to activate latent rheumatism, and naso-pharyngeal infection with this organism is associated with the disease possibly by facilitating the ingress of some infective agent as yet unknown.

The subject is one of considerable difficulty in view of the wide distribution of the hæmolytic streptococcus among healthy normal individuals. An ætiological association between such an extremely common organism and a highly specific disease like acute rheumatism must be abundantly proved before it can be accepted. (*H. J. Gibson.*)

THE TOXINS OF THE STAPHYLOCOCCI AND THEIR RELATIONSHIP TO FOOD-POISONING.

Until 1928 little was known of the toxins of the staphylococci. A true exotoxin had been demonstrated which caused lysis of red blood cells and destruction of leucocytes but its interest appeared to be largely academic. In that year the disaster at Bundaberg in Australia, when a number of children died suddenly following injection of material shown to be contaminated with staphylococci, focussed the attention of bacteriologists on the subject. The intensive research work which followed made it clear that the exotoxin had lethal properties when inoculated intravenously into animals, death being due to a specific action on the heart and pulmonary vessels. Inoculation of toxin into the skin of an animal also produced a local necrosis. It was shown that the toxin was antigenic, stimulating the production of antitoxin in animals when injected in small doses. Such antitoxic serum is now available for therapeutic use and has been employed with some degree of success in the more severe forms of staphylococcal infection.

A further development of the subject was the finding by Jordan (1930) in America that cases of food-poisoning in man could be traced to foods which were heavily contaminated with staphylococci. Acute gastro-intestinal symptoms were caused 3—4 hours after consumption of the affected material. It is well known how often food which is known to be the cause of outbreaks of food-poisoning gives completely negative results on examination for bacilli of the *Salmonella* group. Staphylococci, if found, have been usually regarded as contaminants and

neglected. Jordan has shown that symptoms of the type associated with food-poisoning may be caused by ingestion of culture-filtrates of the staphylococci by human volunteers.

The subject therefore assumes considerable importance from a public health point of view and has been studied in the Bacteriology Department of the University during 1932. It has been shown that the hæmolytic property and the destructive action on leucocytes run parallel with the lethal effect and the power to produce skin-necrosis. The evidence indeed suggests that a single toxic principle is at work. It has been found, however, that strains vary considerably in their toxin production irrespective of the types of lesion from which they have been isolated.

The toxin responsible for gastro-intestinal symptoms in man appears to differ in many respects from the toxins so far described. It shows considerable resistance to heat, being still capable of causing symptoms after exposure at 100°C. for 30 minutes. The other staphylococcal toxins are inactivated at 55°—60°C.

An attempt has been made to produce the symptoms and effects of food-poisoning in laboratory animals by giving toxin *per os*. The results obtained are variable. Guinea-pigs appear to be more susceptible than rabbits. In some cases acute symptoms and rapid death have been produced, while in others no illness has resulted. That the irregular results may be due to the action of gastric juice on the toxin is suggested by recent experiments and efforts are being made to overcome this effect by direct inoculation into the intestine.

Further progress in the prevention and cure of this form of food-poisoning in man will be seriously impeded if human volunteers are the only available experimental subjects. Many aspects of the problem could be studied if the disease could be reproduced in animals. Work is being continued with this in view.

(G. R. Borthwick.)

REFERENCE:—

Jordan (1930), *J. Amer. Med. Assoc.*, vol. 94, p. 1648.

THE EARLY BACTERIOLOGICAL DIAGNOSIS OF WHOOPING COUGH.

An investigation into the bacteriological diagnosis of whooping cough was commenced in 1931 and has been continued this year.

An effort is being made to devise a convenient laboratory method whereby the diagnosis of whooping cough can be established at a date prior to the appearance of the characteristic clinical signs. Through the courtesy of Dr. T. Y. Finlay, Child Welfare Medical Officer for the City, special attention is being paid to the occurrence of the disease in children under the supervision of his Department.

The method adopted has been similar to that used in Denmark by Chievitz and Meyer (see *Annal. Inst. Pasteur*, vol. 30, p. 503, 1916). Plates of a specially prepared medium, being a modification of the Bordet-Gengou medium originally used for the cultivation of *Bacillus pertussis*, were supplied to clinicians. The child was allowed to cough on to these plates at a distance of six inches, three plates being used in each case. The plates were sent without delay to the laboratory

and incubated for 72 hours. At the end of that time they were examined for colonies of *B. pertussis*; suitable colonies were subcultured and the organism was identified by biological characters and agglutination reactions with a specific antiserum.

In addition to the above method the early diagnosis is being approached from the serological point of view.

The results obtained seem to be promising and it is of interest to note that in the few cases so far dealt with, the bacteriological diagnosis has corresponded with the subsequent clinical history. (*C. E. van Rooyen.*)

RECENT WORK ON LYMPHADENOMA (HODGKIN'S DISEASE) WITH PARTICULAR REFERENCE TO ITS INFECTIVE NATURE.

A hundred years have just elapsed since the celebrated Thomas Hodgkin, an Edinburgh graduate, first described this disease. Its ætiology has been the subject of keen controversy.

Early attempts on the part of many workers to arrive at a solution of this ætiological problem were restricted by the limitations imposed upon them by the lack of adequate laboratory methods, but with the advance of bacteriological technique, a fresh impetus was given to the study of the disease. Thus Bunting and Yates (*Archives of Internal Medicine*, 1913, vol. 12, p. 236) associated the disease with infection by a diphtheroid bacillus, but their work has lacked the confirmation of independent workers.

Recently, however, L'Esperance (*Journal of Immunology*, 1929, vol. 16, p. 27) claimed to have isolated the avian tubercle bacillus from a patient suffering from Hodgkin's disease and later supplemented her findings by further work. These results were partly supported by Utz and Keatinge (*Medical Journal of Australia*, 1932, vol. 1, p. 521), who immunised chickens with lymphadenomatous tissue and used their sera for therapeutic purposes.

An endeavour has been made to repeat the work of L'Esperance by the examination of pathological material obtained from six accurately diagnosed cases of Hodgkin's disease, both by direct examination of several hundred histological sections and by cultivation. Animal inoculation was also carried out, rabbits, guinea-pigs, mice, pigeons and chickens being used for the purpose. Attempts were also made to graft fragments of lymphadenomatous tissue into the bone marrow, peritoneum, liver and muscles of chickens, but with uniformly negative results throughout. As a result of the investigation it was concluded that no evidence of *B. tuberculosis avis* infection could be found in six cases of lymphadenoma.

Cases of human infection with the avian tubercle bacillus have already been described by continental workers and the isolation of the causative organism seems to have been achieved by the usual well recognised methods. Whether or not the avian tubercle bacillus be the cause of Hodgkin's disease, it should be pointed out that this type of organism is frequently the cause of porcine tuberculosis and has been known to occur in eggs.

Ample opportunity must therefore exist for exposure of the human subject to infection with *B. tuberculosis avis*. Apart from the fact that such infection is practically unknown in this country, it may be said that there is extremely little evidence that the avian tubercle bacillus is the cause of lymphadenoma.

Perhaps the most interesting contribution which has been made during recent years towards arriving at a solution of the ætiology of this disease has been the work of M. H. Gordon (*Rose Research on Lymphadenoma*, 1932). He showed that the intracerebral inoculation of rabbits with lymphadenomatous tissue was followed by muscular spasms, ataxia and paralysis. Such results, however, were not produced by the introduction of sarcomatous, carcinomatous or leukæmic material. It is possible that this test may not only offer a clue to those engaged in elucidating the nature of this disease, but may also be of value to the clinician in the diagnosis of certain doubtful cases.

Gordon's biological test is the subject of an investigation at the moment and requires further study. (*C. E. van Rooyen*.)

REFERENCE :—

van Rooyen, C. E. *Brit. Med. Jour.*, Jan. 14, 1933, vol. i., p. 50.

FURTHER INVESTIGATION OF CULTURAL TYPES OF THE DIPHTHERIA BACILLUS IN RELATION TO CLINICAL SEVERITY OF THE DISEASE.

In 1931 Anderson, Happold, M'Leod and Thomson of Leeds (*J. Path. Bact.* 34, 667) reported that three distinct and apparently stable biological types of the diphtheria bacillus could be differentiated as regards their colony characters by means of a special tellurite-blood medium. One type, which they named "gravis" was usually associated with severe toxic cases of the disease, and another—the "mitis" form—with mild cases. The third or "intermediate" type occurred only rarely in the Leeds neighbourhood, but appeared to produce a more severe diphtheria than the "mitis" type. Wright and Rankin (*Lancet*, 1932, 884) in a study of fifty strains isolated from cases of diphtheria in Edinburgh found considerable difficulty in classifying them according to the criteria put forward by the Leeds investigators. The colonies varied widely from types resembling "mitis" to others of irregular structure similar to "gravis." They could not be grouped into three hard and fast classes. Several strains when subcultured in bouillon were found to be unstable and there was no apparent correlation between clinical severity and colony types.

Undoubtedly, as Anderson and his co-workers maintain, it would be valuable to distinguish, within 18—24 hours, infections which are likely to be dangerous. And if, as they suggest, the "gravis" type is usually associated with a severe form of the disease and "mitis" with a milder form an examination of colony types would be valuable, provided the colony types remain stable.

In order to study this point in some detail "typical" strains of each of the three types were obtained from Professor M'Leod of Leeds. These were cultivated under various conditions and it was found that a round, black glistening "mitis" colony could be transformed into a gray rough irregular form showing all the structural characteristics of a "gravis" type. Conversely the rough "gravis" colony could be transformed into the smooth type indistinguishable from "mitis."

No antitoxin was used to induce these changes. The "intermediate" type also dissociated to other forms but these did not correspond exactly to either "mitis" or "gravis."

Changes in colony structure on tellurite-blood medium were usually correlated with changes in growth in bouillon and on ordinary nutrient agar. On Loeffler's serum and the tellurite medium used in the Bacteriology Department for routine isolation of *B. diphtheriæ* there was no consistent differentiation of types. No difference in virulence between the variants has been observed so far.

From time to time variants were tested to determine any change in their ability to ferment starch and glycogen, but in spite of marked alteration in the colony structure the biochemical characters have remained stable.

A number of strains have been isolated from swabs sent in to the Department for routine diphtheria diagnosis. More than fifty per cent. were classified as "intermediate." This type is easily recognized from its colony and growth in bouillon and does not dissociate as readily as the other two forms. Apparently "gravis" strains are rare in Edinburgh and when they do occur the colony may be smooth and indistinguishable from "mitis" or, if rough in structure is not a typical matt "daisy-head" form such as that observed in Leeds.

More light has been thrown on this subject since it has been found that a "gravis" strain will dissociate to a smooth form and yet, as far as is known at present, does not lose the ability to utilize starch and glycogen. It would appear, therefore, that when growth is luxuriant fermentation of these two sugars and not colony structure differentiate the so-called "gravis" and "mitis." The "intermediate" form can easily be distinguished by its colony which is fine and rather granular. Several strains have been isolated which do not fall into any of the groups.

It seems doubtful from the observations made in Edinburgh and elsewhere that there is any correlation of colony type and clinical severity such as that found in Leeds, and since it is evident that the colonies undergo marked variation it is hardly likely that there is much value in a classification which is based on colony structure and has as its objective an indication of the probable severity of the disease. (*M. H. Christison.*)

REFERENCES :—

- Anderson, Happold, M'Leod and Thomson. *J. Path. Bact.*, 1931, vol. 34, p. 667.
Wright and Rankin, *Lancet*, 1932, ii, p. 884.

UNDULANT FEVER AND BRUCELLA ABORTUS IN MILK.

An investigation of samples of milk (other than pasteurised) for *Br. abortus* was concluded during 1932. The results obtained during the year may be tabulated as follows :—

Type of Milk.	Number successfully examined.	Number Positive.
Farm Milk	17	2
Retailed Milk	17	5

The final results of the investigation of milk samples for this organism during the past two years may now be summarised.

Type of Milk.	Number successfully examined.	Number Positive.	Percentage Positive.
Farm Milk	86	17	19.8
Retailed Milk	83	29	34.9

The high proportion of retailed milk samples in which live *Br. abortus* could be demonstrated is noteworthy and the search for human cases has been continued during the year. All sera submitted for the Widal reaction are now examined for agglutinins for *Br. abortus* as a routine, and five undoubted cases have been diagnosed in this way. Such examinations thus continue to reveal a certain annual number of cases, the figures for 1930 and 1931 being two and five respectively. The number of cases reported throughout Scotland show a steady rise, viz., 2 cases in 1929 to 18 in 1932, while in the British Isles an incidence of 3 cases in 1928 had increased to 40 in 1931. This increase means either that the disease is becoming more prevalent or that the medical profession and bacteriologists are becoming more alive to its occurrence and are recognising cases which would previously have been missed. The increase may be due to both factors and we cannot exclude the possibility of the infection increasing from an apparently trifling incidence to a future prevalence of more serious importance.

An attempt has been made by Wilson (*Vet. Record*, 1932, 12 N.S. 1226) to estimate the total annual number of cases in England. From records of the percentages of undiagnosed pyrexia giving significant agglutination reactions with the enteric group on one hand and *Br. abortus* on the other he has calculated the ratio of prevalence of abortus-fever to that of enteric fever as 1 to 6 and taking the figure for notified cases of enteric fever has concluded that in 1930 there were approximately 480 cases of Undulant Fever in England and Wales. Among sera examined in this laboratory from Edinburgh and the surrounding district during the past two years the ratio of abortus-fever to enteric fever has been slightly higher than in Wilson's findings, being 1 to 4. Approximately 8 per cent. of sera from cases of undiagnosed pyrexia submitted to the University Laboratory during 1931-32 have been from cases of *Br. abortus* infection.

The disease in America has a definite occupational incidence, many cases occurring among those handling cattle and pigs. Farm workers, cattlemen, butchers and meat-packers are notably affected. In Scotland, while such occupations provide a significant number of cases, the disease is by no means confined to them and indeed no history of contact with infected animals is to be obtained in the vast majority. The disease in America is especially common in rural as compared with urban districts, but this disproportion is not present in Scotland. Among sera examined in the University Bacteriology Department during 1931 and 1932 only 2 cases of abortus infection were diagnosed in the counties round Edinburgh while 10 cases occurred within the City.

The age and sex distribution of the cases at present occurring in Scotland corresponds with that noted in Denmark, Germany and America. The age period 20-40 includes a majority of Scottish cases. The disease is infrequent in childhood

while males at all ages appear to be more susceptible than females. In explanation of this the view has been advanced that the greater quantity of milk consumed by women and children as compared with men acts in immunizing rather than infecting them. Subinfective doses acting over a prolonged period may stimulate an immunity to the disease. Studies of the agglutination reactions of serum from apparently healthy individuals suggest that latent *Br. abortus* infection is indeed commoner in women than in men. The resistance of children is paralleled by that of calves who show a high degree of immunity.

Of the two possible modes of human infection, viz., by contact with infected animals and by ingestion of infected milk, the latter would appear to be the more common in this country. A majority of cases give a definite history of drinking raw milk while in some instances contagious bovine abortion has been shown to be prevalent in the herd supplying infected persons. The contrast between the occurrence of cases of this disease and those in milk-borne epidemics of other diseases is striking. The explosive features associated with milk-spread outbreaks are conspicuously absent. This can only be explained as being a result of a low virulence of the organism for the human host. It must, however, be noted that when isolated from milk and cultured in the laboratory, a procedure which usually reduces the virulence of pathogenic bacteria, *Br. abortus* is unusually virulent as shown by the numerous laboratory infections recorded wherever the organism has been studied.

The question of control of the disease is a difficult one in view of the prevalence of abortion among bovines. The problem is of a magnitude comparable with that of bovine tuberculosis. Efforts are being made to free dairy stock from the disease in view of the economic loss which it entails, but progress must necessarily be slow. Meanwhile, milk pasteurised by approved processes may be regarded as safe. A measure which appears to be desirable is the elimination of infection from certified herds. It is reasonable to insist that milk of this high class retailed at a correspondingly high price should be free from disease-producing bacteria.

PUBLICATIONS.

The following papers on bacteriological subjects related to Public Health have been published during the year from the University Bacteriology Department.

- "Natural Agglutinins and their Relationship to the Somatic and Flagellar Antigens of Bacteria," by H. J. Gibson (1932), *Jour. Immunol.*, vol. 22, p. 211.
- "An Allergic Skin Reaction after Scarlet Fever," by H. J. Gibson and J. P. M'Gibbon (1932), *Lancet*, vol. II., p. 729. (Also from the City Hospital, Edinburgh.)
- "The Biological Types of the Diphtheria Bacillus and their Clinical Significance," by H. A. Wright and A. L. K. Rankin (1932), *Lancet*, vol. I., p. 884. (Also from the City Hospital, Edinburgh.)
- "Dissociation and Variation of the Attenuated Bovine Tubercle Bacillus (B.C.G.) with Reference to Type Stability and Virulence," by M. H. Christison (1932), *Zentralb. f. Bakt.*, Abt. 1. Orig. vol. 125, p. 72.
- "Undulant Fever produced by *Brucella Abortus*," by C. P. Beattie, *Lancet*, vol. I., p. 1002 (1932).
- "The Effect of Carotene on the Course of *B. tuberculosis* infection of Mice fed on a Vitamin A deficient Diet," by M. H. Finkelstein (1932), *Proc. Soc. Exper. Biol. and Med.*, vol. 29, p. 969.

The work has been carried out under the direction of Professor T. J. Mackie.

The *Medical Staff* of the University who took part in the bacteriological services of the City during 1932 were:—Dr. J. M. Alston, Dr. H. J. Gibson and Dr. M. H. Finkelstein, Lecturers; Dr. C. P. Beattie and Dr. A. Haddow, Special Assistants; Dr. C. E. van Rooyen, Assistant.

Voluntary assistance was also given in special investigations by Dr. May H. Christison, Dr. Helen A. Wright and Miss G. R. Borthwick.

MOTOR AMBULANCE SERVICES.

Three motor ambulance cars are provided by the Public Health Department for the removal to hospital of patients suffering from infectious diseases. The cars are garaged at Colinton Mains Hospital and are available at any hour of the day or night.

Transport to the three General Hospitals is undertaken partly by the Public Assistance Department, who have two ambulances, and partly by the Public Health Department, who supply one car when available. The Police Ambulances are at the call of the citizens generally for the removal of accident cases to the Royal Infirmary and other hospitals.

The St. Andrews Ambulance Association have three ambulance cars in service and these are sent on request to convey patients to nursing homes and other institutions.

DISINFECTION.

The Public Health Department are responsible for the disinfection of houses after infectious disease, and the removal by special motor van of infected bedding, clothing and other articles, to the disinfection station for treatment by high pressure steam or formaldehyde gas.

Particulars are given herewith of the number of dwelling-houses disinfected during the last three years:—

	1930.		1931.		1932.	
	Number.	Apartments.	Number.	Apartments.	Number.	Apartments.
Dwelling-houses, etc. :—						
After Tuberculous Disease .	790	1,158	911	1,414	804	987
„ other „ .	4,770	7,535	2,640	6,147	3,754	5,910

The number and description of the articles dealt with at the Disinfection Station during the year are given below:—

Description.	No. of Articles.		Description.	No. of Articles.	
	After Tuberculous Disease.	After Other Diseases.		After Tuberculous Disease.	After Other Diseases.
Mattresses and Palliasses .	733	2,112	Body Clothes . .	1,623	9,553
Blankets, Sheets, Quilts, etc.	2,793	7,323	Carpets and Rugs . .	25	350
Beds, Pillows, Bolsters, etc. .	1,789	2,990	Miscellaneous . .	393	2,048
Curtains, Table Covers, Wraps, etc.	53	126	Destroyed by request .	243	112
Table Napery, Toilet Covers, Towels, etc.	99	324	Totals	7,751	24,938

Second-hand Clothing.—Where second-hand clothing is despatched to the Irish Free State, the exporter is required by the Irish Authorities to furnish proof that the articles have been duly disinfected before leaving this country, or otherwise that they be sent only to certain named ports in Ireland where such disinfection is undertaken free of charge.

In conformity with this regulation, the disinfecting staff carried out the fumigation of 141 consignments of second-hand clothing, and the necessary certificates were supplied by the Medical Officer of Health.

Straw Packing.—In order to comply with regulations issued by certain foreign countries, the disinfection of 27 consignments of straw packing was carried out at the Northern General Hospital, and certificates duly furnished.

Cleansing of Persons.—Facilities were provided at the Disinfection Station for the treatment of persons suffering from scabies, or whose clothing was found to be in a verminous condition. Altogether 620 attendances were made for baths and disinfection of clothing. Of that number, 326 related to verminous conditions, three being children, while 66 adults and 228 children suffered from scabies.

RECEPTION HOUSE.

No outbreak of smallpox or other disease calling for quarantine of contacts took place during the year, but the Reception House was kept in readiness for emergencies.

INTERMENTS.

(In terms of Section 69, Public Health (Scotland) Act, 1897).

Application was made in 168 instances by relatives of deceased persons for assistance towards the cost of interment. Each application was carefully investigated and as a result 13 applicants were refused assistance, and eleven others withdrew their claims. In the remaining 144 instances the burials were arranged by the Department at a total cost of £254, 8s.

The following statement shows the expenditure in connection with interments during the last five years:—

Year.	Number.	Total Cost of Interments and Removals.	Sums Recovered from Relatives.	Net Expenditure.
1928 . . .	48	£126 13 6	£7 13 6	£119 0 0
1929 . . .	51	153 3 6	17 18 5	135 5 1
1930 . . .	50	138 15 6	33 17 9	104 17 9
1931 . . .	79	166 4 0	33 8 3	132 15 9
1932 . . .	144	254 8 0	58 0 5	196 7 7

HOSPITAL EXPENDITURE.

The following Table shows the cost per occupied bed in the Hospitals under the control of the Public Health Department. The particulars apply in each case to the financial year to 15th May 1932 and are based on the gross ordinary expenditure, excluding loan charges :—

Institution.	Daily Average Number of Occupied Beds.	Gross Ordinary Expenditure Year to 15th May 1932.	Cost per Occupied Bed per Week.
City Hospital	449	£48,959	41/10
Western General Hospital	225	20,338	34/7
Northern General Hospital	207	13,221	24/4
Royal Victoria Hospital	72	7,836	41/3
Royal Victoria Farm Colony	13	1,323	37/6
Victoria Park House	21	1,637	29/10
Bangour Mental Hospital	1,058	63,141	22/10
Gogarburn Certified Institution	149	8,699	22/4

PUBLIC HEALTH EXPENDITURE.

The increase in Public Health Expenditure consequent on the introduction of new schemes from time to time is shown in the following Table. The decrease in Revenue in 1930-31 was due to Government Grants being no longer credited to the Public Health account but included in a General Exchequer Contribution in terms of the Local Government Act, 1929.

Year.	Gross Expenditure.	Revenue.	Net Expenditure.
1909-10	£35,159	£699	£34,459
1910-11	34,869	718	34,150
1911-12	35,072	780	34,291
1912-13 T.B. Scheme begun.	37,618	2,690	34,927
1913-14	46,094	14,548	31,546
1914-15	56,768	18,716	38,051
1915-16	56,827	12,997	43,829
1916-17 C.W. Scheme begun.	58,323	23,216	35,107
1917-18	75,198	30,552	44,645
1918-19 V.D. Scheme begun.	99,563	43,029	56,533
1919-20	130,877	49,138	81,738
1920-21 Amalgamation with Leith.	210,875	89,098	121,777
1921-22	184,315	68,450	115,865
1922-23	146,395	67,477	78,917
1923-24	149,873	47,554	102,319
1924-25	156,155	48,949	107,206
1925-26	156,919	54,185	102,734
1926-27	157,895	56,439	101,455
1927-28	* 172,763	56,999	115,764
1928-29	* 177,008	60,512	116,496
1929-30	* 182,136	62,559	119,577
1930-31 Includes General Hospitals	* 394,088	48,070	346,018
1931-32 and Mental Institutions.	* 354,499	48,205	306,294

* Interest and Debt Charges Included.

MATERNITY AND CHILD WELFARE.

REPORT BY MATERNITY AND CHILD WELFARE MEDICAL OFFICER.

I have the honour to submit a report of the work under the Maternity and Child Welfare Scheme for the year 1932. The usual statistical tables associated with the subject-matter of the report are appended.

Births (Tables 1 to 5).—The total number of births registered during the year was 7,617; after correction for outward and inward transfers the number was 6,960, being 3,537 males and 3,423 females. The corrected birth-rate for the City was 15·5, a lower rate than in the previous year, when it was 16·2.

The total births notified were 8,067; of these 503 were stated to be premature, an increase of 52 when compared with 1931. The illegitimate births numbered 466 or 6·7 per cent. of the total corrected births.

Still-Births.—The still-births numbered 371, a decrease of 4 compared with the previous year.

Deaths.—(Tables 6 to 9).—The Infantile Mortality rate for the year was 73, as compared with 69 for 1931. The higher rate is mainly due to deaths from measles and whooping-cough and, to a less extent, to an increase of deaths of prematurely born infants. The total number of deaths up to five years was 755, and of these 183 or 24 per cent. occurred during the first week of life, 223 or 29 per cent. during the first four weeks, 507 or 67 per cent. during the first year, and 248 or 33 per cent. between one and five years of age.

During the year there was an epidemic of measles as well as of whooping-cough. The deaths from measles were 28 under one year, and 53 between one and five years; from whooping-cough the deaths were 24 under one year, and 28 between one and five years of age. Of the 507 deaths under one year, prematurity, pneumonia and bronchitis, and measles and whooping-cough accounted for 295 or 58 per cent., more than half the total for the year. Separately stated prematurity accounted for 128 deaths or 25 per cent. of the total, pneumonia and bronchitis for 115 deaths or 23 per cent., and measles and whooping-cough for 52 deaths or 10 per cent. of the total. Grouped according to age-periods, of the 507 deaths, 183 or 36 per cent. occurred in the first week of life, and 223 or 44 per cent. in the first four weeks of life. Of the total 755 deaths of children up to five years of age, 661 or 87·5 per cent. were legitimate and 94 or 12·5 per cent. were illegitimate. Calculated for age-periods the percentage figures vary very little in whatever age-groups they are compared with one another.

The Neo-natal Death-rate.—The number of deaths of infants occurring in the first four weeks of life, per 1000 live births, was 32, as compared with 33 for the previous year.

Ante-Natal Clinics (Table 10).—During the year under review the number of sessions held at the centres was 133 more than last year—accounted for by the opening in the latter part of 1931 of clinics at Prestonfield and Portobello, and

during the following year in the Stockbridge area. The total attendances show an all round increase of 4,926. In 1921 only 20 per cent. of all infants born in the City were known to have received ante-natal supervision at the municipal clinics; this year the percentage rose to 70.

Ophthalmia Neonatorum (Table 11).—There were 30 cases notified during the year compared with 14 in 1931. An analysis of this increase in notifications supports the view that it is not so much due to an increase of actual cases occurring as to the fact that more cases of slight discharge are being notified than formerly. No doubt this is due to a memorandum circulated during the year by the Department of Health pointing out the value of hospitalisation of cases of this complaint, and the advisability of notification even in apparently trivial cases.

Post-Natal Clinics (Table 12).—The number of clinics held during the year was 38 more, and the total attendances 270 higher than in 1931.

Midwives Act (Table 13).—There were 18 practising midwives on the local roll, and the actual number of confinements attended by them was 357 or 4 per cent., of all notified births. Medical practitioners were called in by midwives in 49 cases of emergency.

Maternity Homes Act, 1928.—At the beginning of the year there were 32 Maternity Homes under supervision. During the year two new Homes were accepted for registration and two were given up, leaving 32 registered Maternity Homes at the end of the year.

Puerperal Fever and Pyrexia (Tables 14 to 19).—During the year there were 100 cases of puerperal fever and 82 cases of puerperal pyrexia notified in the City; of the former, subsequent investigation confirmed the diagnosis in 94. In addition, 20 out of the 82 cases of puerperal pyrexia developed into confirmed cases of puerperal fever—a total of 114. To this total should be added 2 cases not originally notified under either of the above headings, one sent to the Fever Hospital as a case of mumps and the other notified as a case of diphtheria, both of which subsequently developed into cases of puerperal fever. It will therefore be noted that in all, there occurred 116 confirmed cases of puerperal fever during the year. The deaths from puerperal fever numbered 17. Of these there were 3 deaths out of the above 20 cases originally notified as puerperal pyrexia—a case mortality of 14·3 per cent. The case mortality of the remainder was 14·9 per cent. The age periods at which the patients contracted puerperal fever as well as the age periods at which these 17 deaths occurred are shown on page 62. Of the 116 confirmed cases of puerperal fever, 46 or 39·65 were of women in their first pregnancy, and 27 or 23·2 per cent. of women in their second pregnancy—a total of 73 or 62·9 per cent. occurring in women either pregnant for the first time or who had had only one previous pregnancy.

Maternal Deaths (Tables 20 to 22).—The number of maternal deaths which took place in the City was 71, a decrease of 8 compared with the previous year. Of these 71 deaths 24 were of women who had come to the City for their confinement, and their deaths were transferred to the district of permanent residence. Thus after adjustment 47 deaths of Edinburgh citizens remain to be noted compared with 51 in 1931 and 59 in 1930. Puerperal sepsis accounted for 14 of these deaths—two less than last year—or 29 per cent. of the total. There were 7 deaths from

toxæmias of pregnancy—3 less than the previous year; 4 from hæmorrhage, as against 5 last year; 2 from embolism, as compared with 4 in 1931; and 20 from conditions complicating or associated with childbirth. In the last group there were 4 deaths from influenza, 4 from pulmonary conditions and 3 from valvular heart disease. On investigation it has been noted that the majority of these maternal deaths occurred in women who have had little or no systematic ante-natal supervision.

Visits to Homes.—Each Health Visitor has allotted to her a district of the City where she visits mothers and babies and keeps them under supervision. Extra visits are made under their guidance by nurses in training for the Health Visitors' Diploma. During the year 5,612 infants under one year old received 26,198 visits, and 49,652 visits were paid to children between one and five years of age, 416 of whom were seen for the first time at this age-period; 3,712 visits were made to expectant mothers and over 800 children received fortnightly visits from members of the Voluntary Health Workers' Association.

Clinics (Tables 23 to 25).—In addition to the ante-natal and post-natal clinics already referred to, infant and child clinics are held at 12 centres. At the Preventive clinics the attendances of new cases amounted to 2,653, and the total attendances of both new and old cases were 32,386, as compared with 35,354 in 1931. At the Curative clinics the new cases numbered 2,869 and the total attendances of new and old cases were 15,958, as compared with 15,266 in 1931.

Ultra Violet Ray Therapy.—Ultra Violet Ray Therapy is still carried on at only two centres—namely in Leith and the Pleasance. The number of children attending these centres during the year was 296 and the number of treatments 5,759.

Milk and Dinners (Table 26).—The distribution of milk and dinner tickets where health conditions require these has proved of value. There is no doubt that many mothers have little idea of food values nor do they know how to spend money for food to the best advantage. Children frequently suffer from ill health just as much from lack of knowledge of proper feeding as from inability to provide the amount necessary to preserve health.

Day Nurseries (Table 27).—At the four Day Nurseries the total attendances of infants were 4,482 and of toddlers 17,929—in all 22,411 attendances—a decrease of 2,006 on the previous year.

The provision at Leith Day Nursery of several cots for the residential care of healthy children whose mothers have to be from home for a short time for health reasons, continues to serve a very useful purpose. It is proposed to extend similar facilities to two more of the Day Nurseries.

Toddler Playgrounds (Table 28).—The voluntary Health Workers' Association makes itself responsible for sixteen Toddler Playgrounds. Three of these have been started for the first time, one being at Leith, another at Cowan's Close and the third at Cameron House, Prestonfield. The daily attendance of toddlers was 519, which is 52 more than in 1931. The waiting list is always large and were funds available many more of these playgrounds could be started. The small cost of carrying on these playgrounds is well repaid in health results to the toddlers.

Homes for Mothers and Infants.—Edinburgh Corporation give grants to a number of Homes for mothers and infants in and around the City. These Homes work in close harmony with the Child Welfare Department.

The Edinburgh Home for Mothers and Babies at 17 Claremont Park, Leith, had in residence 44 mothers and 22 infants of whom 35 mothers and 17 infants were new admissions during the year. The average length of stay in the Home is about fifteen weeks.

The Salvation Army Home for Mothers and Infants at Bonnington Bank House had in residence at the start of the year 20 mothers (including expectant mothers) and 13 babies. During the year 36 mothers and 28 babies were admitted and 37 mothers and 30 babies were discharged. At the end of the year there were still left in residence 19 mothers and 11 babies.

During the year 30 mothers, 25 infants and 4 toddlers were sent by the Department to spend a fortnight at Hawthornbrae Convalescent Home, Duddingston.

The Edinburgh Home for Babies at 18 Polwarth Terrace had its full complement of 14 infants in residence at the beginning of the year. During the year 21 babies were admitted. The figures for the annexe at 3 Forbes Road were 6 and 11 respectively.

The Department was responsible for the cost of sending 195 toddlers during the year to Humble Children's Village, where each was kept for a period of three to four weeks.

From time to time a number of cases are recommended as suitable for admission to Leadburn Home for Tired Mothers and to Providence House, Kinghorn. These, however, are not paid for out of Corporation funds, but either by the Mothers themselves or through voluntary effort. The Department is gratefully indebted to the Misses Romanes who continue to offer free hospitality at their Convalescent Home at Fushiebridge to any cases specially recommended as suitable. During the past year as many as 22 mothers, 14 babies and 31 children were received in groups of five at a time for a two weeks' stay at this popular home.

Victoria Park Home for debilitated infants and children continues to fill a very necessary place in the Child Welfare Scheme, and the numbers requiring admission continue to be greater than can be accommodated in the cots available. During the year 163 cases were looked after in the Home compared with 140 in the previous year. The average daily occupation was 21. In this Home any suggestion of institutional life is discouraged and the idea of a happy home life is encouraged with the result that the babies thrive in a way which is seldom achieved where larger numbers are herded together—success lies in the multiplicity of small units. The Home is extremely popular with the parents of the children and it attracts more applications from girls anxious to train as domestic nurses than can be dealt with.

Mothercraft Classes.—These steadily increase in popularity with the mothers attending the Child Welfare Clinics. They were started in 1924 and consist of a small series of health talks at the end of which an examination is held and prizes

given. The presentation for competition of a Silver Shield by the late Sir Thomas Hutchison has encouraged the competitive spirit. The winner has the privilege of having her name engraved upon the shield and in addition receives a personal gift. In 1924 there was an attendance of 35 mothers, 13 of whom competed for the Hutchison Shield. This year 210 mothers attended and 102 took part in the examination. The Shield, which was won last year by Stockbridge Centre, was this year captured for Leith Centre by Mrs John Stevenson. This is the fourth time in nine years that Leith Centre has won the Shield. The Staff takes this opportunity of expressing gratitude to Mrs Charles M'Neil for kindly presiding over the gathering of mothers and children at Balgreen House in the month of June, when she presented the Shield to the winner, and in addition, the prizes to the successful competitors in the section for garments and other articles useful for the home.

Cookery Demonstrations.—Miss Gilmour, who has proved herself to be an enthusiastic and delightful teacher, continued to interest mothers again this year by her demonstrations in cookery. These were held for groups of mothers at various centres with a total attendance of 66 mothers.

Rheumatic Clinic (Table 29).—The Rheumatic Clinic is held every Wednesday forenoon at the Royal Hospital for Sick Children and is under the clinical charge of Dr. Norman Carmichael and Dr. Lewis Thatcher. Fifty-two clinics were held during the year when 75 new cases and 473 old cases were examined—a total of 548 cases. Of the 75 new cases 59 were definitely diagnosed as of a rheumatic nature and 16 as due to other non-rheumatic conditions. The total number of notifications during the year was 53.

I am indebted to many workers interested in the various activities of the Maternity and Child Welfare Scheme for much valuable help. To these, both official and voluntary, I desire to express my deep sense of gratitude.

I have, Sir, the honour to remain,

Your obedient Servant,

T. Y. FINLAY, M.D., F.R.C.P. (E.),
Maternity and Child Welfare Medical Officer.

TABLE 1.—Particulars regarding BIRTHS after necessary corrections have been made for transfers.

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births
1st . . .	1,728	1,611	117	6·8
2nd . . .	1,795	1,675	120	6·7
3rd . . .	1,713	1,604	109	6·4
4th . . .	1,724	1,604	120	7·0
Totals .	6,960	6,494	466	6·7

TABLE 2.—BIRTHS allocated according to the three areas of the extended City.

Area.	Births.	Rate per 1000 of Population.
Edinburgh . . .	4,762	14·8
Leith . . .	1,510	18·2
Suburban . . .	507	16·7
Institutions . . .	138	...
Military Quarters . . .	43	...
Whole City . . .	<u>6,960</u>	<u>15·5</u>

TABLE 3.—Corrected BIRTH-RATES for the eight large towns in Scotland and for the whole of Scotland for 1932.

TOWN.	Per 1000 of Population.	TOWN.	Per 1000 of Population.
Glasgow	20·6	Paisley	18·8
Edinburgh	15·5	Greenock	21·5
Dundee	18·5	Motherwell and Wishaw	20·8
Aberdeen	18·8	Clydebank	20·1
SCOTLAND	18·6		

TABLE 4.—NOTIFICATION OF BIRTHS—Analysis of 8,067 births notified during the year.

I. Births attended by Private Doctors	1,803
II. Births attended by Private Doctors with a District Nurse—	
(1) Queen's Nurses	883
(2) Buccleuch Place Nurses	103
	— 986
III. Births attended by Registered Midwives	357

TABLE 4—*continued.*

Carried forward 3146

IV. Births attended by Students and Pupil Nurses in their own homes—

(1) Royal Maternity Hospital	911	
(2) Elsie Inglis Memorial Hospital	375	
(3) Cowgate Dispensary	337	
(4) Deaconess Hospital	94	
	—	1,717

V. Births attended in Maternity Hospitals and Training Centres—

(1) Royal Maternity Hospital	2,050	
(2) Elsie Inglis Memorial Hospital	1,019	
(3) Deaconess Hospital	11	
(4) Edinburgh Lying-in Institution	65	
(5) Western General Hospital	59	
	—	3,204
		<u>8,067</u>

TABLE 5.—Analysis of comparable figures in percentages of the BIRTHS for the past five years.

	1928.	1929.	1930.	1931.	1932.
Births attended by—					
Private Doctors	43	49	40	36	35
Private Doctors with a District Nurse					
Registered Midwives	5	5	5	5	4
Students and Pupil Nurses in Patient's Home	22	18	21	21	21
In Maternity Hospitals and Training Centres	30	28	34	38	40
	100	100	100	100	100

TABLE 6.—Distribution of the DEATHS under ONE YEAR in the different districts of the City, together with the MORTALITY-RATE for the respective areas.

Area.	Deaths under 1 year.	Deaths per 1000 Births.
Edinburgh	353	74
Leith	115	76
Suburban	29	57
Institutions	9	...
Military Quarters	1	...
Whole City	507	73
Figures for 1931	492	69

TABLE 7.—Particulars regarding BIRTHS, DEATHS of CHILDREN at age periods from ONE to FIVE YEARS, and also the INFANTILE MORTALITY in each of the twenty-three Municipal Wards.

WARD.	BIRTHS.		DEATHS.						Infantile Mortality (Rate per 1000 Births.)
	Number.	Per 1000 of Population	Under 1 Year.	1-2.	2-3.	3-4.	4-5.	Total.	
Calton	329	15.0	27	8	3	4	1	43	82
Canongate	379	17.6	27	8	4	5	2	46	71
Newington	238	11.2	14	3	2	...	1	20	59
Morningside	130	6.0	3	2	...	...	...	5	23
Merchiston	164	8.1	9	3	...	...	...	12	55
Gorgie	485	18.6	31	3	2	3	1	40	64
Haymarket	142	8.1	11	1	2	1	...	15	77
St. Bernard's	264	14.8	13	6	...	...	2	21	49
Broughton	251	16.3	23	5	2	...	...	30	92
St. Stephen's	266	15.3	22	3	...	1	1	27	83
St. Andrew's	177	15.8	21	8	4	1	1	35	119
St. Giles	422	20.5	35	12	8	1	2	58	83
Dalry	365	17.3	26	4	4	...	4	38	71
George Square	295	14.0	23	7	2	2	...	34	78
St. Leonard's	394	19.2	30	14	2	2	1	50	76
Portobello	461	17.5	38	7	2	2	3	52	82
South Leith	543	18.4	38	9	4	...	...	51	70
North Leith	420	20.8	37	13	2	3	2	57	88
West Leith	294	15.4	13	4	5	1	1	24	44
Central Leith	253	17.8	27	4	2	1	1	35	107
Liberton	268	24.7	15	5	2	3	3	28	56
Colinton	90	12.8	5	1	...	...	...	6	56
Corstorphine and Cramond	149	12.0	9	...	...	...	1	10	60
Institutions	138	...	9	3	4	...	1	17	...
Military Quarters	43	...	1	...	...	...	...	1	...
Totals	6,960	15.5	507	133	56	31	28	755	73
Edinburgh Area	4,762	14.8	353	94	37	23	19	526	74
Leith Area	1,510	18.2	115	30	13	5	4	167	76
Suburban Area	507	16.7	29	6	2	3	4	44	57
Institutions	138	...	9	3	4	...	1	17	...
Military Quarters	43	...	1	...	...	...	...	1	...

TABLE 8.—CAUSES of DEATH among CHILDREN under FIVE YEARS during 1932.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Wks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Mths.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years	Total under 5 Years
	Smallpox
Chickenpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever . . . . .	...	...	...	...	...	1	2	7	18	28	34	10	5	4	53	81
Whooping Cough . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup . . . . .	...	...	...	1	1	5	3	8	7	24	18	3	5	1	28	52
Erysipelas . . . . .	...	...	...	...	...	1	...	1	1	3	1	2	2	...	13	16
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	5	...	4	9	6	3	4	1	14	23
Other Tuberculous Disease . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Meningitis (not Tuberculous) . . . . .	...	...	...	...	...	1	1	5	...	7	5	3	2	2	12	19
Hydrocephalus . . . . .	...	...	...	1	1	...	1	...	2	3	1	...	...	...	1	4
Convulsions	7	1	...	1	9	2	2	1	1	15	1	...	...	...	1	3
Pneumonia (all forms)	1	3	1	3	8	14	31	18	17	88	34	7	7	3	51	139
Bronchitis . . . . .	...	...	1	1	2	9	12	2	2	27	1	1	...	...	2	29
Laryngitis . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Diarrhoea and Enteritis . . . . .	...	1	...	1	2	6	10	4	1	23	7	1	...	...	10	33
Other Digestive Diseases	1	...	...	...	1	2	4	1	...	8	4	5	...	...	11	19
Congenital Malformations	6	...	...	...	6	6	3	1	...	16	...	...	...	...	...	16
Congenital Heart	4	...	...	...	4	1	3	1	...	9	...	...	...	...	...	9
Premature Birth	112	4	1	7	124	4	...	...	...	128	...	...	...	...	...	128
Atrophy, Debility, and Marasmus	5	1	1	2	9	8	2	4	...	23	...	...	...	...	...	23
Atelectasis	14	1	...	...	15	...	...	...	...	15	...	...	...	...	...	15
Injury at Birth	27	...	...	...	27	1	...	...	...	28	...	...	...	...	...	28
Suffocation, overlaying . . . . .	...	...	2	...	2	3	3	...	...	8	...	...	...	...	...	8
Syphilis . . . . .	...	...	...	...	...	2	...	...	...	2	1	...	...	...	1	3
Rickets . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	6	4	...	2	12	8	10	7	4	41	16	17	3	7	43	84
Totals	183	15	6	19	223	74	93	60	57	507	133	56	31	28	248	755

TABLE 9.—CAUSES of DEATH among ILLEGITIMATE CHILDREN under FIVE YEARS during 1932.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Wks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Mths.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years	Total under 5 Years
	Smallpox
Chickenpox . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles . . . . .	...	...	...	...	...	...	...	...	...	4	7	3	...	...	12	16
Scarlet Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough . . . . .	...	...	...	...	...	...	...	...	2	2	1	...	...	...	1	3
Diphtheria and Croup . . . . .	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2	2
Erysipelas . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis . . . . .	...	...	...	...	...	...	1	...	1	2	...	...	1	...	1	3
Abdominal Tuberculosis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Disease . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
Meningitis (not Tuberculous) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrocephalus . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Convulsions . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	1	1	...	...	2	2	3	4	4	15	6	...	1	...	7	22
Bronchitis . . . . .	...	...	...	...	...	1	1	1	...	3	...	...	...	...	...	3
Laryngitis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis . . . . .	...	...	...	...	...	...	3	1	...	4	3	...	...	...	3	7
Other Digestive Diseases . . . . .	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1
Congenital Malformations . . . . .	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	1
Congenital Heart	1	...	...	...	1	...	1	...	...	2	...	...	...	...	...	2
Premature Birth	8	...	...	1	9	2	...	...	...	11	...	...	...	...	...	11
Atrophy, Debility, and Marasmus . . . . .	...	...	...	1	1	2	...	...	...	3	...	...	...	...	...	3
Atelectasis . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Injury at Birth	3	...	...	...	3	...	...	...	...	3	...	...	...	...	...	3
Suffocation, overlaying . . . . .	...	...	...	...	...	1	2	...	...	3	...	...	...	...	...	3
Syphilis . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Rickets . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	1	1	...	...	2	...	...	2	...	4	1	...	2	2	5	9
Totals	14	2	...	3	19	8	12	10	9	58	22	4	8	2	36	94

TABLE 10.—ANTE-NATAL CLINICS.

CENTRE.	Number of Clinics held.	ATTENDANCES.		
		New Cases.	Old Cases.	Total.
Cowgate	100	480	868	1,348
Torphichen Street	50	105	415	520
Marshall Street	47	58	223	281
Royal Maternity Hospital	365	2,423	11,236	13,659
Leith	50	286	745	1,031
Elsie Inglis Memorial Hospital	150	1,247	4,746	5,993
Prestonfield	52	137	444	581
Portobello	52	48	105	153
Stockbridge	52	114	340	454
Totals	918	4,898	19,122	24,020
Figures for 1931	785	4,424	14,670	19,094

TABLE 11.—OPHTHALMIA NEONATORUM. The interval in days between the Birth of the Child and the onset of the disease.

Days .	1	2	3	4	5	6	7	8	9	10	Over 10 days and under 3 months.	No Particulars.	Total.
Cases .	3	1	1	4	3	1	2	1	...	2	7	5	30

The Confinement was attended by :—

A Doctor and Nurse	12 cases.
Nurses from Institutions	3 cases.
In Institutions	15 cases.—Total, 30 cases.

Treatment was given :—

At Home	10 cases.
At Home and Welfare Centres	2 cases.
In Hospital	18 cases.—Total, 30 cases.

Hospital Treatment was given :—

In Nursing Home	1 case.
In Northern General Hospital	11 cases.
In Western General Hospital	2 cases.
In Royal Infirmary	1 case.
In Elsie Inglis Hospital	3 cases.—Total, 18 cases.

A Queen's Jubilee Nurse or a Nurse from the Royal Maternity Hospital attended to those children who were treated in their homes.

TABLE 12.—POST-NATAL CLINICS.

CENTRE.	No. of Clinics held.	Attendances.
Royal Maternity Hospital	51	1,447
Elsie Inglis Memorial Hospital	104	1,044
Torphichen Street Dispensary	50	134
Prestonfield Welfare Centre	35	64
Totals	240	2,689

TABLE 13.—MIDWIVES ACT.

Report for the year in terms of the Midwives (Scotland) Act, 1915 :—

1. The number of certified Midwives who intimated to the Local Authority their intention to practice in the district	18
2. (a) Total number of Births	8,067
(b) Total number of Deaths of New-born Children (within 10 days)	233
(c) Actual number of Births attended by Midwives	357
(d) Deaths of New-born Children occurring in the practice of Midwives	2
(e) Number of Births not attended by a Doctor or Midwife	0

TABLE 13—*continued.*

3. (a) Total number of cases of Ophthalmia Neonatorum	30
(b) Actual number of cases of Ophthalmia Neonatorum occurring in the practice of Midwives	0
(c) Actual number of cases occurring where confinement not attended by a Doctor or Midwife	0
4. (a) Total number of cases of Puerperal Sepsis	116
(b) Total number of Deaths from Puerperal Sepsis	*17
(c) Actual number of cases of Sepsis in practice of Midwives	1
(d) Actual number of Deaths from Puerperal Sepsis in practice of Midwives	0
(e) Actual number of cases occurring where confinement not attended by a Doctor or Midwife	0
5. (a) Total number of Still-births	371
(b) Actual number of cases of Still-births occurring in the practice of Midwives	10
6. Cases of Emergency	49

* Includes 3 deaths transferred to other districts.

The total cases of emergency in which medical practitioners were called in, under Section 22 of the Act, during 1932, are noted in the following classified list, and number 49, as compared with 28 in 1931 :—

Cases of emergency.

Delay in Labour	10
Contracted pelvis	6
Occipito posterior presentation	5
Still-birth	10
Macerated foetus	1
Post partum hæmorrhage	2
Perineal tear	7
Illness of Mother	2
Illness of child	1
Breech presentation	1
Albuminuria	1
Puerperal Sepsis	1
Puerperal Pyrexia	2
	<hr/>
	49

TABLE 14.—PUERPERAL PYREXIA.

Total number of cases of puerperal pyrexia notified	82
Total number subsequently developing into puerperal fever	20
Total number of deaths of cases notified as puerperal pyrexia—	
Puerperal septicæmia	2
Puerperal infection	1
Primary pneumonia	1
Influenzal pneumonia	1
Acute gangrenous cystitis	1
	<hr/>
	6

TABLE 15.—PUERPERAL FEVER.

Total number of cases of puerperal fever notified		100
Total number of cases notified but not confirmed—		
Influenza	1	
Pleurisy	1	
Pyonephrosis	1	
Cystitis	1	
Constipation and sapræmia	1	
No evidence of puerperal fever	1	
	—	6
Number of notifications confirmed		94
Number of cases not notified as puerperal fever but developed into puerperal fever—		
Mumps	1	
Diphtheria	1	
	—	2
		—
TOTAL		96

TABLE 16.—RESUMÉ OF CONFIRMED CASES OF PUERPERAL FEVER.

Notified as puerperal fever	94
Notified as puerperal pyrexia	20
Other notifications	2
	—
TOTAL	116

TABLE 17.—DEATHS FROM PUERPERAL FEVER.

Number notified as puerperal fever	14
Number notified as puerperal pyrexia	3
	—
TOTAL	17

TABLE 18.—AGES of PATIENTS suffering from PUERPERAL FEVER.

15 years and under 20 years	4
20 years and under 25 years	32
25 years and under 30 years	38
30 years and under 35 years	22
35 years and under 40 years	16
40 years and over	4
	—
TOTAL	116

TABLE 19.—AGES at DEATH of PATIENTS suffering from PUERPERAL FEVER.

15 years and under 20 years	0
20 years and under 25 years	4
25 years and under 30 years	4
30 years and under 35 years	7
35 years and under 40 years	1
40 years and over	1
	—
TOTAL	17

TABLE 20.—MATERNAL DEATHS.

AGES AT DEATH:—

Under 20 years	1 or 2.1	per cent. of the total.
20 years and under 25 years	4 „ 8.6	„ „ „
25 years and under 30 years	17 „ 36.2	„ „ „
30 years and under 35 years	9 „ 19.1	„ „ „
35 years and under 40 years	9 „ 19.1	„ „ „
40 years and under 45 years	6 „ 12.8	„ „ „
45 years and under 50 years	1 „ 2.1	„ „ „
TOTAL	<u>47</u>	<u>100.0</u>

TABLE 21.

CAUSES OF DEATH:—

<i>Septicæmia.</i>		<i>Conditions complicating or associated with Childbirth.</i>	
Puerperal sepsis	14	Rupture of uterus	1
<i>Toxæmia.</i>		Bronchitic asthma	1
Pregnancy toxæmia without convulsions	1	Pneumonia	3
Eclampsia	5	Influenza	4
Uræmia	1	Organic heart disease	3
	— 7	Thrombosis	1
<i>Hæmorrhage.</i>		Cerebral hæmorrhage	1
Antepartum hæmorrhage	1	Shock	3
Postpartum hæmorrhage	2	Acute cystitis	1
Placenta prævia	1	Puerperal mania	1
	— 4	Hydroa gravidarum	1
<i>Embolism.</i>		TOTAL	<u>47</u>
Number of deaths	2		

TABLE 22.

MATERNAL DEATHS 1932.	Septicæmia.	Toxæmia.	Hæmorrhage.	Embolism.	Other conditions complicating or associated with Child-birth.	Totals.
Cases attended by—						
Private Doctors and died at home	0	2	2	0	2	6
Private Doctors and removed to Institutions	7	2	0	1	5	15
Midwives and removed to Institutions	0	0	0	0	0	0
Dispensaries and Pupil Nurses and removed to Institutions	2	0	1	0	2	5
Dispensaries and Pupil Nurses at home	0	1	0	0	0	1
In Institutions	5	2	1	1	11	20
Totals	14	7	4	2	20	47

TABLE 23.—PREVENTIVE CLINICS.

CENTRE.	Number of Clinics held.	NEW CASES.			TOTAL ATTENDANCES.		
		Under 1 year.	Over 1 year.	TOTAL.	Under 1 year.	Over 1 year.	TOTAL.
Gorgie	90	186	69	255	1,858	1,482	3,340
Torphichen Street	100	275	80	355	2,866	1,798	4,664
High Street	103	153	27	180	2,131	1,754	3,885
Pleasance	141	280	80	360	3,555	2,944	6,499
Windsor Street	147	368	156	524	3,441	1,648	5,089
Stockbridge	101	259	91	350	2,242	1,312	3,554
*Marshall Street	48	152	60	212	1,415	498	1,913
*Elsie Inglis Memorial Hospital	52	140	72	212	941	579	1,520
Prestonfield	52	101	104	205	1,162	760	1,922
TOTALS	834	1,914	739	2,653	19,611	12,775	32,386
Figures for 1931	875	2,037	774	2,811	20,920	14,434	35,354

* These Dispensaries receive a grant from the Corporation.

TABLE 24.—CURATIVE CLINICS.

CENTRE.	Number of Clinics held.	ATTENDANCES.		
		Old Cases.	New Cases.	TOTAL.
*Cowgate	100	2,454	311	2,765
Gorgie	51	258	188	446
*Torphichen Street	52	646	366	1,012
High Street	43	1,389	69	1,458
*Marshall Street	48	403	129	532
Portobello	95	2,146	190	2,336
Leith	147	4,761	1,076	5,837
*Elsie Inglis Memorial Hospital	113	1,032	540	1,572
TOTALS	649	13,089	2,869	15,958
Figures for 1931	648	12,365	2,901	15,266

* These Dispensaries are subsidised by the Corporation, the clinics being conducted by doctors on the regular staffs of the Dispensaries.

TABLE 25.—ULTRA VIOLET RAY CLINICS.

CENTRE.	Number of Cases.	Number of Exposures given.	
		M.V. Lamp.	C.A. Lamp.
Leith	151	2,170	...
Pleasance	145	1,966	1,623
TOTALS	296	4,136	1,623

TABLE 26.—MILK AND DINNERS.

The distribution of **milk and dinners** during the year was as follows :—

Milk—Assisted	85,675½ pints.
Free	78 „
Dinners—Assisted	16,124
Free . . . . .	...

TABLE 27.—DAY NURSERIES.

Day Nursery.	Attendances— Infants.	Attendances— Children.	Total Attendances.
Henderson Row	788	3,812	4,600
Dumbiedykes Road	1,864	5,090	6,954
Viewforth Terrace	720	3,751	4,471
South Fort Street, Leith	1,110	5,276	6,386
TOTALS	4,482	17,929	22,411
Figures for 1931	6,858	17,550	24,417

TABLE 28.—TODDLER PLAYGROUNDS.

CENTRE.	Number on roll.	Daily attend- ances.	CENTRE.	Number on roll.	Daily attend- ances.
Fountainbridge	40	30	Chessel's Court	35	26
High Street	60	50	Portobello	36	27
Pleasance	50	45	Cameron House	35	29
Stockbridge	60	40	Cowan's Close	19	16
Cowgate	44	25	Leith—Keddie Park	92	72
High School Yards	27	21	Junction Street	42	34
Tron Square	40	28	Links Place	34	16
Tollcross	66	30			
Barony Place	50	30	TOTALS	730	519

TABLE 29.—RHEUMATIC CLINIC.

ANALYSIS OF 75 NEW CASES SEEN AT RHEUMATIC CLINIC.

<i>Rheumatic.</i>		<i>Other Conditions.</i>	
Prodromal only	13	Nervous instability	6
Arthritis	8	Intestinal indigestion	2
Chorea only	12	General debility	3
Carditis only	19	Arthritis of non rheumatic nature	1
Carditis and Chorea	5	Habit spasm	2
Minor manifestations	2	Chronic bronchitis	1
		Glands in the neck	1
	<u>59</u>		<u>16</u>

VENEREAL DISEASES.

REPORT BY CLINICAL MEDICAL OFFICER.

I have the honour to submit to you a Report of the work carried out under the Venereal Diseases Scheme during 1932.

New Patients.—In the treatment centres throughout the City 4,800 new patients were examined, 2,817 of these being in the clinics at the Royal Infirmary.

A further 4,319 patients, who had not completed their treatment on 1st January 1932, continued to attend, making a total of 9,119 cases which were dealt with in the various departments.

These figures cover all cases from the City and in addition those from the Lothians and other areas which are participating in the V.D. Scheme.

An analysis of the new patients gives the following figures for the various diseases:—Syphilis, 930; gonorrhœa, 1,397; chancroid, 105; non-specific venereal infection, 622. Diseases of the genital organs and other tissues were found in 1,746 patients, but no evidence of venereal infection was found in these cases after subjecting them to careful clinical examination and bacteriological tests.

In-Patients.—The number of cases for whom admission to hospital was necessary was 515; this does not include the cases admitted to the Maternity Hospitals for their confinement. The admissions to the various institutions were as follows:—

	Men.	Women and Children.	Total.
Royal Infirmary	238	145	383
Subsidiary Hospital . . . . .	...	132	132
Bruntsfield Hospital and Elsie Inglis Hospital . . . . .	...	204	204
Royal Maternity Hospital . . . . .	...	159	159
Totals	238	640	878

Out-Patient Attendances.—The attendance rate of patients shows an improvement on any previous year. Visits paid to hospital numbered 145,787; of these 103,030 were made by male patients and 42,757 by women and children.

The following is a detailed list of the number of attendances at the various institutions:—

Royal Infirmary, Male patients	84,263
" " Female "	22,348
Subsidiary Clinics	3,437
Bruntsfield Hospital and Dispensaries	13,794
Royal Maternity Hospital	3,178
Seamen's Dispensary, Leith	18,767

At the two larger centres in the Royal Infirmary the male attendances per day averaged 270; the average attendances for women and children in the same institution were 80 per day. The increased attendance rate per patient is extremely satisfactory and shows that many patients are appreciating the need for continuity of treatment.

INCIDENCE AND TYPES OF DISEASE.

Gonorrhœa.—On analysing the new cases, gonorrhœa accounts for the largest percentage. This percentage, although large, does not reveal the true prevalence of the disease. This infection is three or four times more common in the community than syphilis, and it is probable that a considerable number of cases of gonococcal infection are either untreated, or are being dealt with by medical practitioners. It is unfortunate that many people and some medical practitioners still look lightly on this infection. As a result patients are apt to be content with the relief of their symptoms and many are never tested for cure. This applies to cases of infection in both sexes, and especially to female patients, many of whom report with late complications of the disease and have had no previous treatment.

Syphilis—Acquired and Inherited.—On analysing the cases of syphilis at the Royal Infirmary, there is a reduction in the number of early cases. There is a considerable increase, from 8·2 per cent. to 16·2 per cent. in the cases of inherited syphilis. This increase is due largely to adult inherited cases which are discovered by following up the families of acquired cases. The number of congenital cases was 202. In addition to the cases of inherited syphilis which had signs of active disease, many children, born of syphilitic parents, but with no evidence of disease, have been under observation for considerable periods. Ante-natal treatment has been administered to a large number of pregnant women, many of whom had no knowledge that they suffered from venereal disease. This ante-natal care and treatment, if commenced sufficiently early, results in the birth of healthy children who remain free from the disease. This aspect of the work of the Venereal Diseases Department is proving most successful in safeguarding the future health of children born of syphilitic parents, and is leading to a progressive decrease in the number of cases of inherited syphilis in the population.

There is a slight decrease in the number of cases of gonorrhœa in both sexes, but it is not possible to claim that the incidence of this disease is reduced to any extent. There are definite indications that syphilis is decreasing in incidence. Gonorrhœa is not looked on so seriously by the lay population as is syphilis, and the figures of those attending the clinics are not a true reflex of the actual incidence of the disease.

Ophthalmia Neonatorum.—Gonococcal infection during pregnancy has resulted in 30 cases being notified to the Edinburgh local authority as suffering from ophthalmia neonatorum, a marked increase from 1931. Examination of the cases notified showed that in 8 only of these 30 cases the condition was proved bacteriologically to be a true ophthalmia; 16 cases were treated in hospital. In addition 7 other cases of purulent conjunctivitis, not notified, but which were suspected to be suffering from gonococcal ophthalmia, were treated in hospital.

From the other areas participating in the V.D. Scheme 14 cases of suspected ophthalmia were treated in hospital, and 2 only showed bacteriological evidence of gonococcal infection. It is always advisable to admit these children to hospital as emergency cases so as to give the child every possible chance of preservation of its vision. In the 44 cases which came under the care of the local authority there was complete preservation of vision in all except one child. This case was admitted to hospital 11 days after birth, with one eye almost completely destroyed

by the gonococcal infection. If appropriate treatment had been administered at the onset of the infection, there is no doubt that the gross damage to the eye could have been prevented. The other infected eye was saved and full vision in it retained.

During 1932 the Department of Health for Scotland issued a further circular dealing with ophthalmia to all general practitioners and midwives. If the recommendations contained in this circular are carried out by those in attendance at confinements, ophthalmia neonatorum, with its disastrous results, will be lessened in incidence in a very short period.

Vulvo-Vaginitis.—Gonococcal infection of female children under 14 years of age accounted for 39 patients and filled the hospital beds to overflowing for a considerable period of the year. This condition of vulvo-vaginitis is difficult to nurse and to treat and there is the grave risk of an untreated case infecting other female children and giving rise to an epidemic in schools and centres where children are congregated. This makes it almost imperative to admit these cases to hospital. In co-operation with the Child Welfare Department arrangements have been made to look for this condition in all young children admitted to the hospitals under the control of the Corporation. This should lead to a reduction in the number of cases and prevent epidemics of this type of infection.

Laboratory Work.—By arrangement with the Managers of the Royal Infirmary, the laboratory work under the Venereal Diseases Scheme continues to be carried out with great efficiency under the direction of Dr. Logan, Bacteriologist to the Royal Infirmary. The number of specimens examined during the year was 55,427. The Venereal Diseases Clinics in the City were responsible for sending 47,274 specimens; 5,894 came from other wards in the Royal Infirmary, and 2,259 from Corporation Departments and General Practitioners. The centralisation of the laboratory work in close proximity to the larger V.D. centres is a valuable asset to the scheme and enables the clinical staff to carry out their treatment in close co-operation with those who are responsible for the bacteriological tests. It also enables the clinical staff to carry out co-ordinated research work.

Treatment.—There has been no alteration during the year in the routine methods of treatment of the various diseases. Several new preparations have been tried but none have given results such as would lead us to make any alteration in the routine treatment of either syphilis or gonorrhœa. No new discoveries have been made which would justify us in lessening the intensive and prolonged treatment required in the case of syphilis or which are likely to prove a short cut to the successful treatment of gonorrhœa.

Trials have been made and experiments carried out with various forms of protein shock to try to replace the malaria treatment of cases of nerve syphilis by a safer method. None of these preparations have given as good results as are obtained by the inoculation of malaria blood. Malaria infected blood has been supplied to mental hospitals and other institutions in Scotland from the Infirmary clinics, and we have been successful in keeping a constant supply of this valuable remedy. In carrying out this difficult form of treatment we have had the able assistance of other members of the staff of the Royal Infirmary.

Venereal Disease—Control of.—Under the existing legislation and limited administrative control of V.D., early, intensive, and prolonged treatment is the only method of preventing the spread of venereal disease and the serious conditions to which untreated disease gives rise. It is proving effective in lessening the the amount of inherited syphilis in young children and to a less extent in ophthalmia neonatorum. Further progress could undoubtedly be made in controlling venereal disease if the Public Health Authority were given a measure of greater administrative control over infected patients.

End Results of Treatment.—As a result of treatment 3,633 patients were discharged as completely cured. At the end of the year 3,779 patients were still under treatment; 942 were transferred to other centres during the year.

Percentage continuing at Treatment until considered Cured.—The greatest difficulty in dealing with any case of venereal disease is to convince the patient that apparent cure and relief of symptoms is not necessarily a permanent cure unless the treatment is continued over a considerable time and the patient is kept under observation until a certainty of cure is obtained. This results in what is known as "the defaulting patient" of whom there were 765 during the year, equal to 21·7 per cent. of the patients. No local authority can rest content with this situation as quite an appreciable percentage of these patients are still infective and are likely to spread the disease throughout the population.

The 21·7 per cent. represents those who have failed to respond to letters sent to them or to visits to their homes by members of the staff of the clinic. Any administrative measure which would lessen this percentage would be of undoubted value in lessening the spread of venereal disease among the community. That this figure is so low in the Edinburgh Clinics is largely due to the system of **Follow-up Work** which has been adopted, more especially with female defaulters. In addition to these defaulters 659 patients whose cases were dealt with by the nurse attached to the administrative staff were persuaded to return for treatment. Most of these patients were visited in their homes by the nurse, who made 2,754 such visits. As a result of these visits 90 per cent. of the cases of women and children who defaulted returned for treatment.

In addition to this administrative work by the nurse in the interests of treatment, clothing was provided for many of the poorer cases, holidays were arranged for children requiring fresh air and sunlight, bad homes and housing conditions were brought to the notice of the Sanitary Authority, and public assistance was obtained for many who through unemployment were unable to provide sufficient nourishment for their children.

This home visitation is a valuable asset to the V.D. Scheme. It gives us first-hand information of the home conditions and helps the clinical staff to arrange suitable hours for attendance and so make things easier for the parents of infected children. At the same time it impresses on the parents the seriousness with which the local authority look on untreated venereal disease. In carrying out this follow-up work we have had every assistance possible from many social workers and agencies, from the Society for the Prevention of Cruelty to Children, the Public Assistance Department, and from the Almoners of the Royal Infirmary.

It has not been possible to evolve an effective scheme for following up male patients. If a complete system of home visitation were instituted in their case it would break the pledge of secrecy which is given to these patients, and in the case of young men it would probably result in further defaulting. A nurse from the health department may visit a home to enquire about the children; it is a totally different thing enquiring about an adult male whose parents are probably not aware that the patient is attending hospital. There seems to be no alternative to cope with the defaulter rate in the case of the male patients other than to give the Medical Officer of Health some administrative control over known infective cases.

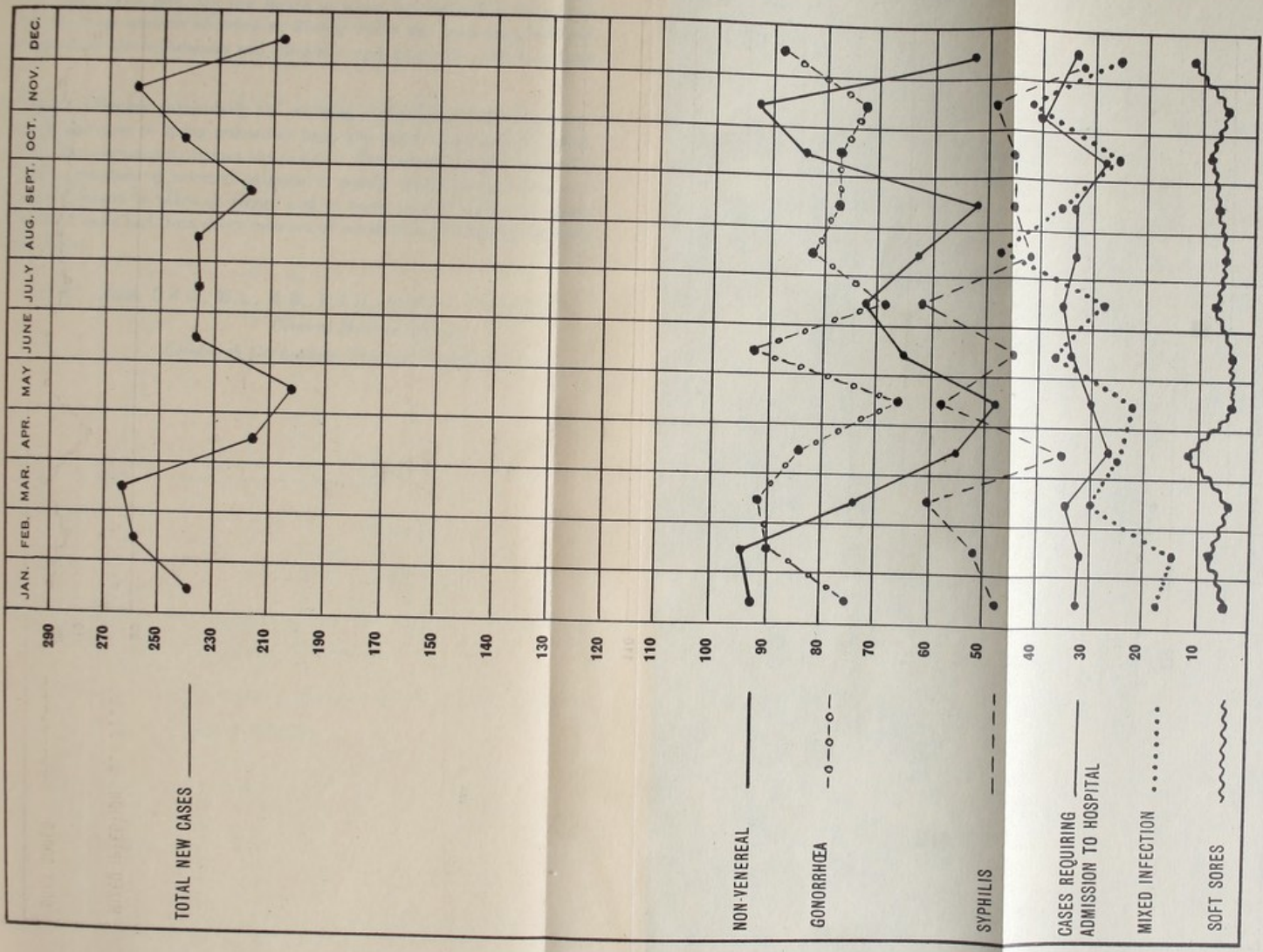
Hostel Accommodation.—The greatest difficulty which the nurse attached to this service has in her work is to provide accommodation for servant girls and others who are out of employment as a result of their infection. Until suitable hostels are provided in which these young girls can be supervised and given a suitable occupation there will still be at large among the population a considerable number of infected persons who continue to spread disease among the community. Hostels of the type we have in mind are provided by the London County Council and are almost self-supporting. The institution of such accommodation in Edinburgh would be of the greatest assistance to the V.D. Scheme and of undoubted social value to the community.

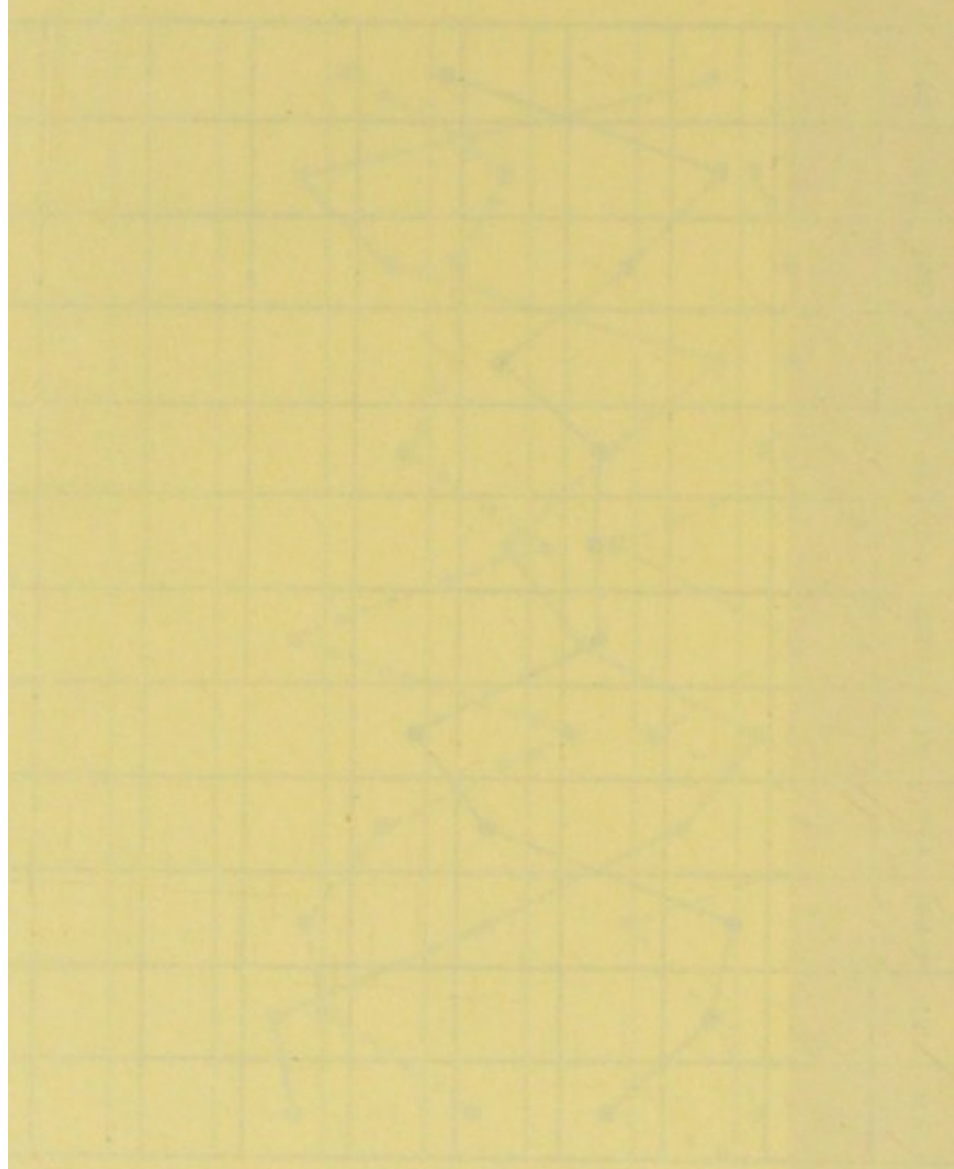
Seamen's Dispensary, Leith.—The provision for treatment of members of the Mercantile Marine at Leith is proving successful. New patients at the Seamen's Dispensary, Leith, numbered 329; these patients and those still attending for treatment from the previous year, made 18,767 visits for treatment during the year. We are satisfied that still more use would be made of the facilities for treatment at this Centre by the local inhabitants if the work were transferred to Leith General Hospital and conducted in association with the other medical activities of the hospital.

Co-operation with other Departments.—As a result of the re-staffing of the Corporation Hospitals we have been able to utilise the services of the consultants in the Western and the Northern General Hospitals. In addition there has been close co-operation with the work in the Children's Department of the Western General Hospital. This co-operation has resulted in a number of cases of latent venereal disease being discovered and placed under the appropriate treatment. The close co-operation which has existed between the work of the Child Welfare Department, the Maternity Hospitals, and the School Medical Service has continued. It is in the interests alike of the patients and of the general public health. In the Royal Infirmary the treatment of patients has been greatly assisted and made more efficient by the help which we have obtained at all times from the members of the staff of all other departments of this institution.

Statistical Tables.—A statistical diagram is attached to this report to show in tabular form the monthly incidence of the various types of disease. Tables are also appended giving information on the work of the department during the year.

COMPARATIVE INCIDENCE OF TYPES OF VENEREAL DISEASE
 (ROYAL INFIRMARY VENEREAL DISEASES CLINIC)





2 08 13 12 12 12 12 13

Medical, Nursing, and Clerical Staff.—It will be seen from these tables that a large amount of work has been overtaken by the medical, nursing and clerical staff. The increased attendance rate, the low figure to which the defaulters have been reduced, and the large amount of infective disease which has been examined and treated, are proofs of the enthusiasm and efficiency with which the staff have done their work.

In the Royal Infirmary particularly the working conditions are far from satisfactory, and in addition to being unhealthy from the point of view of the staff, do not provide the amenities to attract the patient. The constant strain of dealing with these large numbers of infected patients in poorly ventilated premises is a severe one, and I desire to place on record and to bring to your notice the great assistance which I have had from every member of my staff in overtaking the work of the department.

DAVID LEES, D.S.O., M.A., M.B., D.P.H., F.R.C.S., F.R.C.P.(E.),
Clinical Medical Officer,
Edinburgh Corporation Venereal Diseases Scheme.

Year	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total	
1907	10	12	15	18	22	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92
1908	12	15	18	22	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	
1909	15	18	22	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	
1910	18	22	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	
1911	22	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	
1912	25	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	
1913	28	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	
1914	32	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	
1915	35	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	
1916	38	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	
1917	42	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	
1918	45	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	
1919	48	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	
1920	52	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	
1921	55	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	
1922	58	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	
1923	62	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	
1924	65	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	
1925	68	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	
1926	72	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	152	
1927	75	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	152	155	
1928	78	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	152	155	158	
1929	82	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	152	155	158	162	
1930	85	88	92	95	98	102	105	108	112	115	118	122	125	128	132	135	138	142	145	148	152	155	158	162	165	
Total	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	

[TABLES.]

EDINBURGH CORPORATION VENEREAL DISEASES SCHEME.

ROYAL INFIRMARY CLINIC.

REPORT FOR THE YEAR ENDING 31ST DECEMBER 1932.

Number of New Cases Attending :—

	EDINBURGH.		OTHER AREAS IN SCHEME.		OTHER AREAS OUTSIDE SCHEME.		AREAS OUTSIDE SCOTLAND.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
January	113	56	30	10	17	11	1	1
February	141	59	18	5	20	11	4	...
March	151	59	24	13	13	...	...	...
April	116	42	21	9	17	5	2	1
May	102	49	17	5	18	9	1	...
June	122	51	29	13	13	14	1	...
July	130	62	15	8	14	5	4	...
August	129	46	22	10	20	7	4	1
September	122	49	11	7	16	7	5	...
October	121	67	18	11	12	7	5	...
November	128	62	26	16	18	4	4	1
December	111	47	26	11	8	3	3	...
Totals	1486	649=2135	257	118=375	186	83=269	34	4=38

EDINBURGH	2135
Other Areas in Scheme	375
Other Areas outside Scheme	269
Areas outside Scotland	38
Grand Total	2817

Of the New Cases Attending there were :—

EDINBURGH.

	MALES.				FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D. No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
January	18	41	4	5 45	15	11	8	22
February	23	51	5	11 51	15	13	3	28
March	22	68	3	16 42	23	10	5	21
April	17	56	5	9 29	10	12	7	13
May	24	39	4	14 21	17	12	6	14
June	14	57	2	19 30	13	8	5	25
July	29	45	5	16 35	20	10	11	21
August	22	48	3	25 31	4	14	6	22
September	17	55	5	10 35	18	5	18	8
October	18	53	5	15 30	20	9	4	34
November	16	37	3	27 45	12	11	8	31
December	14	55	8	12 22	8	16	7	16
Totals	234	605	52	179 416	175	131	88	255

OTHER AREAS IN SCHEME.

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
January	6	14	1	...	9	3	4	2	1
February	3	9	1	...	5	1	3	1	...
March	9	7	...	4	4	3	4	2	4
April	4	10	2	4	1	1	2	2	4
May	4	7	...	2	4	2	1	...	2
June	4	14	2	5	4	5	5	3	...
July	3	7	2	...	3	...	2	...	6
August	3	10	...	6	3	1	...	7	2
September	1	6	1	...	3	1	2	4	...
October	1	5	3	3	6	2	1	1	7
November	1	14	1	2	8	7	3	2	4
December	4	9	2	3	8	2	5	1	3
Totals	43	112	15	29	58	28	32	25	33

OTHER AREAS OUTSIDE SCHEME.

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
January	1	4	...	1	11	5	1	2	3
February	4	8	2	...	6	3	5	...	3
March	3	3	1	3	3	...	...	...	...
April	2	4	3	2	6	2	...	3	...
May	9	7	...	...	2	3	...	...	6
June	3	7	...	1	2	5	2	3	4
July	5	4	...	1	4	3	1	...	1
August	4	7	2	3	4	5	1	1	...
September	6	5	1	...	4	2	1	3	1
October	1	6	1	1	3	2	1	...	4
November	8	5	1	...	4	1	2	1	...
December	3	3	...	1	1	...	...	1	2
Totals	49	63	11	13	50	31	14	14	24

AREAS OUTSIDE SCOTLAND.

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
January	1	...	...	...	...	...	...	...	1
February	2	1	...	...	1	...	...	...	...
March . . . . .	...	...	...	...	2	...	...	...	...
April . . . . .	...	...	...	...	...	...	...	...	1
May . . . . .	...	1	...	...	...	...	...	...	...
June	1	...	...	...	...	...	...	...	...
July	2	...	...	1	1	...	...	...	...
August	1	2	...	...	1	1	...	...	...
September . . . . .	...	4	...	1	...	...	...	...	...
October	1	3	...	1	...	...	...	...	...
November	2	...	1	1	...	1	...	...	...
December	1	1	1	...	...	...	...	...	...
Totals	11	12	2	4	5	2	...	...	2
Grand Totals	337	792	80	225	529	236	177	127	314

1963

854

2817

AGE PERIODS.

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
Under 1 yr. . . . .	...	...	...	...	...	6	3	...	22
1-4 yrs. . . . .	...	...	...	...	2	9	1	...	38
5-14 yrs.	6	...	...	...	10	19	5	1	69
15-24 yrs.	48	213	25	82	111	56	83	60	61
25 yrs. up	283	579	55	143	406	146	85	66	124
Totals	337	792	80	225	529	236	177	127	314

Admissions to Hospital:—

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
Edinburgh	47	60	4	8	7	43	37	4	4
Other Areas in Scheme	14	27	4	6	2	18	8	...	2
Areas outside Scheme	12	26	4	3	3	19	6	1	...
Areas outside Scotland	4	5	1	...	1	2	...	...	1
Totals	77	118	13	17	13	82	51	5	7
	<u>238</u>					<u>145</u>			

Discharges from Hospital:—

	MALES.					FEMALES.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
Edinburgh	48	58	5	9	6	46	26	2	7
Other Areas in Scheme	18	25	3	5	2	19	8	1	2
Areas outside Scheme	14	29	3	1	3	21	7	...	...
Areas outside Scotland	3	4	...	1	1	2	1	...	...
Totals	83	116	11	16	12	88	42	3	9
	<u>238</u>					<u>142</u>			

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given:—

	Neokharsivan.	Sulfarsenol.	Bismuth.	Other Drugs.	Total.
January	818	331	1,962	728	3,839
February	788	352	2,039	723	3,902
March	800	381	2,011	741	3,933
April	690	322	1,738	706	3,456
May	645	357	1,814	743	3,559
June	640	340	1,829	476	3,285
July	655	273	1,783	719	3,430
August	579	338	1,968	741	3,626
September	525	377	1,615	733	3,250
October	519	364	1,639	737	3,259
November	523	374	1,630	528	3,055
December	401	299	1,560	674	2,934
Totals	7,583	4,108	21,588	8,249	41,528

PATHOLOGICAL WORK.

Number of Specimens examined :—

	Wass.	C.S.F.	G.C.F.T.	D.Gs.	Smears.	Others.	Total.
January	1,260	59	400	48	980	44	2,791
February	1,065	39	400	56	1,230	24	2,814
March	1,273	46	433	32	1,292	22	3,098
April	1,277	55	319	50	1,126	25	2,852
May	1,046	47	304	35	1,150	26	2,608
June	1,103	45	370	36	1,185	17	2,756
July	1,081	51	307	46	1,140	24	2,649
August	1,069	42	340	36	956	36	2,479
September	1,078	36	309	24	1,100	24	2,571
October	888	64	356	38	1,002	16	2,364
November	974	39	382	48	1,175	17	2,635
December	957	43	332	60	1,230	60	2,682
Totals	13,071	566	4,252	509	13,566	335	32,299

Total Attendances at the Clinic for Routine Dressings, etc. :—

	Males.	Females.	Total.
January	6,553	1,845	8,398
February	6,417	1,937	8,354
March	7,200	2,104	9,304
April	7,631	1,870	9,501
May	7,280	1,912	9,192
June	7,000	1,942	8,942
July	6,609	1,756	8,365
August	7,118	1,679	8,797
September	6,889	1,942	8,831
October	7,259	1,727	8,986
November	7,216	1,844	9,060
December	7,091	1,790	8,881
Totals	84,263	22,348	106,611

OTHER TREATMENT CENTRES IN EDINBURGH.

1. Subsidiary Centres for Royal Infirmary.

Number of New Cases				280
	Syphills.	Gonorrhœa.	N.S.D.	No. V.D.
	73	77	6	124 = 280
Number of Patients treated in Hospital				132
Total Attendances of Out-patients				3,437
Pathological Work—Number of specimens examined				2,622
Special Treatment administered—Number of Injections given				3,849

2. Hospital for Women and Children and Subsidiary Centres.

Number of New Cases					777
	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.	
	127	77	227	346	=777
Number of Patients treated in Hospital					204
Total Attendances of Out-patients					13,794
Pathological Work—Number of specimens examined					7,261
Special Treatment administered—Number of Injections given					2,169

3. Royal Maternity Hospital.

Number of New Cases					597
	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.	
	99	149	6	343	=597
Number of Patients treated in Hospital					159
Total Attendances of Out-patients					3,178
Pathological Work—Number of Specimens examined					3,233
Special Treatment administered—Number of Injections given					992

4. Seamen's Dispensary, Leith.

Number of New Cases					329
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.
	58	125	25	31	90 =329
Total Attendances of Out-patients					18,767
Pathological Work—Number of specimens examined					1,859
Special Treatment administered—Number of Injections given					1,875

MUNICIPAL GENERAL HOSPITALS.

REPORT BY MEDICAL SUPERINTENDENT OF HOSPITALS.

SIR,

I have the honour to submit a report of the work carried out in the Municipal General Hospitals for the year 1932.

A new era has dawned for those known as the sick poor. They are now looked after in exactly the same way as the sick in the voluntary hospitals.

Nothing has been more striking in recent years than the steady and marked improvement of the standard of professional service, medical and surgical, in what were poor-law institutions.

Forty years ago in Edinburgh, infirm wards in the poorhouse, with about 150 patients, were attended medically by a doctor who looked in twice a week, and two trained nurses who supervised the nursing of the patients by inmates of the poorhouse. We now have 900 hospital beds in municipal hospitals with a directional-professorial staff, a staff of consultants for treatment and teaching, a whole-time medical staff, a recognised training school for nurses, and weekly clinics for medical students attending the University.

During the year, Craigleith, Pilton and Seafield Hospitals have been re-named and are now designated Western General Hospital, Northern General Hospital and Eastern General Hospital respectively. These three General Hospitals are functioning as one medical unit and are equipped as efficiently as any voluntary General Hospital.

It is found in practice that the standard of efficiency in a hospital is higher when teaching takes place in that hospital. Teaching of medical students by University lecturers has been going on weekly during the session in our hospitals for more than ten years. Since 1925 the hospitals have been a training school for probationer nurses recognised by the General Nursing Council for Scotland, and in 1927 this training school for nurses became affiliated for the surgical training of nurses with the Royal Samaritan Hospital for Women, Glasgow, and the Dunfermline and West Fife Hospital. Our nurses have, since 1925, qualified as general trained nurses after sitting the same State examinations open to the nurses trained in such hospitals as the Royal Infirmary of Edinburgh. The percentage of successes, especially in the final examinations, has been most gratifying and shows a favourable comparison with the results of other training schools for nurses in the city. The number of probationer nurses employed in the care of sick poor has increased from 48 to 130.

Towards the end of the year four main units were formed in the municipal hospitals for medical, surgical, obstetrical and gynaecological cases, and for children. Each unit has for treatment of patients and teaching a full physician or surgeon, and two or more assistants. There is, in addition, a staff of whole-time resident medical officers at the various hospitals. Treatment and teaching are now more closely allied, and being more intensive, should produce greater efficiency.

The Main House portion of Seafeld Institution has now been reconstructed to form four admirable hospital blocks and the original children's and maternity blocks of that institution have been reconstructed to accommodate the nursing and domestic staffs.

The provision of this new hospital accommodation permitted the clearing of the 223 patients requiring hospital treatment remaining in Craiglockhart Institution on 31st December 1931. In May of the following year, these patients along with their attendant nursing and medical staffs were transferred to Seafeld Hospital, and from 16th May 1932 the institution has functioned as a general hospital under the care of the Public Health Committee.

At Craiglockhart Institution only one male ward of 18 beds and one female ward of 18 beds remain as sick wards for patients awaiting transfer to the general hospitals or for the accommodation of patients suffering from illness of a temporary character.

WESTERN GENERAL HOSPITAL.

The entire drainage system has been renewed, and the heating system renewed except for the installation of new boilers.

STATISTICS FOR THE YEAR 1ST JANUARY TO 31ST DECEMBER 1932.

		Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Adults	Males . . .	56	329	252	55	78
	Females . . .	73	294	279	31	57
Children	Males . . .	67	408	402	15	58
	Females . . .	51	411	396	13	53
Totals . . .		247	1442	1329	114	246

Number of Cases treated 1,689

TABLE TO SHOW THE RESULTS OF TREATMENT OR TERMINATION OF ILLNESS.

Cured	422	Not Improved	624
Improved	283	Died	114
Remaining under treatment			246

Almost one-half of the patients have been cured or improved. The large number of cases apparently remaining stationary under the heading "not improved" is due to the number of chronic medical cases and healthy children accommodated.

CAUSES OF DEATH.

	Adults.	Children.
Diseases of Heart and Blood Vessels	23	0
Cancer or other Tumour	18	0
Diseases of Brain and Nerves	13	1
„ Lungs	8	14
„ Digestive Organs	7	6
„ Kidneys	6	0

In addition, surgical conditions caused 9 deaths, senility 2 deaths, and among children, congenital disabilities accounted for 7 deaths.

Total beds	280
Average number of occupied beds	233
Average length of stay, in days, per patient	28

SPECIAL DEPARTMENTS.

SURGERY.

The operating theatre was re-equipped during the year and 87 operations were performed. 53 of these operations were major operations and 34 minor operations.

A general anæsthetic was administered in 79 operations, 3 operations were carried out with a spinal anæsthetic and 5 operations were performed under local anæsthesia.

DENTAL DEPARTMENT.

Patients treated, 59. These included 48 children and 11 adults. 51 treatments required a general anæsthetic.

MATERNITY DEPARTMENT.

Number of Cases treated	89
,, ,, admitted	87
,, ,, discharged	80
,, Deliveries (42 normal, 17 abnormal)	59
Post-partum puerperal admissions	7
Deaths—Mothers, 1 ; Infants, 2	3

The one mother's death refers to a patient who had been confined of a premature child before admission to hospital.

There were no cases of puerperal sepsis during the year.

The admissions to the Department are four more than for the previous year.

Beds have been kept available for the admission of ante-natal cases from the Royal Maternity and Simpson Memorial Hospital. Six cases only were admitted to these beds.

The abnormal deliveries included one by operation—Cæsarian Section.

SPECIAL DIET DEPARTMENT.

Cases treated by Special Diets during the year	55
Remaining at 1st January 1932	11
Number admitted	44
,, discharged	35
,, remaining at 31st December 1932	20

The disabilities treated included diabetes, stomach, kidney and heart disorders, rheumatism, blood diseases and obesity.

Of these patients, 5 were cured, 16 greatly improved, and in 14 cases the condition remained stationary.

Of the total cases 35 per cent. were treated for diabetes.

A "Follow-up" Department, which patients might attend as out-patients for advice on their diets, etc., if it could be arranged, would greatly shorten the length of stay of some patients in hospital for treatment.

X-RAY DEPARTMENT.

The apparatus from Craiglockhart Hospital was transferred and installed. During five months, 240 examinations by X-ray have been made.

MASSAGE AND ELECTRO-THERAPY DEPARTMENT.

The total number of patients treated during the year was 277, of which 53 were cured, 106 relieved, 70 not improved, and 48 remained under treatment.

During the year, 1509 treatments were given.

Massage	623	Ionisation	6
Galvanism and Faradism	74	Ultra Violet Artificial Sun-	
Diathermy	167	light	345
		Re-Educational Exercises	294

NORTHERN GENERAL HOSPITAL.

No structural alterations have been carried out at the Northern General Hospital during the year.

This hospital has been reserved for medical cases of the more chronic type. The average duration of stay is greater on this account.

STATISTICS FOR THE YEAR 1ST JANUARY TO 31ST DECEMBER 1932.

	Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males	97	133	93	47	90
Females	143	161	104	51	149
Totals	240	294	197	98	239

Total number of beds	260
Average number of occupied beds	240
„ length of residence, in days	52
Total number of cases treated	534

TABLE TO SHOW THE RESULT OF TREATMENT OR TERMINATION OF ILLNESS.

Cured	21	Not Improved	47
Improved	129	Died	98
Remaining under treatment	239		

CAUSES OF DEATH.

Senility	24	Diseases of Heart and Blood	
Diseases of Brain and Nerves	24	Vessels	16
Cancer or other Tumour	10	Diseases of Lungs	19
Diseases of Digestive Organs	1	Diseases of Kidney	4

These elderly patients appreciate very much being on the ground floor wards, which allow them to get out of doors so readily during fine weather. The risk of accident through these old people stumbling on stairs is also avoided.

EASTERN GENERAL HOSPITAL.

STATISTICS FOR THE PERIOD FROM 16TH MAY TO 31ST DECEMBER 1932.

	Remaining 15th May.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males	58	471	248	68	213
Females	65	301	171	53	142
Totals	123	772	419	121	355

Total number of beds	360
Average number of occupied beds	234
„ length of residence, in days	140
Total number of cases treated	895

TABLE TO SHOW THE RESULT OF TREATMENT OR TERMINATION OF ILLNESS.

Cured	45	Not Improved	150
Improved	224	Died	121
Remaining under treatment	355		

CAUSES OF DEATH.

Senility	27	Diseases of Heart and Blood	
Diseases of Brain and Nerves	33	Vessels	21
Cancer or other Tumour	13	Diseases of Lungs	17
Diseases of Digestive Organs	5	Diseases of Kidney	2

There were also 3 deaths as the result of violence.

MESSAGE.

The total number of patients treated was 346, of which 40 were cured, 206 improved, and, not improved but remaining under treatment, 100.

Of the patients improved and remaining under treatment, 90 have received re-educational exercises,

CRAIGLOCKHART HOSPITAL.

The accommodation is ample. The staffing, equipment and organisation for the care of the inmates are all good.

STATISTICS FOR THE YEAR, 1ST JANUARY TO 31ST DECEMBER 1932.

	Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males . . . . .	...	1217	1227	104	} 20
Females	223	677	675	86	
Children . . . . .	...	22	27	...	

During the year 112 operations were performed. Of these, 52 were major operations, and 60 minor. 76 of the operations required a general anæsthetic and 36 a local anæsthetic.

Number of cases treated 2139

TABLE TO SHOW THE RESULT OF TREATMENT OR TERMINATION OF ILLNESS.

Cured	249	Not Improved	699
Improved	981	Died	190
Remaining under treatment	20		

The majority of the cases classified as "Not Improved," were transferred for further treatment to one of the general hospitals.

CRAIGLEITH CHILDREN'S HOME.

Children are no longer admitted to the poorhouse, but are most efficiently cared for and well fed in the Children's Home, Crewe Road, an institution situated in the northern suburb of the city, adjacent to the Western General Hospital.

The staffing, adequacy and suitability of facilities for the care of the children are very good.

During the year, on an average, 71 children were resident in the Children's Home. The greatest number of children in the Home at one time was 87 in April, and the lowest number was 59 in November.

Epidemics of rubella and chickenpox were the only factors detrimental to the well-being of the children during the year, and the small number of children accommodated in the Home in November was due to the City Hospital receiving children as transfers on account of rubella.

Ninety-two children were sent to country board during the year.

Numerous gifts, such as books, fruit and flowers, as well as letters and verbal messages of thanks have been received from patients or their relatives as expressions of their appreciation of the treatment given in the hospitals.

The Western Hospital is much indebted to those ladies and gentlemen who have given so generously of their leisure, either by giving an "outing" to the convalescent patients in motor cars or wheel chairs, or an "airing" to the babies in their perambulators.

While the usual medical care of the sick poor had to be carried on with reconstruction in progress, and transfers of patients from Craiglockhart and inmates from Seafield Poorhouse going on at the same time, the hospitals have for a few years been in a state of flux. The removals have been accomplished without a hitch, the treatment of the sick has not been impaired, and all members of the staff deserve unstinted praise and thanks for their ungrudging co-operation during a most trying time.

I have the honour to be, Sir,

Your obedient Servant,

J. W. KEAY, M.D., F.R.C.P., D.P.H.,
Medical Superintendent of Hospitals.

MENTAL HEALTH SERVICES.

BANGOUR MENTAL HOSPITAL.

REPORT BY MEDICAL SUPERINTENDENT.

I have the honour to submit the Annual Report of Bangour Mental Hospital for the year 1932.

General Statistics.—The following statement sets forth the changes in the population of the Hospital during the year :—

	M.	F.	Total.	M.	F.	Total.
In Hospital, 1st January 1932	518	529	1,047			
Absent on Probation	3	3	6			
Absent on Pass	10	2	12			
Total on Register (including 84 voluntary)				531	534	1,065
Cases admitted (including 97 voluntary)—						
First Admissions	115	113	228			
Re-admissions	36	50	86			
Total Cases admitted during the year				151	163	314
Total Cases under care				682	697	1,379
Cases discharged (including 106 voluntary)—						
Recovered	73	60	133			
Relieved	71	74	145			
Not Improved	13	6	19			
Died	44	49	93			
Total Cases discharged and died during the year				201	189	390
Remaining in the Hospital, 31st December 1932	471	504	975			
Absent on Probation	3	1	4			
Absent on Pass	7	3	10			
Total on Register (including 75 voluntary)				481	508	989
Average daily number on Register during the year				517	535	1,052

Admissions.—The total number of admissions shows a slight falling-off as compared with the previous year when the number was 343. It is also somewhat below the average of 346 for the preceding five years. The difference is accounted for by a decrease of 27 in the certified admissions and a decrease of 2 in the number of those entering voluntarily. The most gratifying feature of the admissions is the increasing proportion of patients who enter the Hospital voluntarily. In the year under review just over 30 per cent. entered by this portal—a figure never before reached in the history of the Hospital. Even so, however, the advantages to all

concerned of this mode of admission are not so widely appreciated as they should be. From the patients' standpoint, the irksome conception of "detention" is avoided, for every voluntary patient has the right to leave the Hospital at any time on giving three days' notice. It is instructive to observe how seldom this privilege is abused, though when the practice was introduced many were doubtful of its wisdom. From the point of view of hospital administration there is probably no single factor which conduces so much to contentment and willing co-operation in treatment and so facilitates the work of the Hospital.

It is sometimes thought, especially in these days of economic stress, that as the amenities of the modern mental hospital become more widely appreciated, the voluntary system might open up the way to increased malingering among a certain class. Malingering is not unknown, but a careful scrutiny of all the voluntary admissions during the year reveals only one instance where the motive for entering the Hospital was possibly something other than genuine mental distress.

From time to time the Hospital has come to the assistance of the law courts in dealing with offenders. Where misconduct is directly due to a mental disability it is only right that the offender should be dealt with as a subject for treatment rather than for punishment. At the same time, there are right and wrong methods of securing this co-operation. The mental hospital is in no sense a substitute for the prison and accordingly patients should not be required, as has been done in some instances, to enter the mental hospital "voluntarily" for a fixed period as an alternative to imprisonment. There is nothing penal about the mental hospital nowadays and in any case nothing can over-ride the voluntary patient's right to leave on giving due notice.

The decrease in the total number of admissions may be traced in part to the opening of new accommodation at Gogarburn Certified Institution. Till now defectives requiring care have usually been certified insane and admitted to Bangour for want of a better course. Now these patients go direct to Gogarburn Certified Institution. A subsidiary cause is the opening of the Municipal Clinic for mental disorders at which during the eight months of its existence 127 consultations have taken place and advice has been given which in some instances has prevented the development of more serious symptoms. The Clinic serves a useful purpose as it is, but its usefulness would be greatly enhanced if provision were made for the bed treatment of some of the cases in ordinary hospital surroundings. It is hoped that the necessity for this further development will be kept in view.

Condition on Admission.—

Physical Condition—

	Males.	Females.	Total.
Average	61	36	97
Poor	75	82	157
Very Weak or Exhausted	15	45	60
Totals - - -	151	163	314

Mental Condition.—

<i>Form of Mental Disorder—</i>	Males.	Females.	Total.
I. MANIC-DEPRESSIVE PSYCH—			
(a) Manic State	19	20	39
(b) Depressive State	31	54	85
II. SCHIZOPHRENIC AND ALLIED STATES—			
(a) Schizophrenia	14	14	28
(b) Paraphrenia	7	20	27
(c) Paranoia	8	...	8
III. ORGANIC PSYCHOSIS—			
(a) General Paralysis	14	9	23
(b) Specific other than General Paralysis	1	...	1
(c) Arterio-sclerotic	13	11	24
(d) Post-Encephalitic	2	...	2
(e) Toxic	9	2	11
(f) Associated with other Bodily Diseases	4	11	15
IV. INSANITY WITH EPILEPSY	11	4	15
V. Psychoneuroses	6	3	9
VI. OLIGOPHRENIA	12	15	27
Totals	151	163	314

As usual the figures show a high correlation between ill-health and the incidence of insanity. Less than one-third of the new admissions were in average physical condition, while the remainder suffered from some definite physical disease or were debilitated or exhausted generally. Accordingly in many instances, apart from ensuring the patients' safety, the most urgent need is for attention to the physical condition. Bangour Hospital is in this respect more fortunate than most mental hospitals, for its equipment in physio-therapeutic devices is unusually extensive. Many different forms of treatment, *e.g.*, electricity, hydrotherapy, heat, light, massage, etc., are available and are freely utilised. The resulting benefit is not confined to the physical state of the patients for many of these agents are powerful instruments of suggestion.

In addition, the Hospital uses the services when necessary of a staff of specialists in particular departments of medicine. Their help is invaluable.

This initial concentration on the physical condition of the patient is often a necessary prelude to more specific mental treatment. But it is not meant to imply that insanity is merely the concomitant of some physical ailment and that when that is alleviated the problem has been solved. On the contrary, insanity is the visible symbol of a much more wide-spread disturbance. It involves the failure of the whole individual to meet in a satisfactory way the demands of life in a social environment. Hence it embraces factors, all of which are elusive and some of which are at present beyond our control—heredity, native constitution, the influences of home and school, work and play, and indeed all that "dance of plastic circumstance" in which our personalities are given their bent. It is the peculiar function of the mental hospital to investigate these matters in each individual case and to do what is possible to re-direct the stream of mental activity into better channels.

The Discharges.—The total number of discharges was 297, which figure includes 87 defectives transferred to Gogarburn Certified Institution.

Calculated on the number of admissions the percentage of recoveries was 42·3, as compared with 40·2 in the previous year. If voluntary patients alone are taken into account 56·7 per cent. were discharged recovered while an additional 20·3 per cent. had so far recovered that they were able to leave the Hospital and live at home with safety to themselves and to others.

The following Table gives the length of residence of those discharged as recovered :—

<i>Length of Residence.</i>	<i>Recovered.</i>		
	Males.	Females.	Total.
Under 1 month	12	4	16
From 1—3 months	29	25	54
„ 3—6 „	16	12	28
„ 6—9 „	6	7	13
„ 9—12 „	4	5	9
„ 1—2 years	3	3	6
„ 2—3 „	2	2	4
„ 3—4 „ . . . . .	...	1	1
„ 4—5 „ . . . . .	...	...	...
„ 5—6 „ . . . . .	...	1	1
„ 6—7 „	1	...	1
Totals	<u>73</u>	<u>60</u>	<u>133</u>

The Deaths.—The deaths numbered 93, as compared with the previous year's figure of 104. The principal causes were :—

Circulatory Diseases	36
Diseases of Nervous System	23
Tuberculosis (various forms)	13
Respiratory Diseases	7
Cancer	5
Other Causes	9
Totals	<u>93</u>

The cause of death was ascertained by post-mortem examination in 28 cases.

Alterations.—During the year Ward 24, one of the original temporary buildings built of wood and corrugated iron, was reconstructed following on an outbreak of fire the previous autumn. The Ward is now ready for occupation. Attention is again drawn to the serious risk of fire in the remaining temporary buildings and to the advisability of reconstructing these at an early date.

The suggestion made in last year's report that a fire engine be provided has been given effect to, a motor engine suitable for the purpose having been transferred from the City Fire Brigade.

Plans have been prepared for and work is about to commence with the much-needed extension to the Nurses' Home. It is expected that the building will be ready for occupation towards the end of 1933.

Plans have also been prepared for substituting new verandah accommodation for the existing verandahs in connection with Wards I. and II. These latter are in need of extensive repair, but their arrangements have never been satisfactory and it is considered that they should be entirely removed. The new verandahs should be erected at the Special Treatment Block which at present is utilised for X-ray, Chiropody, Ophthalmic, Aural and Dental work. All these activities can with advantage be carried on in the Massage Department with the result that all the special forms of treatment will be under one roof. No expense will be incurred in adapting the Massage Department to these purposes, and the Special Treatment Department will be set free for the accommodation of patients.

The Mortuary has been re-conditioned. The internal arrangements have been altered and brought up-to-date. Among other things a suitable Mortuary Chapel has been provided, the furniture for which was made by one of the patients. The approaches to the mortuary are being laid out in the form of a garden and a roadway has been constructed round the building.

A large amount of paint-work has been done, particularly to the outsides of the wards, kitchen, laundry, etc. It is hoped to overtake outstanding arrears of this work soon and then to establish some measure of routine in dealing with upkeep.

Milk Supply.—A new tubercle-free herd has been installed at the Farm and is at the moment supplying more than half the milk required by the Hospital. In the course of some months the whole of the milk supply will come from this source and the Hospital will then be independent of outside producers.

General.—The health of the patients and staff during the year has been satisfactory. The overcrowding which was obvious in certain parts of the Hospital has been mitigated by the fall in the number of admissions and by the removal of 87 defectives to Gogarburn Certified Institution. As a result it has been possible to undertake a more careful classification of the population of the Hospital. The beneficial results are seen in the absence of restlessness which follows so quickly on congestion.

Acknowledgments.—Throughout the year the work of the staff has maintained the usual high level of efficiency and loyalty. To all I am indebted for their co-operation and help.

W. M'ALISTER,
M.A., M.B., Ch.B., F.R.C.P. (E.), Dip. Psych. (Edin.),
Medical Superintendent.

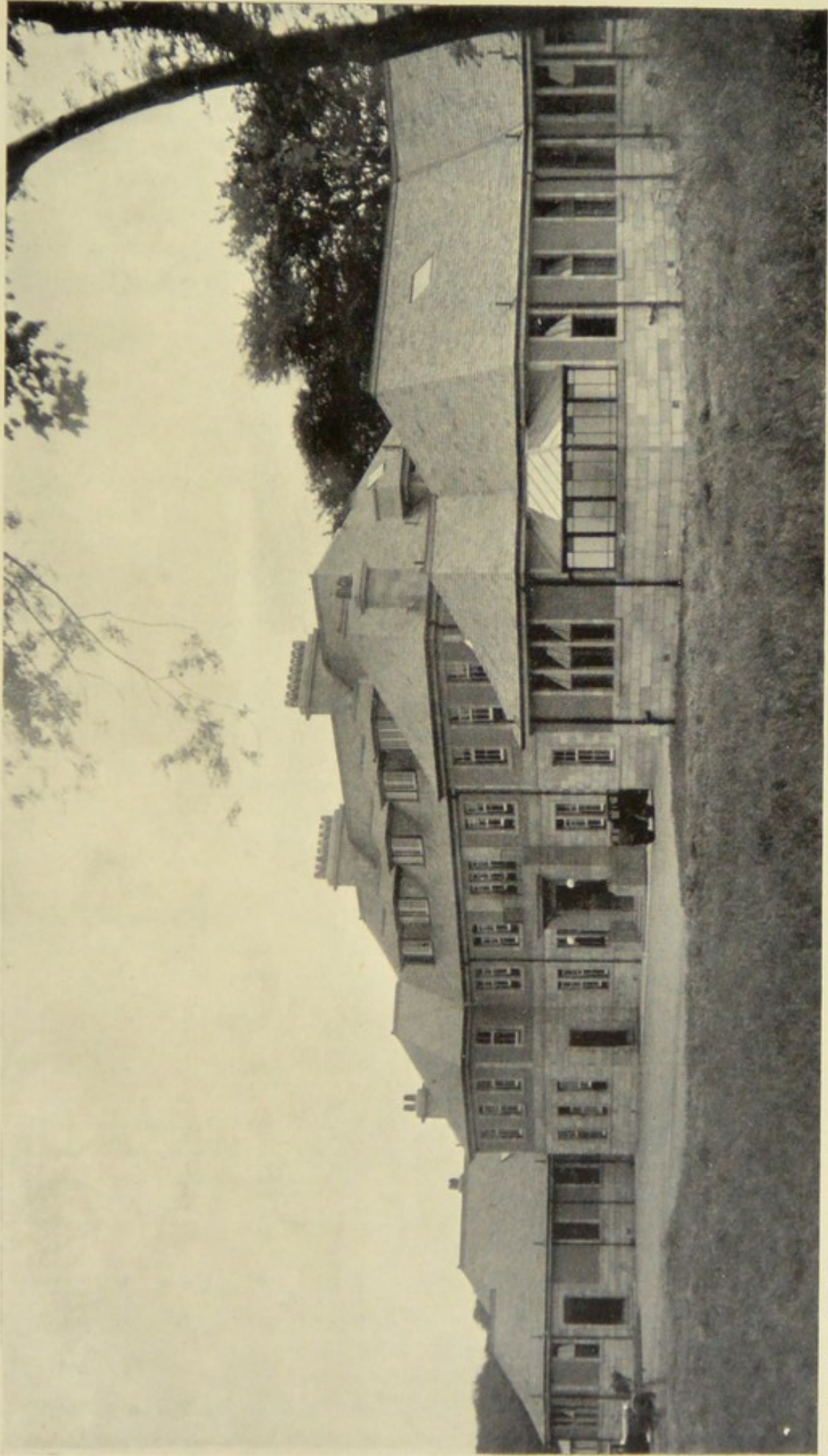
GOGARBURN CERTIFIED INSTITUTION.

(For Mental Defectives.)

REPORT BY MEDICAL SUPERINTENDENT.

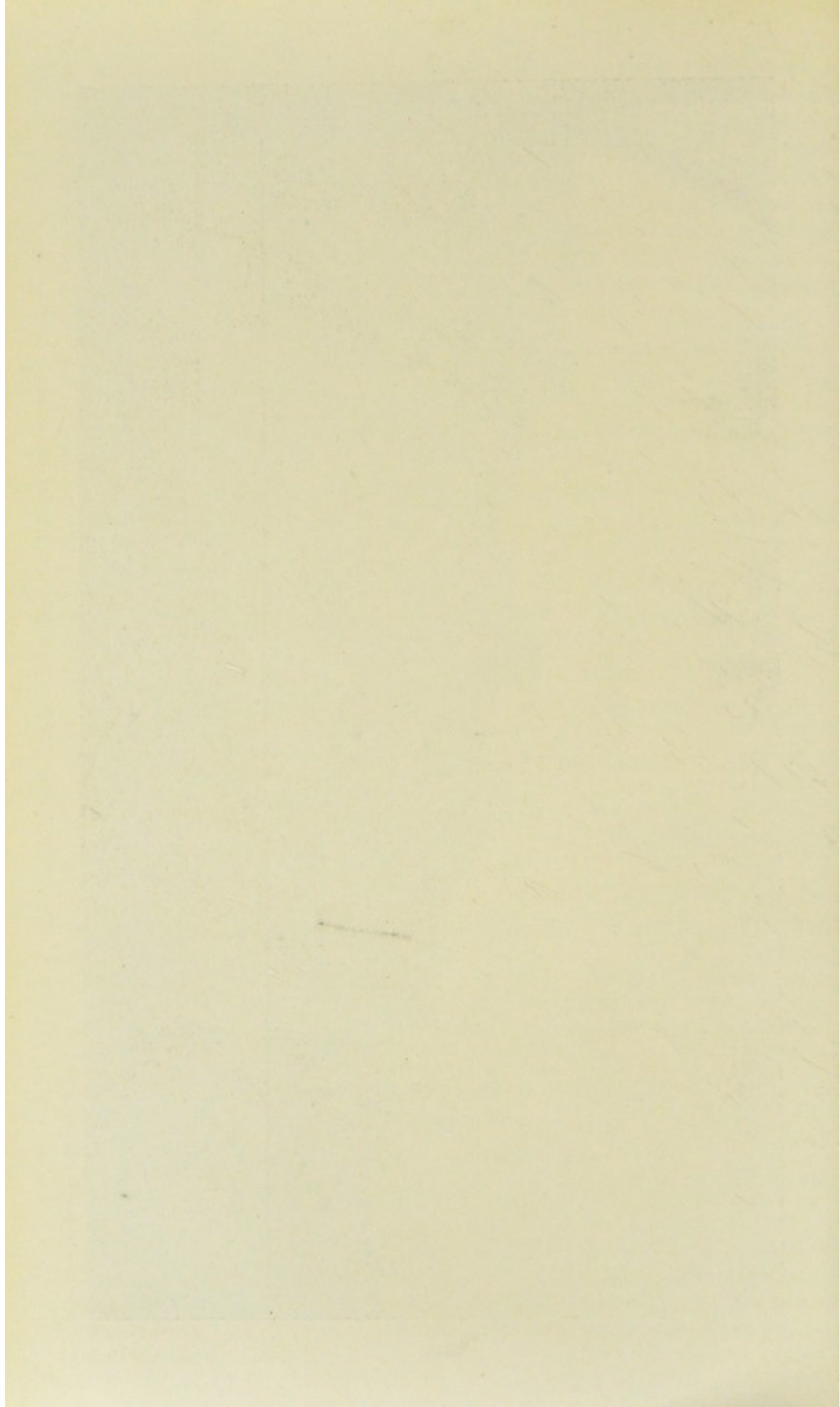
I have the honour to present the Annual Report of Gogarburn Certified Institution for the year 1932.

General Statistics.—The following are the general statistics from which it will be observed that the patient population has been more than doubled during the year. This increase has been made possible by the completion of the Administrative Block with its annexed Admission Hospitals, and two Pavilions for High Grade Patients.



"Evening Dispatch" Photograph.

GOGARBURN CERTIFIED INSTITUTION—ADMINISTRATIVE BLOCK.



	Males.	Females.	Total.
Patients on Register at 1st Jan. 1932	78	74	152
Cases admitted during the year	96	76	172
Total number under treatment	174	150	324
Cases discharged	2	...	2
Cases transferred to other Institutions	...	...	...
Cases died	5	4	9
Total cases removed during year	7	4	11
Number on Register at 31st Dec. 1932	167	146	313

These figures represent an increase of 89 male patients, an increase of 72 female patients, and a total increase of 161 on the patient population for the year.

The average daily number of patients on the register during the year was 233.

Medical Statistics.—There were admitted to the Institution during the year 96 male and 76 female patients, a total of 172.

The place of origin of the patients admitted was as follows:—

	Males.	Females.	Total.
Admitted direct from their homes	23	15	38
„ from Bangour Mental Hospital	45	42	87
„ „ Craiglockhart Institution	14	3	17
„ „ Western General Hospital	5	5	10
„ „ Eastern „ „	2	1	3
„ „ Royal Infirmary	1	...	1
„ „ Waverley Park C.I.	...	3	3
„ „ Larbert C.I.	...	2	2
„ „ Baldovan Institution	...	2	2
„ „ Other Homes and Insts.	2	3	5
„ „ Sheriff Court	4	...	4
Totals	96	76	172

Of the admissions, therefore, 21 per cent. were admitted direct from their homes, 51 per cent. from Bangour Mental Hospital, 10 per cent. from Craiglockhart Institution, 8 per cent. from General Hospitals, and 4 per cent. from other Certified Institutions.

The general physical condition of the patients admitted was as follows:—

	Males.	Females.	Total.
In fair or average health and condition	19	19	38
In poor or indifferent health and condition	19	20	39
In weak or very weak health and condition	58	37	95
Totals	96	76	172

Thus in 134 or 78 per cent. of the total number of admissions the standard of physical health was definitely below normal. It cannot be too clearly understood that mental defectives as a class, whether the defect is induced by disease or injury, or is due to hereditary causes, are persons of lower vitality than their normal fellows. It is not surprising to find that the general standard of health and degree of resistance to infection is correspondingly lowered, that the incidence of tuberculosis is higher, and that the number of deaths is much greater than that prevailing in the population generally.

Classification.—The following Table shows the classification and age grouping of the patients admitted :—

Classification.	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	Up-wards	Total.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.	
Idiots . . .	... 1	... 2	1 2	1 1	... 1	4 ...	... 2	... 1	... ..	... ..	... ..	6 10
Imbeciles - -	... 1	14 3	12 1	7 7	4 7	8 3	3 7	2 3	... 2	5 3	5 6	60 43
Feeble-minded .	... ..	2 ...	5 2	6 8	6 3	3 3	4 3	1 ...	1 3	1 ...	1 1	30 23
Total Males .	...	16	18	14	10	15	7	3	1	6	6	96
Total Females .	2	5	5	16	11	6	12	4	5	3	7	76

Briefly summarised the table shows that 9·3 per cent. of the patients admitted were idiots, 59·9 per cent. were imbeciles, and 30·8 per cent. were feeble-minded.

Causation.—So far as could be ascertained the causes of the condition of mental defectiveness were as follows :—

Primary Amentia (Inherited).

	Males.	Females.	Total.
Simple	40	35	75
Microcephalic	1	...	1
Mongolism	1	...	1
Sclerotic	2	1	3
Totals	44	36	80

Secondary Amentia.

(Arrest of cerebral development due to external factors.)

Traumatic	5	4	9
Inflammatory	19	9	28
Hydrocephalic	4	3	7
Syphilitic	8	5	13
Epileptic	11	17	28
Nutritional	4	2	6
Isolation Amentia	1	...	1
Totals	52	40	92

Discharges.—Two cases, both males, were discharged from care during the year. One boy obtained a situation in a nursery, and has done very well. The other boy failed to adapt himself to home conditions, and was re-admitted to the Institution.

Deaths.—The deaths numbered 9, the principal causes being Tuberculosis, which accounted for 5 deaths, and diseases of the nervous system, which accounted for four. The average age at death was 21·4 years. Calculated on the average daily number of patients resident during the year, the percentage of deaths was 3·8.

General Health.—The general health of the patients during the year has, on the whole, been satisfactory. The number of deaths has been much higher than in previous years, but this has been due to the admission of a large number of patients in an advanced state of physical enfeeblement.

It is thankfully recorded that no accident affecting patients occurred during the year.

One nurse contracted a whitlow of the hand of such severity as to render prolonged surgical treatment in another Institution necessary.

Education of Juvenile Patients.—With the increased number of children resident in the Institution during the year, increased school accommodation was found to be necessary. This was obtained by using the accommodation available in a converted army hut. An extra teacher was provided by the Education Committee. At present the average daily number of children attending school is 45. The additional numbers and increased teaching strength has allowed of better grading of the children, and a consequent increase in the efficiency of the school.

It is hoped that the structural alterations necessary to adapt the present Steward's Store as the permanent school will shortly be completed.

Employment of Adult Patients.—The employment of the adult patients of both sexes in occupations best suited to their varying capabilities, and to the needs of the Institution, continues. With the increased number of male patients a tailor's workshop has been added to the list of available occupations, and a shoemaker's shop will be added as soon as the necessary accommodation becomes available.

The employment of patients is a valuable method of promoting their happiness and well-being, and by their work they are in varying measure enabled to contribute towards the cost of their maintenance.

Guide and Scout Troops.—The Guide and Scout Troops have met regularly throughout the year, and several outings and church parades took place during the summer months. The patients and staff have enthusiastically supported the movement, which has proved a most useful instrument in character training and has widely benefited all who have shared in it. The nursing staff continue to supply the funds necessary to carry on this work. As a result of their continued generosity it has been found possible to increase the number of Guides and Scouts, and to inaugurate Cubs and Brownies for the children.

Staff Training.—The fact that the Institution is a training school, as well as a means of livelihood for the staff, has to be kept in view. Hitherto, as in most mental hospitals, the training has been organised in accordance with the requirements of the Royal Medico-Psychological Association of Great Britain. The certificate of proficiency of this body does not entitle the nurse to have his or her name inscribed on the State Register of Nurses. The training of the nurses has, therefore, been reorganised, with the certificate of the General Nursing Council as its objective. The staff have realised the advantage of State Registration, and, without exception, now present themselves for the examination of this body.

Gogarburn House.—A fire, which eventually gutted the north wing of Gogarburn House, occurred in the late evening of the 21st June. The outbreak started in the rafters of the building, and spread rapidly to the subjacent rooms, which were at the time occupied by low grade female patients, who were asleep in bed. Fortun-

ately, the patients were quietly and quickly evacuated from the burning portion of the building without the slightest injury being sustained by any of the patients or staff.

Development of the Institution.—During the year the number of patients resident in the Institution has been more than doubled. This has been due to the completion of the Administrative Block with its annexed Admission Hospitals, and two Pavilions for High Grade patients. This accommodation has been fully taken up, and as a result of the loss of accommodation for patients in Gogarburn House, several of the pavilions are overcrowded. Two High Grade Blocks are in course of erection, and on completion will relieve the present strain on our accommodation. The structural alterations necessary to adapt the existing Steward's Store as the permanent school are in progress. The erection of a Medical Superintendent's house and a much-needed block of four houses for married staff is also proceeding.

Acknowledgments.—It is with pleasure that I acknowledge my indebtedness to Dr. Morrison, who acted as Assistant Medical Officer, and to the Matron, Assistant Matrons, and the Staff generally, for their loyal and efficient co-operation throughout the year. I would also express my gratitude to those voluntary helpers who have so freely given of their time and means in providing amusement for the patients.

R. BAILEY, M.B., Ch.B.,

Medical Superintendent.

SCHOOL MEDICAL SERVICE.

The following is a report on the work of the School Medical Service for the year ending 31st July, 1932.

Nutrition of School Children.—It is interesting to note the general upward trend in height and weight, of the average child during its school life. To show this, the figures for Entrants and Leavers for the last three years, compared with the last pre-war year, are appended.

	1913-14.	1929-30.	1930-31.	1931-32.
<i>Entrants (Infants)—</i>				
Boys: H. (ins.)	41·5	42·4	41·7	42·3
W. (lbs.)	40·6	40·2	40·4	40·4
Girls: H.	41·2	41·1	41·4	41·3
W.	39·6	38·1	38·8	39·0
<i>Leavers—</i>				
Boys: H.	56·0	57·7	58·2	58·2
W.	78·9	82·1	87·8	88·4
Girls: H.	59·0	58·1	59·2	59·6
W.	84·3	96·3	91·4	92·5

The diminution in children with bad nutrition is also noteworthy. This is shown by the percentages of all the children examined in each age-group.

Percentages of Bad Nourishment in each Age-group.

	1913-14.	1929-30.	1930-31.	1931-32.
<i>Infants—</i>				
Boys	1·0	0·2	0·2	0·06
Girls	0·7	0·2	0·6	0·6
<i>9-year-olds—</i>				
Boys	0·7	0·3	0·3	nil.
Girls	0·5	0·1	0·1	nil.
<i>Leavers—</i>				
Boys	0·8	0·1	0·09	0·09
Girls	0·4	nil.	0·08	0·08

Feeding of School Children.—As detailed later in the Report (page 109) the Education Committee supplied, during the session, 1,176,634 dinners to scholars. The daily number of children, at the close of the Session, receiving the meal was 6,221 of whom 1,501 paid and 4,720 were on the Free Food Roll.

The comparative numbers for the last three years are as follows:—

	Total Meals supplied.	Pupils receiving as at 31st July.	
		Free.	Paying.
1929-30	899,183	2,950	1,081
1930-31	990,471	3,544	1,202
1931-32	1,176,634	4,720	1,501

Under the Milk Scheme, 5,025 children received a daily ration, on payment, of Grade A (T.T.) Milk.

In addition to the above an effort was made to eliminate the possibility of any scholar suffering from gross underfeeding. In the Winter Term, Head Teachers were asked to report all children who, after receiving free meals for three months seemed to be still unable to profit by the education offered due to insufficient food. These children were medically examined and, as a result, 342 were recommended to receive a daily ration of free milk in addition to the free meal.

The Education Committee has approved of this investigation being an annual procedure.

Clothing.—Co-incident with the increase in average height and weight, it is interesting to note the improvement in the state of the children's clothing at Routine Examinations, no case of insufficiency being reported during the session. This is probably due to the parents being warned beforehand of the proposed medical examination. Deficient clothing is, however, discovered apart from Routine cases, and 14 notices were served on parents specifying insufficient clothing and footgear.

	Insufficient.	In need of Repair.	Dirty.
	per cent.	per cent.	per cent.
1929-30	0.03	0.08	0.1
1930-31	0.02	0.1	0.06
1931-32	0.00	0.04	0.06

Figures are not available for comparison with pre-war years, but in 1913-14 the percentage of children at Routine Examinations with dirty clothing was 0.5, more than eight times the number to-day.

Dental Treatment.—Two interesting features emerge from the reports of the dental surgeons. First, the increased number of children who received dental treatment and, second, the increased percentage of acceptances of treatment offered, the latter being the highest recorded. The relevant figures are shown below, those for 1930-31 being shown in brackets.

	Offered Treatment.	Per cent. Accepted.	Number Treated.	Special Cases.	Total Treated.
Edinburgh	10,500 (8,937)	43.6 (21.0)	4,584 (1,879)	2,028 (2,087)	6,612 (3,966)
Leith	2,713 (1,943)	46.3 (39.4)	1,255 (769)	846 (779)	2,101 (1,548)

In passing, it may be noted that there appears to be progressive improvement in the dental condition of school children as shown by the percentages having "clean mouths and no evidence of Dental Caries" at the Dental Surgeons' routine inspections.

	1913-14.	1922-23.	1929-30.	1930-31.	1931-32.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Edinburgh	12	15.5	19.8	20.5	23.4
Leith . . . . .	...	17.1	17.6	21.2	19.9

Syphilis in Defective Eyesight.—During the session an investigation was made into the incidence of syphilis among children attending the Myopia School. With parental consent, 84 were tested by the Wassermann Re-action. Only one child gave a positive result.

Acquired Organic Heart Disease.—The incidence of this disability is steadily increasing as is shown by the figures below which represent the percentages found at Routine Examinations, for all ages, in the last three years.

1929-30.	1930-31.	1931-32.
Per cent.	Per cent.	Per cent.
0·3	0·4	0·8

As to the cause of this increase, two factors may operate, first, an actual greater incidence of rheumatism and, secondly, a more intense search for early cases.

I. Number of Schools.

The number of Schools and Special Classes under the Scheme of Medical Inspection is 109 :—

Elementary Schools	77
Intermediate and Secondary Schools	15
Special Schools and Classes	12
Merchant Company Schools	4
Edinburgh Institution	1
	109

The average number of pupils on the roll was 63,053, with an average daily attendance of 57,817 :—

	Average Roll.	Average Attendance.
Elementary Schools	41,868	38,327
Intermediate and Secondary Schools	9,040	8,410
Special Schools	1,157	1,024
Episcopal Schools	880	781
Roman Catholic Schools	6,018	5,483
Merchant Company Schools	3,828	3,548
Edinburgh Institution	262	244
	63,053	57,817

II. Number of Visits to Schools for Systematic Examination in accordance with Scheme of Inspection.

The total number of visits paid to schools in connection with routine examination was 1,498.

III. Organisation and Administration.

A. System of Medical Inspection.—The following groups of pupils are examined :—

In Primary Schools—

- (a) Newly enrolled infants.
- (b) Nine-year-old pupils.
- (c) Leavers.

In Intermediate and Secondary Schools—

- (a) Twelve-year-old pupils.
- (b) Sixteen-year-old pupils.

Schools are visited at regular intervals during the session by the same doctor and the same nurse. The larger schools are visited once a fortnight, small schools every three or four weeks.

At each visit to schools for routine inspection, a certain time is devoted to the examination of any pupils presented by the Head Master or sent by Attendance Officers; these pupils constitute the "special" cases mentioned in the Report. In addition, Monday forenoons and Wednesday afternoons are devoted to the examination at Lauriston Place Treatment Centre of cases sent up by the Chief Attendance Officer, and to cases requiring more detailed examination. Similar cases are examined at Links Place Treatment Centre on Wednesday afternoons.

All the Special Schools are visited at regular intervals.

B. Nurses.—The total number of nurses employed on School work is sixteen. Six assist at school inspection, four are attached to the Special Schools, and six to the Treatment Centres.

Duties in Schools.—In addition to assisting at routine inspections, where 1,428 visits were paid to schools, 11,425 special examinations were made in schools by the nurses in connection with neglect cases.

Home Visitation.—The nurses paid 1,384 visits to homes.

C. Arrangements for "Following Up."—In connection with dirty and verminous conditions, 394 notices were issued from schools. These cases are visited by the nurses, usually with satisfactory results, but it was found necessary to serve Statutory Warning Notices upon 63 parents.

Insufficient Food, Boots, or Clothing.—Warning Notices are sent from schools regarding these conditions, and when application is made by parents for assistance, either for food or clothing, a full inquiry is made into the case by a committee, which decides whether the case is one of poverty and deserving relief, or one of neglect to be dealt with by Statutory Notice, etc.

Education Committee's Feeding Scheme.—Details regarding this scheme are given later in the Report.

Clothing of Necessitous Children.—The requirement as regards clothing and boots for necessitous children continues to be met by the operations of the Police-Aided Clothing Scheme and other charitable agencies. Details are given under IV. D.

The following Table shows the number of Warning Notices under Section 6 of the 1908 Education Act served upon parents for the various forms of neglect :—

Forms of Neglect.	Number of Notices Served.
Insufficient Boots and Clothing	14
Dirt and Vermin	43
Neglect of Medical Treatment	6
	63

D. Infectious Diseases.—The following table gives the total number of children absent during the session owing to various infectious diseases, showing actual cases and contacts. In the table, the monthly totals are shown.

Absence due to Infectious Disease.

	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Totals.	Per cent. of Totals.	Actual Cases.	Contacts.
1. Scarlet Fever	40	63	114	46	69	79	48	95	113	137	46	850	6.5	342	508
2. Diphtheria . .	95	87	109	87	116	76	129	146	108	89	21	1063	8.1	425	638
3. Erysipelas . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Cerebro-spinal Fever . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Typhoid . . . .	...	...	...	...	1	...	...	...	...	...	...	1	0.007	1	...
6. Measles	29	59	31	27	405	1451	1905	955	221	179	66	5328	40.7	4083	1245
7. Whooping C'gh	44	10	14	23	45	93	97	172	177	152	67	894	6.8	858	36
8. Chickenpox . .	39	169	361	384	392	224	136	85	50	58	13	1911	14.6	1605	306
9. Mumps	32	44	60	84	112	161	91	63	48	68	63	826	6.3	676	150
0. Skin Diseases .	3	1	112	5	76	764	79	3	2	8	...	1053	8.1	1053	...
1. Ringworm . . .	8	4	13	15	22	17	20	20	16	23	3	161	1.2	161	...
2. Itch	71	111	89	101	77	113	86	88	94	89	16	935	7.2	935	...
3. Eye Diseases . .	1	6	5	5	...	10	8	6	11	7	1	60	0.5	60	...
Totals	362	554	908	777	1315	2988	2599	1633	840	810	296	13,082	100.0	10,199	2885

E. Presence of Parents at Inspection.—The number of parents present at the routine inspection was 7,498 for the 16,549 pupils examined—45.5 per cent.

IV. THE PHYSICAL CONDITION OF THE SCHOOL CHILDREN.

A. Total Number of Children Examined.

(a) At Systematic Examinations.

Infants	Boys, 3,029 ;	Girls, 3,188	=	6,217	No. of Examinations.
9-year-olds	„ 2,868 ;	„ 2,790	=	5,658	
12-year-olds	„ 1,289 ;	„ 1,496	=	2,785	
Leavers	„ 780 ;	„ 787	=	1,567	
16-year-olds	„ 169 ;	„ 153	=	322	
				16,549	
<i>Nursery Schools—</i>					
Lochrin	Boys, 21 ;	Girls, 28	=	49	
Tynecastle	„ 14 ;	„ 18	=	32	
				81	
Merchant Company Schools				1,382	
Royal High				168	
Royal High (Preparatory)				127	
Edinburgh Institution				79	
Special Schools : Examinations and Re-examinations				1,948	
				20,334	

(b) Special Cases.

Psychological Examinations	286
Special Cases at Schools	8,483
Special Cases at Clinics	6,492
Neglect Cases	11,425
Re-examinations	2,377
Examinations in connection with Employment Act	*2,003
Children for Stichill	373
Children at Stichill	750
In connection with Milk Scheme	469
	<hr/>
	32,658
	<hr/>
Total Number of Examinations	<u>52,992</u>

* Of this number, 11 were found to be medically unfit, and were dismissed from their employment.

B. Number of Children Notified to Parents as Suffering from Defects.

3,923 Notices were issued. Of these, 1,455 or 37·1 per cent., were in connection with defective vision ; 780 or 19·8 per cent., for tonsils and adenoids, otorrhœa etc. ; 906 or 23·1 per cent., for teeth ; 502 or 12·8 per cent., for dirty or verminous condition of head ; 280 or 7·2 per cent., for other conditions.

C. Supervision.

Of the 8,483 Special Cases seen at schools, 1,052 were re-examined, and 605 or 57·6 per cent., were cured or improved.

At routine examinations, 2,889 cases were placed under medical supervision ; of these 1,325 were re-examined and 1,099 or 82·9 per cent., were cured or improved.

D. Insufficiency of Clothing and Footgear.

The Committee of the Police-Aided Scheme supplied boots and clothing to 4,525 children. Through the kindness of (a) St. Cuthbert's Co-operative Association 397 pairs of boots, and (b) the Leith Provident Society, 64 pairs of boots were provided for necessitous children ; 160 children were supplied with boots by the Education Committee on condition that they were paid for by the parents ; boots and clothing were supplied to 122 children under Section 6 of the 1908 Act ; from the Flora Stevenson Fund 82 pairs of boots were distributed.

E. Heights and Weights.

	Number Examined.	Average Height in Inches.	Average Weight in Pounds.
<i>Boys—</i>			
Infants	2,843	42·3	40·4
9-year-olds	2,766	48·6	54·5
12-year-olds	641	56·7	80·8
Leavers	687	58·2	88·4
16-year-olds	85	63·7	111·8
<i>Girls—</i>			
Infants	3,170	41·3	39·0
9-year-olds	2,666	48·7	53·2
12-year-olds	747	58·2	84·2
Leavers	638	59·6	92·5
16-year-olds	77	63·4	112·4

F. Cleanliness.

(a) Head.

	Number examined.	Nits.		Verminous.		Dirty.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Boys—</i>							
Infants	3,029	10	0·3	1	0·03	...	...
9-year-olds	2,868	5	0·2	...	...	3	0·1
12-year-olds	1,289	2	0·1	...	...	...	...
Leavers	780	2	0·2	...	...	...	...
16-year-olds	169	...	...	...	...	...	...
<i>Girls—</i>							
Infants	3,188	150	4·7	11	0·3	...	...
9-year-olds	2,790	245	8·8	7	0·3	5	0·2
12-year-olds	1,496	97	6·4	5	0·3	1	0·06
Leavers	787	81	10·2	...	...	...	...
16-year-olds	153	1	0·6	...	...	...	...
Total	16,549	593	3·6	24	0·1	9	0·05

(b) Body.

	Number examined.	Dirty.		Verminous.	
		Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>					
Boys	3,029	3	0·09	...	...
Girls	3,188	...	...	3	0·09
<i>9-year-olds—</i>					
Boys	2,868	2	0·07	2	0·07
Girls	2,790	8	0·3	5	0·2
<i>12-year-olds—</i>					
Boys	1,289	...	...	1	0·07
Girls	1,496	1	0·06	...	...
<i>Leavers—</i>					
Boys	780	...	...	...	...
Girls	787	...	...	...	...
<i>16-year-olds—</i>					
Boys	169	...	...	...	...
Girls	153	...	...	...	...
Total	16,549	14	0·08	11	0·06

G. Condition of Skin.

(a) Head.

	Number examined.	Ringworm.		Impetigo.		Others.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>							
Boys	3,029	...	...	7	0·2	23	0·7
Girls	3,188	1	0·03	6	0·1	10	0·3
<i>9-year-olds—</i>							
Boys	2,868	...	...	12	0·4	14	0·5
Girls	2,790	...	...	9	0·3	11	0·4
<i>12-year-olds—</i>							
Boys	1,289	...	...	3	0·2	6	0·4
Girls	1,496	...	...	...	...	9	0·6
<i>Leavers—</i>							
Boys	780	...	...	1	0·1	4	0·5
Girls	787	...	...	4	0·5	3	0·3
<i>16-year-olds—</i>							
Boys	169	...	...	...	...	1	0·5
Girls	153	...	...	...	...	...	...
Total	16,549	1	0·006	42	0·2	81	0·5

G. Condition of Skin—*continued.*(b) *Body.*

	Number examined.	Ringworm.		Impetigo.		Others.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>							
Boys . . .	3,029	1	0.03	5	0.1	40	1.3
Girls . . .	3,188	...	...	5	0.1	31	0.9
<i>9-year-olds—</i>							
Boys . . .	2,868	...	...	7	0.2	52	1.8
Girls . . .	2,790	4	0.1	2	0.07	38	1.3
<i>12-year-olds—</i>							
Boys . . .	1,289	...	...	3	0.2	37	2.8
Girls . . .	1,496	...	...	...	...	29	1.9
<i>Leavers—</i>							
Boys . . .	780	1	0.1	...	...	9	1.1
Girls . . .	787	...	...	...	...	7	0.8
<i>16-year-olds—</i>							
Boys . . .	169	...	...	...	...	4	2.3
Girls . . .	153	...	...	1	0.6	1	0.6
Total . . .	16,549	6	0.03	23	0.1	248	1.5

H. Nutrition.

	Number examined.	Above Average.		Average.		Below Average.		Bad Nutrition.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>									
Boys . . .	3,029	533	17.5	2,143	70.7	351	11.5	2	0.06
Girls . . .	3,188	485	15.2	2,197	68.9	499	15.6	7	0.2
<i>9-year-olds—</i>									
Boys . . .	2,868	544	19.0	2,034	70.8	290	10.2	...	...
Girls . . .	2,790	500	17.9	1,975	70.8	315	11.3	...	...
<i>12-year-olds—</i>									
Boys . . .	1,289	234	18.1	970	75.2	85	6.5	...	...
Girls . . .	1,496	347	23.1	1,029	68.7	119	7.9	1	0.6
<i>Leavers—</i>									
Boys . . .	780	160	20.5	475	60.8	145	18.5	...	...
Girls . . .	787	196	24.9	481	61.1	110	13.9	...	...
<i>16-year-olds—</i>									
Boys . . .	169	30	17.7	129	76.3	10	5.9	...	...
Girls . . .	153	34	22.2	109	71.2	10	6.5	...	...
Total . . .	16,549	3,063	18.5	11,542	69.7	1,934	11.7	10	0.06

I. Teeth.

	Number examined.	Sound.		1-4 decayed.		5 or more decayed.		Oral Sepsis.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>									
Boys . . .	3,029	700	23.1	1,830	60.4	499	16.4	79	2.6
Girls . . .	3,188	776	24.3	1,931	60.5	481	15.0	65	2.0
<i>9-year-olds—</i>									
Boys . . .	2,868	636	22.1	1,818	63.4	414	14.5	51	1.8
Girls . . .	2,790	612	21.9	1,819	65.2	359	12.9	33	1.2
<i>12-year-olds—</i>									
Boys . . .	1,289	541	41.9	707	54.8	41	3.1	4	0.3
Girls . . .	1,496	639	42.7	801	53.5	56	3.7	7	0.4
<i>Leavers—</i>									
Boys . . .	780	307	39.3	436	55.8	37	4.7	6	0.7
Girls . . .	787	344	43.7	394	50.0	49	6.2	6	0.7
<i>16-year-olds—</i>									
Boys . . .	169	72	42.6	80	47.3	17	10.0	1	0.5
Girls . . .	153	71	46.4	73	47.7	9	5.8	...	...
Total . . .	16,549	4,698	28.4	9,889	59.8	1,962	11.8	252	1.5

J. Nose, Throat, and Glands.

(a) Nose.

	Number examined.	Catarrh.		Obstruction.		Other Diseases.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>							
Boys	3,029	85	2·8	10	0·3	6	0·1
Girls	3,188	70	2·1	6	0·1	3	0·1
<i>9-year-olds—</i>							
Boys	2,868	167	5·8	19	0·7	4	0·1
Girls	2,790	137	4·9	10	0·4	7	0·3
<i>12-year-olds—</i>							
Boys	1,289	33	2·5	10	0·7	...	...
Girls	1,496	17	1·1	5	0·3	...	...
<i>Leavers—</i>							
Boys	780	11	1·4	10	1·2	...	...
Girls	787	14	1·7	5	0·6	2	0·2
<i>16-year-olds</i>							
Boys	169	1	0·5	6	3·5	...	...
Girls	153	1	0·6	...	...	...	...
Total	16,549	536	3·2	81	0·5	22	0·1

(b) Throat.

	Number examined.	Tonsils.				Adenoids.				Other diseases.	
		Slightly enlarged.		Markedly enlarged.		Probably present.		Present.			
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
<i>Infants—</i>											
Boys	3,029	642	21·1	125	4·1	107	3·5	14	0·4	6	0·1
Girls	3,188	659	20·6	142	4·4	108	3·3	15	0·4	5	0·1
<i>9-year-olds—</i>											
Boys	2,868	531	18·5	126	4·4	94	3·2	12	0·4	14	0·5
Girls	2,790	557	19·9	145	5·2	85	3·0	10	0·3	11	0·4
<i>12-year-olds—</i>											
Boys	1,289	199	15·4	25	1·9	18	1·3	2	0·1	2	0·1
Girls	1,496	267	17·8	40	2·6	18	1·2	3	0·2	2	0·1
<i>Leavers—</i>											
Boys	780	82	10·5	13	1·6	5	0·6	1	0·1	1	0·1
Girls	787	109	13·8	16	2·0	5	0·6	1	0·1	2	0·2
<i>16-year-olds—</i>											
Boys	169	21	12·4	1	0·5	...	...	...	...	1	0·5
Girls	153	20	13·0	4	2·6	1	0·6	...	...	...	...
Total	16,549	3,087	18·6	637	3·8	441	2·6	58	0·3	44	0·2

(c) Lymphatic Glands.

(1) Submaxillary.

	Number examined.	Palpably Enlarged.		Markedly Enlarged.		Cicatrices.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>							
Boys	3,029	97	3·2	4	0·1	3	0·9
Girls	3,188	72	2·2	2	0·6	6	0·1
<i>9-year-olds—</i>							
Boys	2,868	90	3·1	4	0·1	9	0·3
Girls	2,790	59	2·1	2	0·07	9	0·3
<i>12-year-olds—</i>							
Boys	1,289	28	2·1	1	0·07	8	0·6
Girls	1,496	32	2·1	1	0·06	4	0·2
<i>Leavers—</i>							
Boys	780	7	0·8	...	...	2	0·2
Girls	787	7	0·8	...	...	2	0·2
<i>16-year-olds—</i>							
Boys	169	2	1·1	...	...	...	...
Girls	153	1	0·6	...	...	1	0·6
Total	16,549	395	2·4	14	0·08	44	0·2

J. Nose, Throat, and Glands—*continued.*(2) *Cervical Glands.*

	Number examined.	Palpably Enlarged.		Markedly Enlarged.		Suppurating.		Cicatrices.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>									
Boys	3,029	319	10·5	9	0·2	...	...	17	0·5
Girls	3,188	340	10·6	10	0·3	1	0·03	8	0·2
<i>9-year-olds—</i>									
Boys	2,868	419	14·6	19	0·7	...	...	27	0·9
Girls	2,790	401	14·3	14	0·5	...	...	19	0·6
<i>12-year-olds—</i>									
Boys	1,289	138	10·7	2	0·1	...	...	19	1·4
Girls	1,496	127	8·4	3	0·2	...	...	21	1·4
<i>Leavers—</i>									
Boys	780	68	8·7	2	0·2	...	...	11	1·4
Girls	787	62	7·8	1	0·2	...	...	6	0·7
<i>16-year-olds—</i>									
Boys	169	9	5·3	...	...	...	...	2	1·1
Girls	153	8	5·2	...	...	...	...	1	0·6
Total	16,549	1,891	11·4	60	0·3	1	0·006	131	0·8

K. External Eye Diseases.

	Number examined.	Blepharitis.		Con-junctivitis.		Corneal Opacities.		Strabismus.		Other diseases.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
<i>Infants—</i>											
Boys	3,029	26	0·8	6	0·1	1	0·03	108	3·5	8	0·2
Girls	3,188	34	1·0	9	0·2	1	0·03	98	3·0	13	0·4
<i>9-year-olds—</i>											
Boys	2,868	30	1·0	11	0·3	5	0·2	111	3·8	12	0·4
Girls	2,790	17	0·6	15	0·5	1	0·03	110	3·9	11	0·4
<i>12-year-olds—</i>											
Boys	1,289	8	0·6	...	...	2	0·1	34	2·6	4	0·3
Girls	1,496	12	0·8	2	0·1	1	0·06	49	3·1	5	0·3
<i>Leavers—</i>											
Boys	780	6	0·7	2	0·2	...	...	26	3·3	7	0·8
Girls	787	4	0·5	3	0·3	...	...	20	2·5	1	0·1
<i>16-year-olds—</i>											
Boys	169	...	...	1	0·5	...	...	6	3·5	...	...
Girls	153	...	...	1	0·6	...	...	6	3·9	...	...
Total	16,549	137	0·8	50	0·3	11	0·05	568	3·4	61	0·4

L. Visual Acuity.

	Number examined.	Good—6/6		Fair—6/9 and 6/12		Bad—6/18 and worse.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>9-year-olds—</i>							
Boys	2,868	2,191	76·4	438	15·3	239	8·3
Girls	2,790	2,103	75·3	431	15·4	256	9·2
<i>12-year-olds—</i>							
Boys	1,289	959	74·3	195	15·1	135	10·4
Girls	1,496	1,059	70·7	245	16·3	192	12·8
<i>Leavers—</i>							
Boys	780	588	75·3	90	11·5	102	13·1
Girls	787	578	73·4	91	11·5	118	14·9
<i>16-year-olds—</i>							
Boys	169	118	69·8	25	14·7	26	15·2
Girls	153	111	72·5	23	15·0	19	12·4
Total	10,332	7,707	74·6	1,538	14·8	1,087	10·5

M. Ears.

	Number examined.	Otorrhœa.		Wax.		Other diseases.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>							
Boys	3,029	26	0·8	9	0·2	7	0·2
Girls	3,188	27	0·8	10	0·3	2	0·06
<i>9-year-olds—</i>							
Boys	2,868	25	0·9	23	0·8	6	0·2
Girls	2,790	22	0·7	8	0·3	1	0·03
<i>12-year-olds—</i>							
Boys	1,289	10	0·7	3	0·2	5	0·3
Girls	1,496	11	0·7	3	0·2	7	0·4
<i>Leavers—</i>							
Boys	980	11	1·4	5	0·6	1	0·1
Girls	787	14	1·7	2	0·2	1	0·1
<i>16-year-olds—</i>							
Boys	169	2	1·1	...	...	...	...
Girls	153	...	...	1	0·6	1	0·6
Total	16,549	148	0·9	64	0·3	31	0·1

N. Hearing.

	Number examined.	Slightly Deaf.		Markedly Deaf.	
		Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>					
Boys	3,029	7	0·2	3	0·09
Girls	3,188	14	0·4	...	...
<i>9-year-olds—</i>					
Boys	2,868	13	0·4	1	0·03
Girls	2,790	10	0·4	...	...
<i>12-year-olds—</i>					
Boys	1,289	14	1·0	1	0·07
Girls	1,496	14	0·9	...	...
<i>Leavers—</i>					
Boys	780	5	0·6	...	...
Girls	787	6	0·7	1	0·1
<i>16-year-olds—</i>					
Boys	169	2	1·1	...	...
Girls	153	1	0·6	...	...
Total	16,549	86	0·5	6	0·03

O. Speech.

	Number examined.	Defective Speech.		Stammering.	
		Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>					
Boys	3,029	18	0·5	3	0·09
Girls	3,188	11	0·3	4	0·1
<i>9-year-olds—</i>					
Boys	2,868	7	0·2	8	0·3
Girls	2,790	1	0·03	3	0·1
<i>12-year-olds—</i>					
Boys	1,289	1	0·07	6	0·4
Girls	1,496	3	0·2	1	0·06
<i>Leavers—</i>					
Boys	780	2	0·2	7	0·8
Girls	787	1	0·1	2	0·2
<i>16-year-olds—</i>					
Boys	169	2	1·1	1	0·5
Girls	153	...	...	...	...
Total	16,549	46	0·2	35	0·2

P. Mental Condition.

	Number examined.	Dull or Backward.	
		Number.	Per cent.
<i>Infants—</i>			
Boys	3,029	7	0.1
Girls	3,188	4	0.1
<i>9-year-olds—</i>			
Boys	2,868	7	0.2
Girls	2,790	2	0.07
<i>12-year-olds—</i>			
Boys	1,289	...	...
Girls	1,496	1	0.06
<i>Leavers—</i>			
Boys	780	2	0.2
Girls	787	1	0.1
<i>16-year-olds—</i>			
Boys	169	...	...
Girls	153	7	0.1
Total	16,549	31	0.2

Q. Heart and Circulation.

	Number examined.	Organic Heart Disease.				Functional Disorder.		Anæmia.	
		Congenital.		Acquired.		Number.	Per cent.	Number.	Per cent.
		Number.	Per cent.	Number.	Per cent.				
<i>Infants—</i>									
Boys	3,029	5	0.1	9	0.2	20	0.6	49	1.6
Girls	3,188	5	0.1	7	0.2	11	0.3	57	1.7
<i>9-year-olds—</i>									
Boys	2,868	1	0.03	17	0.6	11	0.3	65	2.3
Girls	2,790	8	0.3	20	0.7	18	0.6	66	2.3
<i>12-year-olds—</i>									
Boys	1,289	1	0.07	17	1.3	6	0.4	20	1.5
Girls	1,496	1	0.06	21	1.4	13	0.8	17	1.1
<i>Leavers—</i>									
Boys	780	1	0.1	9	1.1	5	0.6	2	0.2
Girls	787	...	...	11	1.3	8	1.0	16	2.0
<i>16-year-olds—</i>									
Boys	169	...	...	2	1.1	4	2.3	2	1.1
Girls	153	5	0.1	9	0.2	20	0.6	49	1.6
Total	16,549	27	0.1	122	0.8	116	0.7	343	2.7

R. Lungs.

	Number examined.	Chronic Bronchitis.		Tuberculosis.		Suspected Tuberculosis.		Other diseases.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>									
Boys	3,029	56	1.8	...	...	3	0.09	83	2.7
Girls	3,188	42	1.3	...	...	6	0.1	69	2.1
<i>9-year-olds—</i>									
Boys	2,868	43	1.5	...	...	11	0.3	73	2.5
Girls	2,790	19	0.6	1	0.03	4	0.1	55	1.9
<i>12-year-olds—</i>									
Boys	1,289	6	0.4	...	...	2	0.1	18	1.3
Girls	1,496	5	0.3	...	...	1	0.06	14	0.9
<i>Leavers—</i>									
Boys	780	4	0.5	...	...	3	0.3	6	0.7
Girls	787	1	0.1	1	0.1	1	0.1	7	0.8
<i>16-year-olds—</i>									
Boys	169	...	...	2	1.3	1	0.6	4	2.6
Girls	153	56	1.8	...	...	3	0.1	83	2.7
Total	16,549	232	1.4	4	0.02	35	0.2	412	2.5

S. Nervous System.

	Number examined.	Epilepsy.		Chorea.		Infantile Paralysis.		Other diseases.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>									
Boys	3,029	2	0·06	2	0·06	4	0·1	6	0·1
Girls	3,188	1	0·03	7	0·2	1	0·03	16	0·5
<i>9-year-olds—</i>									
Boys	2,868	4	0·1	2	0·07	1	0·03	15	0·4
Girls	2,790	2	0·07	4	0·1	1	0·03	11	0·4
<i>12-year-olds—</i>									
Boys	1,289	...	...	...	...	1	0·07	4	0·3
Girls	1,496	...	...	2	0·1	...	...	5	0·3
<i>Leavers—</i>									
Boys	780	...	...	...	...	1	0·1	2	0·2
Girls	787	...	...	...	...	...	...	2	0·2
<i>16-year-olds—</i>									
Boys	169	...	...	...	...	...	...	...	...
Girls	153	...	...	...	...	...	...	1	0·6
Total	16,549	9	0·05	17	0·1	9	0·05	62	0·3

T. Tuberculosis.

	Number examined.	Glands.		Bones and Joints.		Abdominal.		Skin.		Other Forms.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
<i>Infants—</i>											
Boys	3,029	6	0·1	...	...	4	0·1	...	...	...	...
Girls	3,188	8	0·2	1	0·03	6	0·1	...	...	...	...
<i>9-year-olds—</i>											
Boys	2,868	10	10·3	3	0·1	2	0·07	...	...	1	0·03
Girls	2,790	2	0·07	3	0·1	...	...	...	...	...	...
<i>12-year-olds—</i>											
Boys	1,289	2	0·1	...	...	...	...	...	...	...	...
Girls	1,496	...	...	...	...	...	...	...	...	...	...
<i>Leavers—</i>											
Boys	780	1	0·1	...	...	1	0·1	...	...	...	...
Girls	787	...	...	1	0·1	...	...	...	...	...	...
<i>16-year-olds—</i>											
Boys	169	...	...	1	0·5	...	...	...	...	...	...
Girls	153	...	...	...	...	...	...	...	...	...	...
Total	16,549	29	0·1	9	0·05	13	0·08	...	...	1	0·006

U. Rickets.

	Number examined.	Slight.		Marked.	
		Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>					
Boys	3,029	48	1·5	22	0·7
Girls	3,188	30	0·9	4	0·1
<i>9-year-olds—</i>					
Boys	2,868	31	1·1	7	0·2
Girls	2,790	11	0·4	1	0·03
<i>12-year-olds—</i>					
Boys	1,289*	7	0·5	1	0·07
Girls	1,496	3	0·2	...	0·07
<i>Leavers—</i>					
Boys	780	6	0·7	1	0·1
Girls	787	1	0·1	1	0·1
<i>16-year-olds—</i>					
Boys	169	1	0·5	...	...
Girls	153	...	...	...	...
Total	16,549	138	0·8	37	0·2

V. Deformities.

	Number examined.	Congenital.		Acquired.	
		Number.	Per cent.	Number.	Per cent.
<i>Infants—</i>					
Boys	3,029	24	0·7	51	1·6
Girls	3,188	9	0·2	28	0·8
<i>9-year-olds—</i>					
Boys	2,868	13	0·4	52	1·8
Girls	2,790	9	0·3	21	0·7
<i>12-year-olds—</i>					
Boys	1,289	5	0·3	15	1·1
Girls	1,496	9	0·6	25	1·6
<i>Leavers—</i>					
Boys	780	2	0·2	15	1·9
Girls	787	2	0·2	13	1·6
<i>16-year-olds—</i>					
Boys	169	1	0·5	5	2·9
Girls	153	1	0·6	2	1·3
Total	16,549	75	0·4	227	1·3

W. Infectious or Contagious Disease.

(These are given under "Skin Diseases" and "Tuberculosis.")

X. Vaccination.

	Number examined.	No. Mark.	
		Number.	Per cent.
<i>Infants—</i>			
Boys	3,029	629	20·7
Girls	3,188	656	20·5
<i>9-year-olds—</i>			
Boys	2,868	609	21·2
Girls	2,790	629	22·5
<i>12-year-olds—</i>			
Boys	1,289	226	17·5
Girls	1,496	277	18·5
<i>Leavers—</i>			
Boys	780	161	20·6
Girls	787	165	20·9
<i>16-year-olds—</i>			
Boys	169	22	13·0
Girls	153	21	13·7
Total	16,549	3,395	20·5

SPECIAL SCHOOLS AND CLASSES.

Special Schools.—The following is a list of the Special Schools and Classes which were open during the session, and the number of pupils on the roll at the close of the term:—

For Mentally Defective Children—

Balfour Place School	173
Duncan Street School	99
St. Christopher's R.C. School	98
St. Nicholas' School	102
	<hr/>
	472

For Physically Defective Children—

Clarebank School	141
Duncan Street School	74
Gorgie School	150
Willowbrae School	111
	<hr/>
	476

For Children suffering from Ringworm—

Lauriston Place School	23
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<i>For Delicate Children.—</i>		<i>For Children suffering from High Myopia—</i>	
Stichill School	70	Myopia School	93
<i>For Children suffering from Tuberculosis—</i>		<i>For Cripple Children—</i>	
Colinton Mains Hospital Class	19	Douglas Home	*28
		Taught at home by Visiting Teachers	20
			48
<i>For Hard-of-Hearing Children—</i>			
Deaf and Dumb Institution Class		6	

*Of this number the Education Committee paid for the maintenance of 3. (This number (28) includes children from outwith Edinburgh.)

1. Physically Defective Children.

There were 476 pupils on the roll at the end of the session classed as physically defective. The following is a classification of the defects:—

Paralysis of various types	37	Heart Affections	57
Tubercular diseases of—		Speech defects	9
Bones	12	Otorrhœa and Deafness	13
Hip Joint	10	Lung Disease (bronchitis and pre-	
Abdomen	10	tubercular cases)	106
Glands	13	Defective vision	8
Spinal Cases	12	Malnutrition	7
Rickets	46	Other conditions	129
Accidents	7		476

2. Mentally Defective Children.

Investigation of Cases.—Children are referred for investigation with regard to mental deficiency from many sources, including:—Head Teachers, Medical Officers, Hospitals, Police Courts, Clinics and outside Societies. A report from the Head Teacher is obtained on prescribed forms and the child then examined medically and tested psychologically. All the reports are considered and recommendations made to the Education Committee who decide as to the child's disposal: whether Ineducable, for Institution, Special School, or otherwise.

286 cases were examined psychologically and reported on during the session:—

- 81 cases were passed for Special Schools or Classes;
- 6 „ were passed for Special Schools or Classes, on probation;
- 115 „ were considered dull or backward;
- 36 „ were delayed for further consideration;
- 5 „ were considered more P.D. than M.D.;
- *34 „ were considered ineducable (these were reported to General Board of Control and Public Assistance Department);
- 4 „ were admitted to Gogarburn Certified Institution;
- 1 case was decertified and returned to ordinary school;
- 1 „ was sent to Wellington Reformatory;
- 1 „ was admitted to Deaf and Dumb Institution;
- 2 cases were M.D. as well as P.D., and were continued to be taught at home by Visiting Teacher.

* (17 of these were considered suitable for enrolment at the Occupation Centre, Slateford).

There were 472 mentally defective pupils on the roll at the end of the session. These have been classed according to the progress made during the session:—

Good	224 or 47·4 per cent.
Fair	197 „ 41·8 „
Little progress	51 „ 10·8 „

73 pupils left during the session. The reasons for leaving were as follows:—transferred to other Special Schools, 8; sent to Institution, 2; over age, 34; medically exempted, 8; left district, 8; granted exemption before attaining 16 years, 1; ineducable, 6; returned to ordinary school, 1; died, 4; enrolled in Private School, 1.

In the case of pupils leaving to go to work inquiry is made by the teacher and advice given regarding the nature of employment for which the pupil is best suited.

The number of educable defective children maintained by the Education Committee in certified Institutions was as under:—

	Boys.	Girls.
Baldovan	1	1
Larbert . . . . .	...	1
Waverley Park . . . . .	...	1
St. Joseph's R.C.	2	4
Gogarburn	3	...
	6	7
	} 13	

3. Blind and Partially Blind Children, and

4. Deaf and Mute Children.

Blind, Deaf-Mute, and Epileptic Children.—Blind and deaf-mute children are dealt with under the Education of Blind and Deaf-Mute Children (Scotland) Act, 1890, and epileptic children under the Education of Defective Children (Scotland) Act, 1906, as read with the Education Acts of 1908 and 1918. The Education Committee have no schools under their management for the education of such children, and they have, therefore, to be sent to special institutions. The following shows the number of children so maintained by the Education Committee as at the end of the session:—

	Boys.	Girls.
Royal Blind Asylum, Edinburgh	5	3
Deaf and Dumb Institution, Edinburgh	14	9
Donaldson's Hospital, Edinburgh	7	7
St. Vincent R.C. School, Glasgow . . . . .	...	2
	26	21
	} 47	

Blind Persons' Act, 1920.—The Education Committee are responsible for the technical training at the Royal Blind Asylum workshops of 31 adult blind persons (21 men and 10 women). The training consists of basket-making, brush-making, and mat-making for men, and machine-knitting for women; in the case of special men trainees instruction in piano-tuning is given, and in the case of special women trainees instruction in massage.

5. Pupils Suffering from Ringworm

Lauriston Place Special School.—This school has accommodation for 60 pupils, and during the session 52 attended, 29 being sent out cured. Of the 29 cases cured, 5 had X-ray treatment, 3 drug treatment, and 21 thallium acetate treatment.

6 Special School at Stichill.

Stichill Special School.—This school is carried on by the Education Committee under an arrangement with the Leith Holiday Home Committee, and has accommodation for 70 to 80 pupils.

The Education Committee, who are managers of the school and have complete control of the education of the children in residence, pay a sum to meet the cost of food and lodging for the children. A charge is made appropriate to the parents' circumstances in each case. There are three teachers, and 360 pupils attended during the session.

The majority of the children suffer from debility and anæmia, though a fair number are cases recovering from illnesses or operations.

7. Arrangements for Physical Education and Personal Hygiene of Children.

A. PHYSICAL EDUCATION.

Physical Education is included in the Syllabus of all the Education Committee's schools. In Elementary Schools, the instruction is given by class and visiting teachers in accordance with the Board of Education Syllabuses of Physical Exercises, and Physical Exercises for Infant Classes. In Intermediate and Secondary Schools, the instruction is given by specialist teachers of physical education. The staff consists of a Superintendent, Assistant Superintendent, and 27 Assistant Teachers (16 women and 11 men). The whole of the physical education, including Swimming, in both day and evening schools, is under the direct supervision of the Superintendent. All exercises, as far as possible, are carried out in the open-air.

B. BATHS.

Swimming.

There are six School Baths and the staff consists of six teachers (2 women and 4 men). In addition, six Corporation Baths and the services of the attendant Instructors are extensively utilised.

8. Arrangements for Feeding of Children.

Under the Education Committee's scheme, dinners are supplied to three groups of children: (1) necessitous, supplied free; (2) pupils whose parents pay at the rate of 1½d. per dinner; (3) a special two-course dinner at a higher rate for Special Schools and some of the Secondary Schools.

The number of dinners sent out from the Cooking Centre was 1,176,634, and the average cost per meal was 1·01d. for food and 0·95d. for administration—Total, 1·96d. The total expenditure for the year to 15th May in connection with the Feeding Scheme was £9,664, 3s. 6d. The receipts amounted to £3,985 18s. The net cost was £5,678, 5s. 6d.

9. Arrangements for Medical Treatment.

The medical treatment provided by the Education Committee is best described under two heads: (1) Work done at the Treatment Centres; (2) Arrangements made for the treatment of ringworm.

Clinics are held as under:—

1. Treatment Centres at 45 Lauriston Place, Edinburgh, and 5 Links Place, Leith.
2. Sub-Clinic at Prestonfield: Medical Officer and Nurse once weekly.
3. Nurses' Sub-Clinics for minor ailments at Dalry School, St. John's School and Regent Road School twice weekly.
4. Nurses' Sub-Clinics at Special Schools (Balfour Place, Clarebank, Gorgie Special, St. Nicholas and St. Christopher's) twice weekly. A nurse attends daily at Duncan Street and Willowbrae Special Schools.
5. Occupation Centre: Nurse once weekly.

The Staff at Lauriston Place Centre consists of: (1) Visiting Medical Officers (2) four Dentists, one Oculist, and one Aurist (all part-time); (3) three whole-time nurses who assist the oculist, aurist and dentists, and, in addition, carry out treatment of minor ailments; (4) one nurse for treatment of itch cases.

The Staff at Links Place Centre consists of: (1) Visiting Medical Officers; (2) two Dentists, one Oculist and one Aurist (all part-time); (3) two whole-time nurses who assist oculist, aurist and dentists, and, in addition, carry out treatment of minor ailments; (4) an attendant for treatment of itch cases.

Treatment is given free when the average weekly income of the family, after deducting house rent, does not exceed 10s. per head. In other cases, a charge of 2s. 6d. is made, this charge to cover any necessary treatment carried out at the Clinic for a period of a year. The amount received in payment for treatment during the session was £222, 10s., representing 1,780 children.

Any necessary investigation is made by the Attendance Department.

There is a Special School for pupils suffering from Ringworm at 41 Lauriston Place where treatment is carried out by the nurse.

Ringworm.—Children suffering from Ringworm are treated at the Royal Infirmary by X-rays or Thallium Acetate. The nurse attached to the Special Skin School carries out the after-treatment of these cases.

Treatment of Scabies.—Provision is made at Lauriston Place and Links Place Treatment Centres for the treatment of scabies. Baths are fitted up, and a special nurse and attendant supervise the bathing and ointment treatment of the pupils. The pupils, their clothing, the house and bedding are disinfected when a cure is effected. The following are the results for the session, viz.:—*Lauriston Place Centre*—Number cured:—boys, 109; girls, 113—Total, 222. The number of attendances made was 1,182. *Links Place Centre*—Number cured:—boys, 54; girls, 56—Total, 110. The number of attendances made was 1,600. The number of children bathed and disinfected at the Public Disinfecting Station was:—boys, 106; girls, 100—Total, 206.

Defective Vision and External Eye Diseases.—The following are the Oculists' reports on cases of defective vision, etc., detected by school doctors in the different schools and referred for further examination.

Lauriston Place Treatment Centre.—Altogether 1,513 children were examined for defective vision, of whom 1,382 were found to require glasses. In 131 cases lenses were not prescribed, either owing to the error of refraction being only of a slight degree or because, as some other disease of the eyes was present, little benefit would have been derived from glasses.

In addition to the children who attended for examination of their vision, a large number (409), were treated for external diseases of the eye, the total number of attendances for treatment being 3,298. The treatment is carried out by the school nurse, under the supervision of the Oculist. In cases where the treatment could be carried out by the parents at home, they have been shown by the nurse how to apply it.

E. M. LITHGOW, M.B., Ch.B., F.R.C.S.E.

Links Place Treatment Centre.—In all, 665 cases were examined, making 1,017 attendances. A great proportion of these cases were pupils with defective vision. Lenses were not prescribed unless definite visual benefit or the relief of asthenoptic symptoms was likely to result. Lenses were prescribed for 430 pupils.

In addition to the above, a large number of cases of external eye disease was seen. Treatment was carried out by the School Nurse under the supervision of the Oculist.

CHARLES W. GRAHAM, M.B., Ch.B., F.R.C.S.E.

Provision of Spectacles.—1,291 pairs of spectacles were supplied during the year by the Education Committee; 105 pairs were given free, 63 pairs were paid for by the Public Assistance Committee, while 1,123 were paid for by the parents.

REPORTS BY AURISTS.

Lauriston Place Treatment Centre.—There were 548 examined—273 boys and 275 girls; the number of attendances for the session being 567.

The following conditions were found:—impacted cerumen, 105; chronic otitis media suppurativa, 156; enlarged tonsils and adenoids, 344.

Palliative remedies are employed at the clinic, such as syringing for discharge, wax, and foreign bodies; douching of nose, politzerisation, etc. 1,864 attendances were made for treatment.

J. D. LITHGOW, M.B., C.M., F.R.C.S.E.

Links Place Treatment Centre.—There were 262 cases examined—125 girls and 137 boys.

The following conditions were found:—enlarged tonsils and adenoids, 251—girls, 116; boys, 135; otitis media suppurativa, 130—girls, 67; boys, 63; other conditions, including accessory sinus suppuration, impacted wax, furunculosis, etc., 145—girls, 70; boys, 75.

A record has been kept of the number of children seen at the school clinic and recommended for tonsil and adenoid operations, and who have been operated on at the Ear and Throat Department, Leith Hospital. The cases totalled 136—girls, 66; boys, 70.

It must be pointed out that, in children, the mere removal of adenoids does not make a mouth breather breathe through his nose. Those children who have been operated on for nasal obstruction due to adenoids must receive training in breathing, and it is hoped that this training can be supervised by teachers during class hours and be supplemented by breathing exercises given with regular physical drill.

G. EWART MARTIN, M.A., M.B., Ch.B., F.R.C.S.E.

Defective Teeth.—The pupils selected for dental treatment were 6-years-old, 9-years-old and 12-years-old. The dentists visit the schools, examine all the children and note on charts the condition of the teeth. Where attention is necessary, a card is sent to parents, and on their signing that they are unable otherwise to secure treatment, and that they consent to this being carried out, notices are issued telling them when to bring the child to the Treatment Centre.

The following is the record of work done at the Dental Clinics for the session :—
Schools visited, 92.

The total number of children who received dental attention was 8,713. It is often difficult to get parents to realise the importance of preventive measures. Most of the special cases have been sent by the medical staff; here the ill-health or pain arising from bad teeth makes parents resort at once to treatment. Included in the special cases are many children who refused treatment when examined as routine cases at 6 or 9 years.

The number examined was :—

A. *Lauriston Place Treatment Centre.*—Boys, 6,842; Girls, 6,868—Total, 13,710.

There were also examined 258 children (Boys, 120; Girls, 138), attending Special Schools whose ages were other than 6, 9 and 12 years.

B. *Links Place Treatment Centre.*—Boys, 1,779; Girls, 1,607—Total, 3,386.

Condition of Teeth.—The condition of the teeth is noted in every case, and also the treatment necessary, extraction, filling, etc.

I. *Numbers with Clean Mouths and no evidence of Dental Caries.*

A. Boys, 1,599; Girls, 1,611—Total, 3,210 or 23·4 per cent. of number examined.

B. Boys, 352; Girls, 321—Total, 673 or 19·9 per cent. of number examined.

II. *Numbers with Dental Caries.*

A. 6-year-olds—Boys, 1,651; Girls, 1,599—3,250	} 10,500 or 76·5 per cent. of number examined.
9-year-olds—Boys, 1,928; Girls, 1,924—3,852	
12-year-olds—Boys, 1,664; Girls, 1,734—3,398	
B. 6-year-olds—Boys, 415; Girls, 435—850	} 2,713 or 80·1 per cent. of number examined.
9-year-olds—Boys, 542; Girls, 538—1,080	
12-year-olds—Boys, 401; Girls, 382—783	

The following table gives the number of pupils in each age with carious teeth—(a) four or less ; (b) more than four.

	(a) With four or less Carious Teeth.			(b) With more than four Carious Teeth.		
	6 years.	9 years.	12 years.	6 years.	9 years.	12 years.
A. Boys . . .	844	996	1,213	807	932	451
Girls . . .	803	958	1,339	796	966	395
Total . . .	1,647	1,954	2,552	1,603	1,898	846
B. Boys . . .	252	424	336	163	118	65
Girls . . .	278	415	351	157	123	31
Total . . .	530	839	687	320	241	96
Grand Total . . .	2,177	2,793	3,239	1,923	2,139	942

A. Of the 10,500 requiring dental treatment, 4,584 or 43·6 per cent. accepted the services of the school clinic.

In addition to the above, 2,028 pupils—977 boys, 1,051 girls—were treated as special cases, so that in all 6,612 pupils received dental treatment.

B. Of the 2,713 requiring treatment, 1,255 or 46·3 per cent. accepted the services of the school clinic.

In addition to the above, 846 pupils—413 boys, 433 girls—were treated as special cases, so that in all 2,101 pupils received treatment.

Analysis of Dental Treatment.

(a) Conservation.

	Teeth filled.		Teeth conserved by treatment.		Total Number of Teeth conserved.
	Temporary.	Permanent.	Temporary.	Permanent.	
A. Boys . . .	24	830	8	39	901
Girls . . .	23	1,066	24	26	1,039
Total . . .	47	1,896	32	65	1,940
B. Boys . . .	...	67	71	...	138
Girls . . .	...	39	73	5	137
Total . . .	...	106	144	5	275
Grand Total . . .	47	2,002	176	70	2,215

(b) Extraction.

	Number of Teeth Extracted.		Total.	Anæsthetics.
	Temporary.	Permanent.		
A. Boys . . .	7,291	1,915	9,206	1,760
Girls . . .	6,757	2,018	8,775	1,805
Total . . .	14,048	3,933	17,981	3,565
B. Boys . . .	1,563	606	2,169	773
Girls . . .	1,576	728	2,304	788
Total . . .	3,139	1,334	4,473	1,561
Grand Total . . .	17,187	5,267	22,454	5,126

NOTE.—A. refers to Dental Treatment at 45 Lauriston Place.

B. refers to Dental Treatment at 5 Links Place, Leith.

EDINBURGH MERCHANT COMPANY'S SCHOOLS, ROYAL HIGH SCHOOLS
AND EDINBURGH INSTITUTION.

By arrangement, pupils in the following schools are given the option of being examined by their family doctor or by the School Medical Officers:—Edinburgh Ladies' College, George Watson's Ladies' College, George Watson's Boys' College, Daniel Stewart's College and Edinburgh Institution. The results of the medical examinations for these and the Royal High School and Royal High (Preparatory) School, which are under the Education Committee, are given below.

In each school, the pupils examined belonged to four groups:—(1) Entrants, *i.e.*, pupils in their sixth year and all new entrants, of whatever age; (2) pupils in their tenth year (age 9); (3) pupils in their thirteenth year (age 12); and (4) pupils in their seventeenth year (age 16).

	Edinburgh Ladies' College.		George Watson's Ladies' College.		George Watson's Boys.		Daniel Stewart's.		Royal High.		Royal High (Preparatory).		Edinburgh Institution.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Total number examined	346	...	325	...	491	...	220	...	168	...	127	...	79	...
Examined by School Doctor	*217	62·7	†213	65·5	227	46·2	62	28·2	136	80·9	94	74·0	45	56·9
Examined by Family Doctor	129	37·3	112	35·5	264	53·8	158	71·8	32	19·1	33	26·0	34	43·1
<i>Teeth—</i>														
None decayed	142	41·0	223	68·7	227	46·2	127	57·7	63	37·5	52	40·0	60	75·9
1 to 5 „	164	47·4	81	24·9	230	46·8	87	39·6	82	48·8	67	52·7	18	22·9
6 to 10 „	40	11·6	11	3·4	34	6·9	6	2·7	23	13·7	8	6·2	1	1·2
Stoppings	131	37·8	105	3·2	137	27·9	19	8·7	54	32·1	6	4·8	13	16·4
<i>Visual Acuity—</i>														
6/6	231	80·5	246	85·1	364	86·9	158	89·3	134	79·8	105	83·3	66	89·2
6/9—6/12	46	16·0	36	12·4	26	6·2	11	6·2	17	10·1	18	14·3	5	6·8
6/18 and above	10	3·5	7	2·5	29	6·9	8	4·5	17	10·1	3	2·4	3	4·0
<i>Eyes—</i>														
Wearing Glasses	23	6·6	32	9·8	35	7·1	11	5·0	26	15·5	2	1·5	4	5·0
External Eye Diseases	1	0·2	3	0·9	1	0·2	...	...	1	0·6	...	...	...	...
Squint	12	3·4	1	0·3	14	2·8	1	0·5	9	5·3	5	3·1	...	...
<i>Deafness</i>	3	0·8	...	...	...	...	1	0·4	3	1·7	4	3·1	...	...
<i>Mouth Breathers</i>	9	2·3	8	2·4	16	3·2	7	3·2	4	2·4	6	4·7	2	2·5
<i>Tonsils—</i>														
Enlarged	39	11·2	41	12·6	74	15·1	32	1·5	20	11·9	28	22·0	5	6·8
Tonsils and Adenoids Operation	112	32·3	74	22·8	176	35·8	48	21·9	56	33·3	40	31·5	26	32·9
<i>Glands—</i>														
Enlarged	25	7·7	25	7·7	19	3·8	10	4·5	2	1·2	16	12·6	2	2·5
Cicatrices	9	2·3	5	1·5	...	...	...	...	11	6·5	2	1·5	...	...
<i>Heart—</i>														
Valvular . . . . .	...	...	...	...	...	...	...	...	2	1·2	1	0·8	...	...
Impure Sounds	4	1·1	6	1·8	1	0·2	2	0·9	...	...	...	...	...	...
Irregular	6	1·7	3	0·9	2	0·4	1	0·5	...	...	...	...	...	...
Anæmia	4	1·1	10	3·0	2	0·4	...	...	...	...	...	...	...	...

* In addition, 90 children—submitted by Headmistress as "Special Cases"—were examined by the School Medical Officer

† In addition, 96 do. do. do. do.

PORT SANITARY ADMINISTRATION.

The following is a report of the Port Sanitary Administration which has been prepared by Dr. Grierson, Assistant Medical Officer of Health.

Principal Trading Ports.—North American :—New York, Philadelphia, Portland, Baltimore, Montreal, San Francisco.

South American :—Buenos Aires, Bahia Blanca, Rosario.

Continental :—Stockholm, Helsingfors, Leningrad, Libau, Konigsberg, Danzig, Stettin, Hamburg, Bremen, Copenhagen, Amsterdam, Rotterdam, Antwerp, Havre, Bordeaux, Oporto, Lisbon.

Mediterranean :—Marseilles, Oran, Bona, Tunis, Alexandria, Port Said.

Indian :—Karachi, Bombay, Calcutta, Rangoon.

Eastern :—Shanghai, etc.

The bulk of the foreign shipping comes from Continental Ports. In addition there is a large amount of coastwise shipping from Home Ports, besides the constant arrival of vessels in the fishing industry.

The number of ships entering the Port Sanitary District was 10,886, representing a tonnage of 2,825,586, an increase of 1,061 vessels and 91,586 tons when compared with 1931.

AMOUNT OF SHIPPING ENTERING THE PORT SANITARY DISTRICT DURING THE YEAR 1932.

	Number.	Tonnage.	Number Inspected		Number reported to be defective.	Number of Notices issued.	
			by the Assistant M.O.H.	by the Sanitary Inspector.			
Foreign	Steamers	1,269	1,142,217	106	721	19	11
	Motor	30	48,596	4	23	...	...
	Sailing	2	164	...	...	...	...
	Fishing . . . .	...	...	...	...	...	...
Total Foreign	1,301	1,190,977	110	744	19	11	
Coastwise	Steamers	5,063	1,267,841	14	128	12	2
	Motor	19	15,647	...	9	1	...
	Sailing	4	211	...	...	...	...
	Fishing	4,499	350,910	...	306	...	...
Total Coastwise	9,585	1,634,609	14	443	13	2	
Total Foreign and Coastwise	10,886	2,825,586	124	1,187	32	13	

Imports and Exports.—The principal items of cargo imported at Leith consist of wheat, barley, oats, maize, rye, flour, meal, sugar, fruit, cement, timber, guano, manure, flax, hemp, fish (fresh and cured), butter, eggs, and esparto grass. Of these the chief import is grain. The exports are chiefly coal, iron, oil, liquor, and ammonia. Coal is the heaviest export.

Medical Inspection of Aliens.—During the year 1932, 598 alien passengers arrived at the Port. Of these, 401 were subjected to medical inspection at the request of H.M. Alien Immigration Officer. Permission to land was given to all of these passengers.

The alien passengers were classified as follows:—

CLASSIFICATION OF ALIEN PASSENGERS.

Resident returning.	In transit.	Visitors of Six Months or less.		Diplomats and persons on Foreign Government Missions.	Seamen.	Seamen under contract to join ship in British waters.	Ministry of Labour Permit.	Aliens coming to settle not holding M.L. Permit.
		On holiday, tourists, etc.	On Business.					
18	70	340	89	2	2	37	20	20

Cases of Illness.—During the year 13 cases of venereal disease were noted amongst sailors arriving at Leith. One case of dysentery and one of a perforated gastric ulcer represented the more serious illnesses occurring at the port.

In February, five shore workers reported sick with rashes while working on board a ship. On investigation this was found to be a rash due to the handling of cotton seed.

Ship Inspection and Fumigation.—The routine inspection of ships is carried out as soon as possible after docking, and has been described in detail in a previous report. Inspection in terms of the International Sanitary Convention of 1926 is also systematically undertaken. During the year 26 Deratisation and 144 Deratisation Exemption Certificates were issued. The increase in the number of the latter certificates granted indicates that rats are being kept down to a minimum in a greater number of ships.

The fumigation of ships throughout the year was done by means of Cyanogen Chloride and proved highly satisfactory. Many owners have availed themselves of this method of fumigation of certain parts of their ships for the repression of vermin other than rats.

Details of the sanitary inspection of crews' quarters and of the measures taken for rat repression will be found in the report of the Chief Sanitary Inspector, along with the yearly table of nuisances discovered, etc.

It has to be recorded that as in former years placards in connection with venereal disease are maintained in selected places in the Docks. These are printed in English, Norwegian, Dutch, and German, and draw the attention of seamen and dockers to the existence and location of the Seamen's Dispensary at the Shore, where skilled treatment may be obtained.

FACTORY AND WORKSHOP ACTS.

The following report which the Medical Officer of Health is required to make to the Secretary of State for Home Affairs, in accordance with the provisions of Section 132 of the Factory and Workshop Act, 1901, gives a summary of the inspection work and other information for the year 1932.

1. INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Occupiers Prosecuted.
Factories	328	29	NIL.
Workshops }	1,270	55	NIL.
Workplaces }			
(Other than Outworkers' premises.)			

2. DEFECTS FOUND.

	Number of Defects.			
	Found.	Remedied.	Referred to H.M. Inspector.	Number of Prosecutions.
Want of cleanliness	176	176	...	...
Want of ventilation	13	13	...	...
Overcrowding . . . . .	...	...	...	...
Want of drainage of floors . . . . .	...	...	...	...
Other Nuisances	104	104	...	...
Sanitary Accommodation {	Insufficient	9	...	...
	Unsuitable or defective	23	...	...
	Not separate for sexes	3	...	...
Illegal Occupation of Underground Bakehouses (sec. 101) . . . . .	...	...	...	...
Breach of special sanitary regulations for Bakehouses Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921	23	23	...	...
Other Offences :— (Excluding Offences relating to Outwork)	10	4	6	...
Total	361	355	6	...

3. HOME WORK—OUTWORKERS' LISTS (sec. 107).

	Feb. 1932.	Aug. 1932.
Total Number of Lists received	34	34
Number of Outworkers on Lists (<i>i.e.</i> , those residing in Edinburgh)	82	76
(Note.—These figures include Outworkers who may be working for more than one firm and therefore appear in more than one list.)		
Number of Addresses of Outworkers residing in other districts forwarded to other Local Authorities	15	6
Number of Addresses of Outworkers received from other Local Authorities	7	5
Actual Number of Outworkers on Register, at date of last Returns . . . . .	...	43

Nature of Work—

- (1) Making, altering, repairing, &c., of Wearing Apparel.
- (2) Making-up, finishing, and repairing of Table Linen, &c.
- (3) The weaving of any textile fabric or any processes incidental to the latter.

Outwork in Unwholesome Premises (sec. 108)	. . . . .	Nil.
Outwork in Infected Premises (secs. 109 & 110)	. . . . .	Nil.

4. REGISTERED FACTORIES AND WORKSHOPS.

Premises on Registers at end of the year.		Number.
Workshops (various trades)	. . . . .	1,063
Bakehouses	{ Factories	122
	{ Workshops	30
	—	152
Underground Bakehouses in use at end of year	. . . . .	64

5. OTHER MATTERS.

Matters referred to H.M. Inspector of Factories :—

(a) Failure to affix Abstract of the Factory and Workshop Act (Sec. 133)	4
(b) Others	2
	— 6

Action taken in matters referred by H.M. Inspector of Factories :—

Matters remediable under the Public Health Act but not under the Factory Act	4
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Sanitary Accommodation for Factories and Workshops—Intimations received by Local Authority in order that work might be carried out according to Local Regulations	11
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Notices received for the information of Local Authority <i>re</i> Bakehouses—Scottish Board of Health (Factories and Workshops Transfer of Powers) Order 1921 (Secs. 97-100 Factory Act)	6
--	---

Notices received <i>re</i> provision of means of escape in case of fire (Sec. 14)	1
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Number of Notices of Occupation of Workshops received from H.M. District Inspector of Factories	29
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Miscellaneous Complaints :—

Received from other Departments	7
Anonymous	1
Received from Public	9
	— 17

WORKSHOPS.

Trade conditions remained at a very low ebb throughout the year, and circumstances were such as to discourage expenditure on developments and improvements of workshop premises. On the whole, however, it is satisfactory to report that progress has taken place, during the year, in regard to sanitary conditions which mean so much to the health and well-being of the operatives in factories and workshops.

Regular and systematic inspections of workshops in the City have been carried out, and the general standard of cleanliness has been well maintained. It must not be supposed, however, that this standard is maintained automatically, or that constant vigilance and much solid work are not still necessary on the part of the Department. Irregularities are frequently found, and occasionally instances of very unsatisfactory conditions occur, but after written notice had been served, no serious case of non-compliance took place.

Under supervision, steady improvement has taken place in respect of ventilation, lighting, provision of pure water supplies, and sanitary accommodation adequate for the number of employees, etc.

Where the general level of sanitary accommodation was found to be low, great improvements were effected by reconstruction on modern lines. There is, however, always a difficulty with the smaller type of workshop in raising it to the standard required by the Sanitary Accommodation Order, *e.g.*, the provision of an intervening ventilated lobby between the convenience and the workroom, so in order technically to conform with requirements, the W.C. compartment has been sometimes reduced to far too small a size. This, in many cases, arises from the lack of working floor space in the premises, and also because these small workrooms may merely form the back premises of a shop, and, of course, were never originally intended to be adapted for the purposes of a Workshop.

Another important matter which the Local Authority is responsible for, is to see that adequate provision is made for escape in case of fire. In this connection two cases were discovered, during the course of routine inspection, where escape stairs and doors had been rendered useless in case of emergency by being blocked up with materials and even work-tables.

BAKEHOUSES.

At the end of 1932 the number of Bakehouses on the register was 152, 64 being underground. There is, within recent years, a marked increase in the number of "Factory" Bakehouses consequent on the installation of electric power. While there are still too many of the old-fashioned and unsatisfactory underground bakehouses, there has been considerable development in the industry through the formation of large companies who have erected up-to-date factories provided with all modern improvements. Constant pressure is needed to secure a higher average standard of cleanliness in the baking trade, especially in underground premises, some of which are handicapped by antiquated and unsuitable buildings. In the worst of such premises the structural conditions often render it impossible to obtain good lighting, ventilation, and sanitary conditions, and if a reasonable standard in these respects is obtained it reflects unusual credit on the occupier. It may be said, however, that the competition of new hygienic bakeries has led to some general improvement in the older places, though examples are still to be found of failures to clean furniture and appliances or remove dirt from floors under machines.

In previous reports reference has been made to the disadvantages of underground bakehouses. The construction of underground rooms is generally of such

a nature that it is difficult to provide through ventilation for the whole of the premises and especially for that part where work is carried on. In some cases the rooms have "dead ends," *i.e.*, where no opening can be made through any of the walls, generally on account of other buildings, or there are recesses off the rooms, such as archways projecting under the pavement, in which the air may be nearly stagnant, although the body of the room may be well ventilated.

The efficient lighting of underground rooms, both by natural and artificial means, is almost as important as ventilation, but here again some of the underground bakehouses are placed at a disadvantage, for in a considerable number of them artificial lighting is continually necessary. Dampness of walls is another defect of certain underground rooms and is especially prevalent in recesses under pavement lights. Sufficient storage accommodation is also lacking in some instances, and obstruction of lighting takes place owing to material being stacked and stored near windows. Many difficulties arise where a bakehouse has a side doorway in a common passage leading to tenement dwellings above, as baking odours find their way into the staircase, and deficient cleansing of the passage stairs and landings used in common is apt to occur.

Premises underground are as a rule rarely satisfactory, but for various reasons their use will have to be continued. The provisions with regard to registration of underground bakehouses are contained in the Factory and Workshop Act, 1901, and only premises used prior to the passing of the Act were eligible for certification. All the underground bakehouses now in use were certified at that time, but as there was no time limit fixed and the Act contains no requirement as to application for renewal, all that can be done meantime is to exercise a close supervision in order to see that these places are kept in as good condition as possible. At the time of certification in 1904 there were 134 underground bakehouses in Edinburgh. By 1920 they had been reduced to 86, and in 1932 they numbered 64. The problem thus promises to remain a troublesome one for some years to come.

SANITARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, *May* 1933.

To

*The Department of Health for Scotland and
The Right Honourable the Lord Provost,
Magistrates and Council of the City of Edinburgh.*

MY LORD PROVOST AND GENTLEMEN,

I have the honour to present the Annual Report of the Sanitary Department of the City of Edinburgh for the year 1932.

HOUSING.

Improvement Schemes.—Further progress was made during the year in carrying out the Local Authority's policy of slum clearance by means of improvement schemes. Although it was not possible to promote any new scheme, the erection of additional numbers of houses enabled a further number of tenants to be transferred from the insanitary dwellings in the St. Leonard's (Second Section) Scheme, and already those families are realising the comfort and healthfulness of their new homes.

All the occupants of houses in the earlier schemes in other parts of the City have now been removed and the demolition of the old buildings is practically finished. Further groups of new houses have been erected on the cleared sites and their pleasing appearance and generous internal equipment are frequently commented upon.

The excellent beneficial results from the schemes already undertaken provide much encouragement for the continued adoption of this wholesale method of dealing with the slum problem, and it is most desirable that the promotion of further schemes should not be long delayed. Other methods, including the closure of individual houses and the demolition of individual tenements, will materially help in dealing with the problem, but it is felt that in certain districts the most complete and satisfactory method is by means of clearance schemes. Experience has shown that in cases where only a proportion of the houses in tenemental property are uninhabitable and closing orders are made upon them, the property soon deteriorates and the windows become dirty or broken and require to be boarded up, thereby giving the place a derelict appearance. As the remaining houses usually require to be dealt with sooner or later, the grouping of properties in a clearance area makes it possible to deal with all the houses therein at the same time, and permits of the sites being used for rebuilding.

Supervision of Re-housing Areas.—The houses in the re-housing areas are regularly visited by the women sanitary inspectors with a view to having the houses kept clean and in proper order and preventing overcrowding and subletting, and the results continue to be most gratifying. Altogether 9,056 visits were made during the year.

Every effort is made to prevent the new houses becoming infested by bugs, but unfortunately, in spite of the precautions taken, these vermin have appeared in several houses. The tenants, before being transferred from the slum areas, are advised to notify this Department if they suspect that their furnishings or bedding are bug-infested, and in those cases the articles are disinfested in the steam disinfector. Where infestation has taken place in the new houses, the surface woodwork is immediately stripped off and the walls and ceilings are sprayed with a strong insecticide.

Individual Uninhabitable Houses.—Inspections were made of 1,116 houses in terms of the Housing (Inspection of District) Regulations (Scotland) 1928. Considerable difficulty, however, was again experienced in obtaining the closure of uninhabitable houses on account of the scarcity of alternative accommodation but it was possible to close 42 houses by statutory procedure, and in addition 53 were closed by the owners at the request of this Department.

The Department considered numerous applications for Corporation houses from tenants of insanitary dwellings, and where their houses were regarded as uninhabitable, an endeavour was made to obtain undertakings from the owners agreeing to the houses remaining closed when vacated, before recommendations were passed on to the House-letting Department.

Housing Repairs and Improvements.—Intimations of sanitary defects and suggested improvements were sent to a number of owners. The improvements were effected in some instances, but here again the lack of alternative accommodation prevented the owners from carrying out major alterations as the success of many of the schemes depended on the combination of two or more houses. In other cases the lack of funds prevented owners from carrying out the necessary work. It is becoming more and more evident that much progress cannot be expected with the improvement or reconditioning of existing houses until some arrangement is made to overcome these difficulties.

Hostels.—A number of years ago attention was called in these reports to the need for a type of lodging for men and women superior to that offered in common lodging houses, where they could have more privacy, improved amenities and properly cooked food. It is gratifying to note that the suggestion has now been acted upon. In carrying out the Cowgate-Grassmarket Improvement Scheme opportunity was taken to form one of the old buildings in Candlemaker Row into a Hostel for women, well-known as the Margaret Tudor Hostel. The accommodation provided, including bedrooms, recreation and dining-room, baths and lavatories, is bright and attractive and the place is conducted with consideration and sympathy for the occupants.

In connection with the same scheme, the newly-erected building at No. 8 Cowgate was fitted up as a Hostel for men. It was opened early in the present year and is proving a conspicuous success. The new hostel is known as the Greyfriars Hotel, and beds may be had for 1s. 3d. per night or 6s. 6d. per week. There are single rooms (*i.e.*, with one bed) and double rooms (*i.e.*, with two beds). The rooms are well lighted and ventilated, each having a window and also a permanently

open grating over the door. Each man is provided with a comfortable clean bed, and a wardrobe, chair and clean towel. He has the use of a bath, one being situated on each floor, with a plentiful supply of hot water. Wash-hand basins and other sanitary accommodation are also provided on each floor. The food is cooked in a well-equipped kitchen and is tastefully served in a cheerful dining-room. The meals are remarkably cheap and it is reckoned that for the modest sum of 20s. 6d. a man can obtain his bed for the week, and three good meals per day, with tea, sausages and egg and roll for breakfast, three-courses for lunch comprising soup, meat and vegetables and pudding, and fish and chips or sausage and egg, with bread and tea for the evening meal. Many men, however, by judiciously studying the menu, are able to live comfortably in this hostel for a sum of from 15s. to 17s. 6d. per week. The inmates have also the use of a comfortable recreation room. The rooms are already nearly all occupied and the restaurant is being well used both by the inmates and by outsiders. It is felt that there is real need for these hostels and it is to be hoped that one or two more will be erected in other working-class districts of the City.

Rural Housing Improvements.—Under the Housing (Rural Workers) Acts, 1926 and 1931, applications for financial grants were made during the year by the owners of 32 farm and other rural cottages. All were granted, and improvements were proceeded with immediately, including the provision of bathrooms, sculleries, drainage, improved lighting and repairs to floors, walls, roofs, etc.

The houses occupied by farm workers in the suburban areas were visited by the Women Sanitary Inspectors in order to ascertain the state of cleanliness in the dwellings. The conditions were usually found to be satisfactory and in the few instances which were not up to standard, revisits showed a marked improvement.

NUISANCES AND SANITARY IMPROVEMENTS.

In addition to the foregoing, many housing improvements were effected in the process of "nuisance" removal, and continued progress was made in modernising the general sanitary condition of houses and their environment. Thus, in 91 instances new waterclosets were introduced while 209 were improved or repaired; 189 earthenware sinks and tubs were introduced and repairs to woodwork around sinks were effected in 309 instances; renewals or repairs of drainage were effected at 43 properties; and 44 soil-pipes, 23 waste-pipes and 55 rainwater conductors were repaired or renewed.

Conveniences used in common.—Where sanitary conveniences are used in common by a number of tenants there is much neglect regarding the care and cleanliness of these appliances. Altogether 136 choked waterclosets, 108 choked sinks, wash-tubs, etc., and 704 choked drains and surface traps had to be brought to the notice of the parties responsible and cleared.

The Table showing the number of sanitary conveniences used in common has been brought up to date as follows:—

	Number used in common by the Tenants of									Total Number of Conveniences.	Total Number of Houses.
	2 Houses.	3 Houses.	4 Houses.	5 Houses.	6 Houses.	7 Houses.	8 Houses.	9 Houses.	16 Houses.		
Common Waterclosets	4,375	1,392	719	103	47	3	3	...	...	6,642	16,644
Common Sinks	338	290	182	44	18	5	1	...	...	878	2,645
Number of houses without Sink or water supply within the house and without the use of a common Sink	...	...	...	...	...	...	...	...	...	...	660
Dry Closets	96	5	3	2	...	...	...	...	...	106	229
Privy Middens . . . .	...	...	...	...	...	...	...	...	6	6	96
Ashpits	12	6	4	1	2	...	1	1	...	27	92

There remain 295 dry closets (inclusive of the number referred to in the above table as being used in common) and 6 privy middens. This is a decrease of 31 dry closets as compared with last year. These conveniences are mostly situated in properties on the outskirts of the City where sewers have not been provided. On account of the demolition of houses under the various improvement schemes, and improvements effected at other properties, the number of houses where waterclosets are used in common was reduced by 124 and the number where sinks are used in common was reduced by 58. The number of houses without sink or water supply within the house and without the use of a common sink has been reduced by 57.

Household defects.—In 149 houses defective or obstructed vents giving rise to smoke were improved; and nuisances arising from escapes of gas, dead vermin, etc., were remedied in 137 houses. Complaints of flooding in houses were found in 60 cases to be due to defects in the fittings of flats above, or to burst pipes.

Household Cleanliness.—The floors and bedding in 247 houses were found to be in a dirty condition and the tenants were required to carry out the necessary cleansing. The owners or occupiers of 390 houses were required to carry out distempering, papering or painting of the walls and ceilings.

In the course of visitation very marked variations are observed in the state of household cleanliness. Here and there one finds a tendency to take matters easily, with resulting dirty and untidy conditions. In illness this is excusable, but at other times the importance of hygienic observance requires to be emphasised. A very marked improvement, however, is being gradually effected in domestic cleanliness and in large numbers of houses the spic and span conditions are a wonderful testimony to the untiring industry of the housewives. It is often very heartening to find how, even amidst the most unfavourable circumstances, many women contrive to keep their homes bright and spotless.

Domestic Animals.—Nuisance committed in common stairs and back-greens by dogs and cats was complained of on 233 occasions and on 50 occasions complaints were made against the keeping of animals and poultry within or in close proximity to buildings.

Cleansing of Stairs.—A survey of the common stairs throughout the City and the service of notices upon the owners where painting was required resulted in 864

staircases being painted. The sweeping and washing of stairs and passages was found in 2,138 instances to have been neglected and insistence on compliance with the Regulations had to be made.

Garbage throwing.—While the practice of casting garbage out of windows on to back courts, areas and roofs of outbuildings, and the depositing of refuse in cellars and other odd corners is still of too frequent occurrence in the more congested districts, the number of accumulations of garbage and filth which had to be removed from those places either by the owners or the Cleansing Department, namely, 2,238, is about 500 less than the previous year. Education on these matters appears to be bearing good results.

Water Supply.—At the instigation of the Department 109 water pipes were repaired, 9 branches were taken off the main supply pipes and 62 cisterns were repaired or renewed. In addition the examination of cisterns, undertaken by the the Inspectors of the Water Department, showed that 1453 were dirty and 74 were without covers. Notices were sent by this Department to the parties concerned.

Ticketed Houses.—In addition to the inspections of the re-housing areas, visits were regularly made by the women sanitary inspectors to the ticketed houses within the City and to the non-ticketed houses in close proximity thereto. Altogether 11,978 visits were made, during which help, advice and encouragement were given in the furthering of cleanly habits and improving domestic hygiene.

OVERCROWDING.

During the year 663 new cases of overcrowding were recorded, which, together with the 1,183 unabated cases carried over from the previous year, makes a total of 1,846 overcrowded houses. This is an increase of 295 compared with last year.

These figures do not, by any means, represent the total amount of overcrowded conditions which prevail throughout the City, but only those which specially came under the notice of the Department. There is no doubt that considerable overcrowding exists, and this is borne out by the results obtained from the recent special overcrowding surveys, carried out in different parts of the City, and referred to in last year's report.

In 451 instances the overcrowding was abated and of this number 165 were provided with Corporation Houses. Recommendations were made to the House-Letting Department in 567 instances where overcrowding was serious and where there was a lack of proper sex separation.

While much of the overcrowding was caused by the size of the family in residence, in 245 cases it was either due to or aggravated by the keeping of lodgers or the sub-letting of rooms to other families.

Of the 1,846 overcrowded houses found, 1,015 were of one apartment, 792 of two apartments and 39 of three apartments and over.

In 208 instances the available space per person had been reduced to below 200 cubic feet, being less than half of what has been recognised as a very low standard, namely 400 cubic feet.

In individual cases the available space had been reduced to the extremely low figure of from 96 to 137 cubic feet per person.

The following are a few examples of the conditions found :—

(a) A sub-let room, suitable for 3 persons, was found to be occupied by a man, his wife and family of 6 daughters and 5 sons, making a total of 13 persons.

(b) A one-apartment house in Leith, with accommodation for not more than one person, was found to be occupied by a man, his wife and family of 3 daughters, aged 14, 9 and 4 years respectively, and two sons, aged 12 years and 7 years, making a total of 7 persons.

(c) A two-apartment house in the centre of the City, with accommodation for 4 persons, was found to be occupied by a man, his wife and family of 3 daughters, 9, 6 and 3 years respectively, and 5 sons whose ages ranged from 12 to 18 years, making a total of 10 persons.

(d) A two-apartment house in the south side of the City, suitable for 5 persons, was found to be occupied by a man, his wife and family of 3 daughters and 7 sons, aged 6 months to 16 years respectively, making a total of 12 persons.

VERMIN REPRESSION.

Verminous Children.—During the year 149 cases involving 223 children were notified by the Education officials and in connection therewith 24 beds and 214 sets of personal clothing were disinfected and 172 children were bathed at the City Disinfecting Station.

Verminous Houses.—342 houses, which upon examination were found to be in a verminous condition, were dealt with, and 132 sets of bedding were removed to the City Disinfector for treatment.

Rat Destruction.—The Department received notification during the year regarding 325 premises being infested by rats or mice. Repeated visits were made and altogether 260 premises were cleared of the vermin.

On investigation it was found that in many cases infestation was due to defects in the drainage systems, involving the execution of repairs and renewals, often at considerable expense. In other cases advice was given to owners and occupiers as to the best methods for destroying the vermin and in addition gassing operations and other repressive measures were carried out by the staff.

Very satisfactory results were achieved during Rat Week when the Local Authority again co-operated with the Department of Agriculture in an intensive campaign for the destruction of the rodents.

INCREASE OF RENT, ETC., ACTS.

The tenants of three houses made application for certificates in terms of the Rent and Mortgage (Restrictions) Acts, 1920-23, that their houses were not in all respects in a reasonable state of repair. In no instance was a certificate granted, as the disrepair in the houses did not warrant it. The owners, however, were communicated with, and all necessary repairs were duly carried out.

LODGING HOUSES.

Common Lodging Houses.—At the beginning of the year there were 17 common lodging houses with accommodation for 2,162 persons. Thirteen of these were occupied by male and four by female lodgers. At the end of the year the common lodging houses numbered 16 with accommodation for 2,135 persons. One lodging house with accommodation for 17 men was discontinued as the premises were unsuitable. In another extensions were carried out and the existing cubicles improved so as to provide more space for the lodgers, and in addition considerable improvement was effected on the sanitary accommodation, the hot water supply and the kitchen arrangements. In a further lodging house the sanitary fittings and hot water supply were renewed, while in another the ventilation was improved.

Farmed-out Houses.—The number of farmed-out houses on the register is 57 with accommodation for 205 persons.

Houses Let-in-Lodgings.—At the beginning of the year there were 16 houses let-in-lodgings with accommodation for 623 persons. During the year two houses with accommodation for 49 persons were removed from the register, the use of one of the houses having been discontinued for this purpose and the other having been closed due to the premises having become unsuitable. One house with accommodation for 16 persons was newly registered. The number of houses let-in-lodgings at the end of the year was accordingly 15 with accommodation for 590 persons.

ACCOMMODATION FOR SEASONAL WORKERS.

The number of farmers employing seasonal workers last summer was 19, and the number of workers was approximately 497. The huts or barns in which the workers were accommodated were visited regularly in order to ascertain that the requirements of the Bye-laws were being observed.

PLACES OF PUBLIC ENTERTAINMENT.

The various picture-houses and theatres and other places of public entertainment were regularly visited by the Inspectors and as a rule the conditions were found to be satisfactory. Any matters requiring attention were brought to the notice of the management who had them immediately rectified.

There has been marked improvement in the general condition of the picture-houses, etc., during the past few years, but the public could help considerably in the keeping of those places clean. It is surprising to see the amount of debris collected each day by the cleaners. This largely comprises paper bags, wrappings from confectionery, cigarette cartons, etc., which could easily be retained and deposited in some outside receptacle.

INVESTIGATIONS INTO ATMOSPHERIC POLLUTION.

For a number of years the Department has been co-operating with the Atmospheric Pollution Research Committee of the Department of Scientific and Industrial Research, in an endeavour to obtain records of the extent of atmospheric pollution within the City.

Deposit Gauges.—For this purpose three atmospheric pollution deposit gauges have been used, namely, one at Leith Links, one at Bruntsfield House and one at West Princes Street Gardens. The contents of the gauges are submitted monthly for analysis and the results sent to the Committee referred to. The following table gives a summary of the results for the year.

Month.	Station.	Millimetres of Rainfall.	Total Insoluble Matter.	Total Soluble Matter.	Total Solids.	Total Solids.
			Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	English Tons per Sq. Mile.
January	Leith Links . . .	60.62	2.06	3.04	5.10	13.06
	Bruntsfield House . .	Gauge damaged by storm.	5.25	2.74	7.99	20.41
	W. Princes St. Gds.					
February	Leith Links . . .	5.02	2.52	1.84	4.36	11.16
	Bruntsfield House . .	6.06	2.58	0.95	3.53	9.03
	W. Princes St. Gds.	5.07	5.66	1.25	6.91	17.66
March .	Leith Links . . .	59.13	3.35	2.37	5.72	14.67
	Bruntsfield House . .	88.22	3.37	4.24	7.61	19.51
	W. Princes St. Gds.	65.47	6.87	1.84	8.71	22.27
April .	Leith Links . . .	38.54	3.03	2.48	5.51	14.12
	Bruntsfield House . .	60.01	4.05	4.56	8.61	22.04
	W. Princes St. Gds.	42.44	15.79	1.78	17.57	44.95
May .	Leith Links . . .	69.00	3.28	4.28	7.56	19.38
	Bruntsfield House . .	81.40	2.53	2.45	4.98	12.78
	W. Princes St. Gds.	72.24	14.57	3.61	18.18	46.50
June .	Leith Links . . .	29.23	4.66	1.88	6.54	16.74
	Bruntsfield House . .	28.42	3.07	1.42	4.49	11.49
	W. Princes St. Gds.	26.57	10.28	1.91	12.19	31.21
July .	Leith Links . . .	32.13	2.51	1.35	3.86	9.88
	Bruntsfield House . .	51.16	2.90	1.22	4.12	10.55
	W. Princes St. Gds.	53.28	5.99	1.92	7.91	20.25
August .	Leith Links . . .	6.55	4.01	1.26	5.27	13.49
	Bruntsfield House . .	10.33	3.68	1.57	5.25	13.44
	W. Princes St. Gds.	10.84	8.32	2.77	11.09	28.39
September	Leith Links . . .	57.65	2.99	1.73	4.72	12.08
	Bruntsfield House . .	65.14	2.90	2.47	5.37	13.77
	W. Princes St. Gds.	57.60	7.34	1.96	9.30	23.81
October	Leith Links . . .	128.39	2.51	2.83	5.34	13.67
	Bruntsfield House . .	150.66	2.81	3.62	6.43	16.46
	W. Princes St. Gds.	143.71	4.24	4.60	8.84	22.63
November	Leith Links . . .	35.10	2.23	1.33	3.56	9.11
	Bruntsfield House . .	41.99	2.20	1.67	3.87	9.91
	W. Princes St. Gds.	40.25	5.86	1.85	7.71	19.73
December	Leith Links . . .	90.18	2.15	5.23	7.38	18.92
	Bruntsfield House . .	108.00	2.62	5.83	8.45	21.63
	W. Princes St. Gds.	102.53	5.60	5.74	11.34	29.03

In the recently published 18th Report of the Investigation of Atmospheric Pollution for the year ended 31st March 1932, statistics are given comparing the analysis of the Deposit Gauges for the year under report with the analyses for the previous five years. It is of interest to observe a reduction in the figures showing the tar content of the atmosphere as well as those showing the presence of sulphates. As these two products are specifically related to combustion processes it would seem that for the year ending 31st March 1932 improvement had been effected.

Owens Air Filter.—In addition to the Deposit Gauges an Automatic Air Filter has been installed at the Public Health Chambers. This apparatus records atmospheric pollution by aspirating a two-litre sample of air through a disc of filter paper every twenty minutes. The suspended impurity in the sample is retained on the filter disc in the form of a circle, $\frac{1}{8}$ inch in diameter. The density of this small circle is compared with a standard scale and the amount of pollution can thus be determined in pounds of suspended impurity per one million cubic yards of air.

The record discs have been examined by the Natural Philosophy Department of the University of Edinburgh and an analysis of the readings affords some interesting information. In considering this it will be helpful to state that one million cubic yards of air is represented approximately by the volume of air within the building lines of St. Andrew Square, Edinburgh, to the height of about 100 feet (or half the height of the Scott Monument).

The site of the observations is one which is likely to record the maximum pollution obtaining in the town and in addition the maximum pollution from domestic as compared with trade sources. By comparing the figures for all the Sundays and for all the week-days (Mondays to Fridays inclusive) during the first quarter of the year (January—March) a difference appears amounting to 16 per cent. of the week-day figure. This must not, however, be taken as an exact expression of the difference between domestic and trade pollution, as many chimneys of institutions, factories, etc., are in use on Sundays and in consequence a correction of at least 5 per cent. requires to be made. This would bring the proportions nearer to four-fifths for domestic and one-fifth for trade pollution.

During 1932, December was shown to be the month with the highest average pollution throughout, and July the lowest, the figures representing continuous pollutions of 1.5 lbs. and of 0.63 lbs. respectively of suspended impurity per one million cubic yards. The "dirtiest" day was November 7th (a very foggy day) when an average pollution of 3.78 lbs. per one million cubic yards was recorded throughout the twenty-four hours. At 8 p.m. on this date a pollution of 8.1 lbs. was observed, this being the highest individual reading of the year. At the other end of the scale, the clearest day was June 26th, the average reading during the twenty-four hours being only 0.34 lbs.

During the winter months (*i.e.*, the period when British Summer Time is not in operation) the figures are divided into "ordinary" days and "Z" days, the latter being any which show at any time of the day or night a concentration of more than 2.16 lbs. per million cubic yards, or, in other words, a period of thick smoke haze. Out of 195 "winter" days for which records are available, the number of days which could be classified as "Z" days is 106 or 54.4 per cent. of the whole.

For the purpose of determining the variation of pollution during the twenty-four hours of an average day, the year was again divided as indicated in the last paragraph, all the records at one o'clock each day, two o'clock each day, etc., being calculated and averaged in order to obtain figures representing an average day in the winter months and one in the summer months. The results were as follows:—

Winter Months—The clearest portion of the day is found to be at 3 a.m., from which time the concentration increases to a maximum at between 9 a.m. and 10 a.m. Thereafter a slight decrease is observed till about 3 p.m., when the concentration commences to increase again till a secondary maximum is reached at 7 p.m., following which it falls off till the minimum is again reached in the early hours of the morning. The evening maximum is slightly less than that noted at about 9.30 a.m. These maxima would appear to coincide approximately with the times of the stoking of domestic fires in order to cook the morning and evening meals, that in the morning being aggravated by the factory chimneys being in full blast.

Summer Months.—The pollution on an average summer day is about 31 per cent. less than that on the average winter day. A variation similar to the winter day is noticeable in summer as well, save that the "zero-hour" is 2 a.m., the forenoon maximum 9 a.m., the decrease in afternoon concentration 3 to 4 p.m., and the evening secondary maximum 8 p.m. The evening maximum is definitely lower than that in the forenoon.

Investigation into Sulphur Content of the Atmosphere.—Following upon suggestions received from the Research Committee, apparatus has been set up to provide for regular observations of the presence of sulphur gases in the atmosphere. These observations have been made since the beginning of June and the following is a resumé of the readings:—

Month.	No. of Determinations.	Sulphur Dioxide (Volumes per million volumes of Air).			Percentage of Readings.	
		Average.	Highest.	Lowest.	Above 0.2 parts per million.	Below 0.1 parts per million.
June . . .	16	.024	.061	.012	0	100
July . . .	13	.020	.035	.006	0	100
August . . .	25	.041	.085	.023	0	100
September . . .	23	.041	.087	.009	0	100
October . . .	26	.040	.084	.003	0	100
November . . .	26	.067	.174	.016	0	88.5
December . . .	25	.073	.185	.021	0	84

Under normal conditions the sulphur in air appears to be present almost entirely as sulphur dioxide, the amount of sulphuric acid being usually negligible.

The sulphur dioxide content is determined by bubbling the sample of air through a solution of hydrogen peroxide which converts the sulphur dioxide present into sulphuric acid. This latter is next neutralised by standard re-agents, and the pollution calculated as volumes of sulphur dioxide in one million volumes of air.

The importance of these observations is evident when the deleterious effect of sulphur fumes on plant life and on stone-work is considered, not to mention the harm to the health of individuals.

With reference to the Table it is to be observed that while comparative figures are not yet available for June to December, 1932, the observations obtained at this station are on the whole much less than those previously published for other stations in England.

SMOKE ABATEMENT.

The smoke problem is two-sided, namely, domestic and industrial, and in a City like Edinburgh the greater volume of smoke is contributed by domestic fires.

Domestic.—On the domestic side progress is being gradually effected by the introduction of gas and electric cookers and fires and the use of coke and other smokeless fuel in place of raw coal. The smoke contribution made by domestic fires, however, is still serious and further improvement will rest largely with individual householders.

Industrial.—On the industrial side progress also continues to be made in reducing the pollution. During the year two large business concerns discarded entirely their steam boiler plants comprising six Lancashire boilers in which large quantities of coal were burned, and replaced these by electric power. Improvements in other directions have been effected by the introduction of mechanical stokers, whereby fuel is conveyed continuously in small quantities to the furnaces, also by the provision of "smoke preventers" to boiler furnaces and by the substitution of coke or oil fuel for coal.

It is an axiom that boiler efficiency and smoke prevention go hand in hand. The replacing of old boilers by new ones contributes in no small degree towards better combustion by obviating the necessity for forced firing, which is a common cause of smoke production. Owners of factories are realising more and more that the once popular idea that smoke means prosperity is false logic and that better combustion with high efficiency in their boiler plants not only reduces smoke but is advantageous to themselves. With the return to more prosperous times in industry it is hoped that further improvements on these lines will be made.

Close watch of the various chimneys throughout the City was regularly kept and visits of inspection were made to factories, etc., and to the various railway depots and stations as required. The number of visits made during the year totalled 3,030.

The records of 235 observations of chimneys varying from one to several hours showed that in 18 cases the smoke discharged was somewhat excessive. The matter was brought to the notice of the owners concerned and the steps taken in each case to effect a remedy were as follows:—

One new boiler installed obviating the necessity for forced firing; smoke preventers fitted to three furnaces; boiler flues cleaned in three cases; oil-burner in furnace re-adjusted; secondary air inlets provided in furnace doors; and improvement effected in 7 cases by more careful stoking.

In one case, owing to special requirements in the trade processes, experiments are to be made with a view to preventing the emission of smoke and in another case improvements in the boiler plant are pending.

Road Vehicles.—From observation of steam vehicles proceeding along the streets it was found, as a rule, that precautions were taken to prevent the emission of smoke by the use of suitable fuel and by care in stoking. In a few cases drivers were cautioned and this had the effect of immediate improvement.

Complaints.—During the year 44 complaints received from citizens were investigated. These mostly referred to smoke emitted from chimneys of workshops, garages, churches, schools, etc., situated in proximity to dwelling-houses. By the substitution of coke for coal or by the heightening of chimneys, the matter in almost every case was satisfactorily adjusted.

Improvements effected :—

New steam boilers installed including replacement of old boilers	11
Steam boilers replaced by electric power	6
Secondary-air smoke-preventing apparatus fitted to boilers	6
Mechanical stokers fitted to steam boilers	4
Number of boilers in which oil fuel has been substituted for coal	2
New Central heating boilers installed to replace boilers of older types	5
New chimneys erected or existing ones heightened to increase their draught	7
Furnaces in which anthracite, coke or non-bituminous fuel has been substituted for ordinary coal (this includes garages, hotels, schools, churches, etc.)	26

OFFENSIVE TRADES.

The nature and number of the Offensive Trades carried on in the City is as follows :—3 tanners, 8 hide and skin factors, 1 gut scraper, 1 glue and size maker, 2 skinners, 1 soap boiler, 3 tripe cleaners, 5 manure manufacturers, and 2 tallow melters, making a total of 26.

This is a decrease of one as compared with last year, one of the premises of a manure manufacturer having been discontinued for that purpose.

Visits of inspection were made to the various works in order to see that the Bye-laws were being observed.

FOOD SUPERVISION.

The importance of strict cleanliness and the adoption of the most modern hygienic methods in the handling and distributing of food cannot be over-emphasised. In order to impress this upon food purveyors and their assistants the inspection of food shops was continued throughout the year. As a result of these visits considerable improvement has been effected, but it has again to be stated that the best results cannot be achieved until suitable statutory regulations are provided which will induce those who prepare and handle food to adopt the right attitude as regards this important subject.

Much remains to be done, too, regarding the structure and fittings of food shops to bring them into line with modern requirements and to prevent the food exposed for sale from becoming contaminated by flies, dust or animals. The practice of

exposing food openly on the pavement at shop fronts is most reprehensible but unfortunately there is no power to stop it. The food exposed in this way is not all cleaned before use and the practice is both offensive to the senses and prejudicial to health.

The following is a list of the improvements effected :—

Walls and ceilings repainted or distempered	23
Wall and ceiling plaster repaired	4
Cellars lime-washed	8
Accumulations of rubbish removed from cellars	6
Floors cleaned	7
Floors and windows repaired	8
Dirty W.C. basins and apartments cleaned	7
Waterclosets repaired and improved	9
Modern waterclosets substituted	2
Additional waterclosets introduced	2
Sinks repaired	4
Modern sinks substituted	6
Ventilation of shops improved	3
Beetles exterminated	4
Main water fitted	1

MILK SUPPLY.

The number of registered dairy-keepers, including hawkers, at 1st January 1932 was 474. During the year, applications for registration in respect of 7 premises and one hawker were received and, after investigation, were granted. Two of the premises were fully registered and 5 were registered for the sale of bottled milk only. Registration Certificates were cancelled for 8 dairy premises and one hawker, the sale of milk having been discontinued. The total of 473 dairies, including hawkers, at the end of the year showed a reduction of one.

The total approximate daily sale of milk of all classes was 24,378 gallons—equivalent to an average amount of about half-a-pint per person—and of this amount 79 per cent. was sold in bottles, being 2 per cent. higher than last year.

Deducting the amount of milk supplied in bulk to Institutions, etc., namely, 10 per cent., it is found that there is still 11 per cent. of the total daily supply passed on to the consumer otherwise than in bottles. This is 4 per cent. less than last year.

The Milk (Special Designations) Order (Scotland), 1930:—The quantities of the specially designated milk now sold daily within the City are—307 gallons of “Certified,” 840 gallons of “Grade A (Tuberculin Tested),” and 81 gallons of “Grade A.” In addition, 15,214 gallons of milk are “Pasteurised,” although only a small proportion of this is sold under licence, making a total of 16,442 gallons or about 67 per cent. of the total daily sale of milk. This is an increase of 4 per cent. as compared with last year.

The Local Authority has granted licences to 208 dealers for the sale of the various grades of milk under the Milk (Special Designations) Order (Scotland), 1930, 80 being for “Certified,” 57 for “Grade A (Tuberculin Tested),” 8 for “Grade A,” and 63 for Pasteurised. This is an increase of 37 over the previous year.

The previous routine practice was continued of taking monthly samples of the different grades of milk sent into the City under the above Order.

During the year 226 samples were submitted for chemical analysis. These comprised 104 of "Certified," 66 of "Grade A (Tuberculin Tested)," 22 of "Grade A," and 34 of "Pasteurised" milk.

A detailed statement is given showing the number of samples taken in each month of the year under the various designations, along with the average amount of butter fat found present.

Date.	"Certified."		"Grade A(T.T.)."		"Grade A."		"Pasteurised."	
	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.
January .	9	3.69	6	3.53	2	3.46	3	3.38
February .	9	4.07	6	3.50	1	4.17	3	3.39
March .	9	4.06	6	3.70	2	3.52	3	3.43
April .	9	4.11	5	3.74	2	3.90	3	3.51
May .	9	3.84	7	3.84	2	3.73	3	3.68
June .	9	4.01	8	3.80	2	4.04	3	3.54
July .	9	3.94	4	3.80	2	3.88	3	3.49
August .	5	4.33	2	4.04	1	3.57	1	3.78
September .	9	3.87	5	4.11	2	3.69	3	3.76
October .	9	4.25	4	4.29	2	3.74	3	3.71
November .	9	3.96	7	4.16	2	3.25	3	3.81
December .	9	4.09	6	3.82	2	3.92	3	3.86
Total .	104	...	66	...	22	...	34	...
Average .	...	4.02	...	3.86	...	3.72	...	3.61

As in previous years, the highest grade, viz., "Certified," shows the best results, the lowest average amount of fat in any month being 3.69 per cent., while the average exceeded 4 per cent. in 7 months of the year, viz., February, March, April, June, August, October and December.

ICE CREAM.

The number of premises registered for the sale of ice cream is 280. Regular supervision was made of the shops, vehicles, etc., in order to have a proper hygienic standard maintained.

36 samples of ice cream were forwarded to the City Analyst for chemical examination, and he reported that the average amount of milk fat found present was 3.55 per cent. In addition 25 samples were procured for bacteriological examination.

PREVENTION OF FOOD ADULTERATION.

The number of samples submitted for chemical analysis was 1,775, which is at the rate of 3·96 per 1,000 of the population.

This comprised 808 statutory and 967 informal or test samples, representing a variety of 81 articles of food and drugs.

As regards the statutory samples, Dr. A. Scott Dodd, B.Sc., Ph.D., F.R.S.E., the City Analyst, reported that 778 or 96 per cent. were genuine, and 30 or 4 per cent. were not in accordance with the legal requirements.

Milk.—In conformity with practice the number of samples of sweet milk was larger than that of any other article of food, namely, 193 samples or 24 per cent. of the total number of statutory samples, while in addition 163 samples were procured at shops, railway stations, etc., for biological examination.

Of these 193 statutory samples, the City Analyst reported 179 as genuine and 14 as being adulterated either by the abstraction of fat or the addition of water or both.

An interesting feature was the high average amount of milk fat which was 3·49 per cent. as compared with the present presumptive standard of 3 per cent., and was calculated from all the statutory samples taken, including those certified as being adulterated.

Serious forms of milk adulteration have been comparatively rare in recent years and during this term there occurred only one instance which could be placed in this category.

The milk in question was forwarded to the City from a farm in West Lothian, and the sample was taken while in course of delivery. The consignment consisted of 50 gallons and the Analyst reported it to be deficient in milk fat to the extent of at least 15 per cent., and that it contained at least 19 per cent. of added water. The explanation offered by the producer was that there had been a leakage in his refrigerator which had not been detected till after the sample was taken, but this excuse was not accepted in view of the large quantity of water present. The accused was convicted and a fine of £5 imposed.

Mince.—Since the Preservatives' Regulations came into operation there have been considerably more contraventions in regard to Mince than to any other article of food. During this year, however, there has been a marked decrease, and it is apparent that the butchers throughout the City have now realised that the Regulations must not be ignored.

Altogether 40 samples were purchased from various shopkeepers and 9 of these were reported as not conforming to the Regulations.

Regarding the latter the amounts of preservative found present were appreciably less than formerly, varying from a minimum of 90 parts per million by weight of

sulphur dioxide to a maximum of 537 parts. Compared with the excessive amounts which were at one time prevalent these figures show a marked diminution.

It was found necessary to take legal action against only 3 offenders. These were convicted, and a total sum of £8, 16s. 6d. was inflicted in fines and expenses.

Sausages.—On account of its enormous sale, a larger number of samples of sausages than of other foods was taken in order to detect the presence of preservatives. For several years it has been a matter for pleasurable comment that the contraventions have been very few indeed in marked contrast to the results obtained during the first year or two after the Regulations came into force. Last year this was again the experience, with this important addition, that the surprising number of 20 samples were found to contain no preservative whatsoever, which is quite unprecedented.

A total of 87 samples of various descriptions of sausages were analysed and 9 of these were reported upon adversely by the City Analyst. Among the latter was a sample of pork sausages in which a small quantity of Boric Acid was present. On investigation this was traced to the sausage skins purchased by the butcher from a large wholesale firm. Unfortunately the firm in question were unable to locate the source from which they had been supplied as they had been buying extensively from a number of different suppliers.

One butcher was prosecuted for selling pork sausages containing an excessive amount of Sulphur Dioxide and was fined the sum of £3 : 5s. : 6d.

Imported Foodstuffs.—Attention has been given to the sampling of the specified imported foodstuffs which, under the Preservatives Regulations, come within the purview of the Local Authority.

The number of samples procured during the present term was 56, and represents 21 varieties of food, the majority of which had been consigned from America and Denmark. The City Analyst reported that every sample conformed to the Regulations with one exception, viz., a sample of Jellied Veal in which Boric Acid was detected, but the amount was so small as to be practically negligible.

THE SALE OF FOOD ORDER, 1921.

Under the Expiring Laws Continuance Act, the provisions of the above Order in regard to the labelling of Imported Meat were continued in force during the year.

Periodical visits were made to the various butchers' premises throughout the City and it was evident that the terms of the Order were being complied with by the shopkeepers generally, although in some instances a certain laxity was observable. The infringements appeared to partake more of the nature of carelessness than fraudulent intent, and it was not thought expedient to take legal proceedings but simply to caution the offender, and subsequent visitation to the premises proved that this procedure had effected its purpose.

THE RAG FLOCK ACT, 1911.

It is very gratifying to report that the manufacturers of rag flock are supplying an article which, as regards cleanliness, is considerably better than the standard set forth in the Regulations. For several years the percentage of samples reported on adversely by the Public Analyst has been very small indeed, and the past year has proved to be no exception.

Out of a total number of eleven samples procured from various bedding manufacturers and submitted for analysis, only one was found to contain chlorine in excess of the specified amount.

THE POISONS AND PHARMACY ACT, 1908.

The number of applications received by the Local Authority requesting registration in order to sell poisonous substances used in agriculture and horticulture, under the above Act, is identical with that of the previous year. These exclusively consisted of renewals for licences previously granted and the total number at present appearing on the Register is 29.

Inspection of the various premises proved that the licence-holders were alive to the due observance of the terms of the Act, and any infringements were of a comparatively trivial nature, these being principally in connection with the entries written in the Poisons Book, which were at once adjusted.

THE FERTILISERS AND FEEDING STUFFS ACT, 1926.

In previous reports comment was made in regard to the apathy displayed by the farmers throughout the district in ignoring the facilities placed at their disposal by this Act. This is a matter for regret because it was on account of complaints from both farmers and traders that certain provisions were framed. It is the more surprising as the civil provisions of the Act are of immediate interest to the farmer since he has the right to have a sample taken by the Official Sampler, in the prescribed manner for analysis by the Agricultural Analyst and to receive a certificate of the result, while if a breach of warranty is disclosed by the analysis, a claim can be made by the purchaser without such action leading to criminal proceedings against the Seller.

During the year a number of premises were visited where fertilisers and feeding stuffs were prepared for sale or consignment and 8 official samples were taken in the prescribed manner, and forwarded to the Agricultural Analyst.

The results were most satisfactory as they not only conformed to the statutory statement or warranty in all respects, but in some cases exceeded that in one or more constituents.

THE MERCHANDISE MARKS ACT, 1926.

It has been amply demonstrated during the year that constant supervision must be exercised in order to compel shopkeepers to observe the terms of the Orders in Council made under this Act, whereby certain imported foodstuffs must bear an indication of origin.

While the majority of the traders complied with the requirements, there has been a tendency on the part of others to view this legislation with a certain amount of irritation and even resentment. This primarily applies to the marking of imported apples and tomatoes which are often exhibited in various positions all over the shop premises.

As each separate lot requires to be marked, the complaint is sometimes made that the display of fruit is hidden from the view of customers under an "array of tickets."

On account of some shopkeepers having apparently adopted an attitude of indifference or carelessness, it was found necessary to take legal proceedings. Accordingly three prosecutions were instituted against offenders, two in regard to the marking of imported apples and one in regard to imported tomatoes. In each case a plea of guilty was tendered and modified fines amounting to £2 inflicted, the Sheriff remarking that he had made the penalty a small one as the prosecutions were the first taken under this Act in the City. The result of this legal action was significant, for immediately thereafter the infringements seemed automatically to terminate.

PORT SANITARY INSPECTION.

Shipping Arrivals.—The amount of shipping which entered the Port of Leith and Granton Harbour, inclusive of steamers, motor ships, sailing and fishing craft, totalled 10,886 vessels of 2,825,686 tons, an increase in arrivals of 1,061 vessels and 91,686 tons over last year.

The total number of foreign and coastwise vessels boarded and inspected was 1,187. Vessels direct from foreign ports were inspected in precedence to those which arrived coastwise. Re-visits were made in 894 cases.

Insanitary conditions discovered on board ships necessitated 251 verbal warnings, 126 written communications, and the service of 50 statutory notices.

Literature distributed on 706 vessels informed the masters of the sanitary regulations of the Port, and the facilities afforded ashore by the British Social Hygiene Council for the treatment of Venereal Disease.

Hygienic Conditions.—The insanitary conditions dealt with under the Public Health (Scotland) Act, 1897, included the low standards of cleanliness in the living accommodation, messrooms, galleys, food stores, pantries, and other quarters; the lack of proper storage for, and the irregular removal of, garbage, refuse, etc.; choked or defective sanitary appliances; offensive bilges; dirty fresh water tanks; dampness, insufficient light, inefficient ventilation; and the presence of vermin. The detailed statement included in this report shows that no less than 6,027 nuisances were dealt with.

The standard of sanitation in ships, particularly of the larger class, continues to improve, due to an increasing appreciation of the economic advantages gained by hygienic conditions as these contribute to the efficient discharge of the duties of the ships' personnel, the comfort and well-being of passengers during their sojourn on board, and the preservation of cargoes from contamination and damage.

Rat Destruction.—In terms of the provisions of the International Sanitary Convention of Paris 1926, which have been adopted by the principal countries of the world, the owners of all foreign-going vessels require to deratize their ships every six months unless exempted under specific circumstances.

During the year 144 certificates were issued to the masters of vessels when, after careful inspection, the conditions on board warranted exemption. Deratization measures were necessary on 26 ships and fumigation certificates were issued to the masters after the satisfactory completion of the work.

Certificates of deratization and certificates of exemption held by masters as *prima facie* evidence that their vessels are free from, or carry only a minimum number of, rats, do not exempt vessels from re-inspection until the expiration of the certificate, which is valid for six months.

The importance of re-inspections within the validity period of certificates cannot be too strongly emphasised in view of the fact that re-infestations occur. The refumigation of a vessel, which arrived at Leith from Rosario, carrying a certificate of fumigation only three months old, yielded no less than 221 rats. Fortunately, this is exceptional, but less serious re-infestations have also been recorded at the Port, in one case 40, and in another 67, rats were recovered, pointing to the necessity for maintaining a strict vigilance irrespective of the certificates produced.

Cyanogen Chloride gas has been used as a fumigant for many years at the Port of Leith. This gas was found most suitable for the work. It is extremely poisonous, generates quickly, liberates freely, and is non-injurious to fittings, stores, and foodstuffs. The presence of lachrymatory gas, the use of gas masks, and the application of chemical and animal tests are the necessary safe-guards employed to ensure against accident.

Rat repressive measures have been regularly carried out within the dock area by members of the staff of the Leith Dock Commission, and these, combined with the maintenance of a high standard of cleanliness of the roads, wharves, sheds, etc., have reduced the rat population to a minimum, only 176 rats having been caught ashore, whereas 766 were killed on board ship. Forty-five specimens of the rats were subjected to bacteriological examination for plague infection with negative results.

It gives me very great pleasure to express my deep appreciation of the valuable co-operation of the Leith Dock Commissioners, His Majesty's Collector of Customs, the Chief Preventive Officer and his staff, the Granton Harbour Officials, and the various shipping companies and agents, in the execution of the duties of the Port Sanitary Department.

Port Sanitary Inspection—Annual Statement.

Year 1932.

Ships boarded and inspected	1,187
Re-visits made	894
Nuisances discovered	6,027
Nuisances abated	5,944
Communications written	126
Notices served	50
Verbal warnings	251
Ships fumigated or otherwise treated for vermin by owners	158
Fumigation certificates granted	82
International Fumigation Certificates granted	26
International Exemption Certificates granted	144
Local Fumigation Certificates granted	56
Rats exterminated	942
Ships provided with rat guards	712
Notices of regulations served upon Masters or Officers in charge	706
V.D. Pamphlets distributed on behalf of the B.S.H. Council	706
Rats submitted for bacteriological examination	45
Negative	45

Nuisances Discovered.

Dirty floors, tables, decks, etc.	848
Dirty bunks and bedding	1,985
Dirty partitions and ceilings	470
Dirty lockers	718
Foul closets and latrines	338
Foul wash-basins	80
Foul sinks	21
Foul baths	6
Choked scuppers	87
Choked and defective latrines	42
Choked and defective wash-basins	19
Choked and defective sinks and baths	27
Obnoxious odours	8
Accumulations of garbage, refuse, etc.	83
Dirty fresh-water tanks	86
Dirty and offensive bilges	518
Dirty galleys, food stores, pantries, etc.	116
Dirty wash-places	95
Dampness in quarters	6
Insufficient light and ventilation	10
Ships without rat guards	83
Presence of rats and mice	84
Presence of cockroaches and beetles	75
Presence of bugs and fleas	109
Presence of flies	5
Miscellaneous	108
Total	<u>6,027</u>

Rat Destruction Measures in Dock Area:—

Baits laid 9,000

STAFF.

I desire to express my cordial appreciation of the hearty co-operation and the enthusiastic services rendered by Mr Thomas Bishop, Depute Chief Inspector, and all the members of the staff.

I am,

My Lord Provost and Gentlemen,

Your obedient Servant,

ALLAN W. RITCHIE, F.R.San.I., F.R.S.E.,

Chief Sanitary Inspector.

NUISANCES AND SANITARY IMPROVEMENTS IN 1932.

NATURE OF NUISANCE.	Calton.	Canongate.	Newington.	Morningside.	Merchiston.	Gorgie.	Haymarket.	St. Bernard's.	Broughton.	St. Stephen's.	St. Andrew's.	St. Giles.	Dalry.	George Square.	St. Leonard's.	Portobello.	South Leith.	North Leith.	West Leith.	Central Leith.	Liberton.	Colinton.	Corstorphine and Craigmond.	TOTALS.
<i>Water-closets:—</i>																								
Water-closets introduced	1	21	5	4	2	3	1	1	1	1	2	1	15	6	4	5	2	1	4	1	15	6	1	6
New apparatus substituted	5	7	3	4	5	5	2	4	2	12	10	34	4	13	18	37	5	12	5	5	12	1	1	85
Improved or repaired	5	4	3	4	7	5	2	4	5	12	10	34	4	13	18	37	5	12	5	5	12	1	1	209
Partitions of W.C. apartments repaired	...	4	...	...	...	...	1	...	2	...	1	1	...	1	...	10	1	...	...	...	...	...	...	212
Water-closets and sinks in a filthy condition and cleaned	1	7	26	4	1	2	1	1	36	1	3	35	2	24	34	98	5	3	4	4	15	6	5	229
Choked water-closets cleared	5	4	3	...	...	...	...	2	4	1	...	9	1	12	15	42	...	11	3	...	8	2	5	136
Water-closet apartments insufficiently lighted and ventilated—improvements effected . . . . .	...	...	...	1	...	...	...	...	...	...	...	6	...	1	...	...	2	...	...	19	...	...	...	32
New water-closet apartments provided . . . . .	...	...	...	...	...	...	...	...	...	...	3	...	...	1	...	...	...	...	...	...	...	...	...	2
<i>Sinks, Tubs, and Wash-hand Basins:—</i>																								
Sinks introduced	1	16	...	...	...	5	...	1	2	5	4	2	...	4	4	13	...	2	2	43	...	...	...	5
Insanitary sinks abolished . . . . .	...	16	1	2	4	8	...	1	2	5	2	15	35	24	4	21	4	21	3	1	1	3	...	104
Earthenware sinks and tubs substituted	11	16	3	2	7	25	1	3	10	10	10	22	40	34	18	32	8	11	5	14	7	2	1	184
Repairs (woodwork, etc.)	20	23	3	3	7	25	1	3	10	10	10	22	40	34	18	32	8	11	5	14	7	2	1	309
Choked sinks, wash-tubs, etc., cleared	3	2	1	...	...	1	1	2	2	3	5	15	2	5	6	33	...	10	2	...	13	...	2	108
Wash-hand basins renewed or introduced . . . . .	...	1	5	2	...	...	...	1	...	...	...	...	1	2	...	2	1	...	...	...	...	...	...	15
<i>Drains:—</i>																								
Choked drains cleared	38	34	3	7	11	90	5	9	14	25	15	31	38	45	49	48	27	46	10	21	20	4	3	593
Choked surface traps cleared . . . . .	...	4	2	...	2	6	...	...	1	2	2	7	5	7	4	20	13	12	2	13	3	3	3	111
Drains repaired or renewed	2	4	...	2	2	1	...	...	4	...	1	...	2	3	1	13	2	1	...	3	...	1	1	43
Soil pipes repaired or renewed	1	7	2	1	1	1	...	...	...	1	4	2	1	3	8	11	...	...	...	...	1	...	...	44
Sinks, etc., waste pipes repaired or renewed	2	5	1	3	2	7	1	4	2	3	7	4	23	9	10	16	4	9	...	5	5	...	1	123
Rain-water conductors repaired or renewed	5	3	...	...	3	4	...	...	2	...	2	...	5	2	2	13	...	7	...	3	1	2	1	55
<i>Water Supply:—</i>																								
Cisterns found dirty	1	3	...	...	6	...	...	1	...	...	1	8	...	1	1	...	...	2	1	...	...	...	...	25
Cisterns found without covers	1	2	...	...	3	...	1	...	...	...	...	6	...	1	1	...	3	6	...	...	...	...	...	22
Cisterns repaired or renewed	3	9	...	2	...	...	...	1	1	1	...	2	2	1	...	2	3	25	1	...	...	...	...	62
CARRY FORWARD	102	172	55	35	51	159	14	30	91	69	74	203	296	209	179	418	77	185	38	141	86	24	17	2,524

NUISANCES AND SANITARY IMPROVEMENTS IN 1932—continued.

NATURE OF NUISANCE.	Calton.	Canongate.	Newington.	Morningside.	Merchiston.	Gorgie.	Haymarket.	St. Bernard's.	Broughton.	St. Stephen's.	St. Andrew's.	St. Giles.	Dairy.	George Square.	St. Leonard's.	Portobello.	South Leith.	North Leith.	West Leith.	Central Leith.	Liberton.	Collinton.	Corstorphine and Craigmond.	TOTALS.
BROUGHT FORWARD	102	172	55	35	51	159	14	30	91	69	74	203	296	209	179	418	77	185	38	141	86	24	17	2,524
<i>Water Supply</i> (continued) :—																								
Branches taken off the main	4	2	18	1	1	1	1	1	7	5	1	2	1	2	8	4	11	4	1	26	13	1	1	9
Water pipes repaired	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	109
Houses temporarily without water supply due to burst pipes, etc.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	85
<i>Repairs to Houses</i> :—																								
Partition walls repaired	1	6	3	1	9	4	1	1	1	2	1	2	1	1	1	6	1	2	2	1	6	1	1	38
Floors, hearths, doors, etc., repaired	12	8	3	1	9	4	1	1	15	3	2	5	17	14	8	19	8	22	4	19	22	1	4	201
Windows and skylights repaired or renewed	25	6	8	1	5	7	1	1	9	4	7	9	11	29	13	24	4	17	9	15	9	4	2	209
Coal bunkers repaired or provided	4	1	1	1	1	1	1	1	2	1	3	4	4	1	24	1	2	11	3	3	6	1	1	46
Grates or ranges repaired or substituted	4	5	5	1	1	1	3	2	2	4	2	7	3	8	3	5	1	11	3	4	6	1	1	78
Wall and ceiling plaster repaired	25	20	5	6	4	6	1	1	17	2	1	20	7	20	12	25	11	21	4	5	11	2	2	228
Defective roofs repaired	1	7	9	2	1	2	2	1	4	1	2	5	1	1	4	11	1	3	1	2	4	3	1	64
Boiler of kitchen range renewed	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
<i>Nuisances in Houses</i> :—																								
Floors and bedding of houses in a dirty condition and cleansed by tenants	6	14	38	2	1	1	1	2	14	1	4	15	1	17	20	58	19	19	1	1	29	3	2	247
Nuisances due to bad smells in dwelling houses caused by escape of gas, dead vermin, etc.	13	3	1	5	4	1	4	6	2	11	7	17	1	9	3	20	11	5	4	6	2	1	1	137
Smoke in houses due to foul or obstructed vents	14	7	6	4	1	2	1	4	10	6	5	7	3	12	4	24	6	12	4	10	8	1	1	149
Damp houses remedied or abated	4	1	5	2	5	1	2	1	6	1	1	6	2	5	3	5	2	10	2	7	2	1	1	78
Damp and uninhabitable houses vacated	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	1	3	4	1	39
Houses overcrowded	77	160	30	6	5	71	20	35	34	56	77	215	134	120	188	61	127	200	87	125	11	5	2	1,846
Houses and shops flooded from defects on flat above	3	3	1	3	1	1	4	1	8	2	2	3	1	6	5	6	5	5	2	1	2	1	1	60
Animals kept in, or in close proximity to dwellings	1	1	1	6	1	4	2	4	1	1	6	1	1	3	1	11	1	3	2	1	2	2	1	51
CARRY FORWARD	191	246	129	41	37	104	40	60	132	98	120	318	204	248	326	336	192	344	125	228	130	25	15	3,679

NUISANCES AND SANITARY IMPROVEMENTS IN 1932—continued.

NATURE OF NUISANCE.	Calton.	Canongate.	Newington.	Morningside.	Merchiston.	Gorgie.	Haymarket.	St. Bernard's.	Broughton.	St. Stephen's.	St. Andrew's.	St. Giles.	Dalry.	George Square.	St. Leonard's.	Portobello.	South Leith.	North Leith.	West Leith.	Central Leith.	Liberton.	Colinton.	Corstorphine and Craigmond.	TOTALS.
BROUGHT FORWARD	191	246	129	41	37	104	40	60	132	98	120	318	204	248	326	336	192	344	125	228	130	25	15	3,679
<i>Nuisances in Houses (continued):—</i>																								
Houses distempered, papered or painted by—																								
Tenants	5	3	...	7	1	5	...	2	10	...	...	51	4	17	...	54	9	18	...	2	5	...	...	193
Owners	12	17	4	14	9	11	...	2	7	2	...	24	4	12	14	10	17	10	1	25	1	...	1	197
<i>Stairs, Passages, etc.:—</i>																								
Staircases painted	57	77	15	54	52	58	11	11	34	36	22	49	81	75	31	19	64	54	35	28	...	...	1	864
Stairs and passages in a dirty condition and cleansed by tenants	118	135	34	44	37	118	25	29	516	65	75	181	67	110	80	150	121	81	9	25	116	...	2	2,138
Dogs and cats committing nuisance in common stairs and back-greens	21	16	6	12	3	17	2	1	30	6	3	3	15	7	14	35	15	10	3	5	6	2	1	233
<i>General:—</i>																								
Premises infested by rats	14	16	12	19	11	12	16	15	15	16	10	29	6	19	16	21	12	15	12	13	10	3	21	333
Premises infested by other vermin	24	56	29	2	...	7	1	2	13	9	24	37	8	28	41	5	24	33	...	10	8	...	...	361
Accumulations of rubbish, garbage, and filth removed from areas, roofs, cellars and vacant houses	73	49	28	24	20	16	20	23	135	28	46	96	49	46	48	38	93	828	140	421	5	5	7	2,238
Accumulation of manure near dwellings	1	3	2	...	1	1	1	4	48	...	1	1	5	...	...	15	...	3	...	1	3	...	4	94
Disused cellars cleaned and closed . . . . .	...	3	1	...	...	3	2	...	8	...	2	1	1	2	3	3	...	6	1	1	1	...	...	37
Tenants casting garbage over windows	11	22	13	19	16	2	7	8	34	19	13	12	8	18	14	62	8	1	1	1	3	8	18	318
Surfacing of courts repaired or renewed	12	...	...	...	...	...	...	1	...	1	...	...	6	...	...	...	6	10	6	2	...	...	...	43
Noise nuisances . . . . .	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	8
Shops cleaned by tenants or owners . . . . .	...	1	1	...	...	1	...	3	7	...	1	...	1	...	...	5	2	3	...	1	...	...	...	26
Seasonal workers' huts found dirty and cleansed . . . . .	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	4	...	12	21
Miscellaneous nuisances	56	76	13	13	25	59	16	17	47	45	37	43	28	25	11	9	25	17	9	16	15	13	33	650
TOTALS	404	474	159	210	176	310	102	118	904	227	237	527	283	350	272	429	396	1,089	217	551	177	33	100	13,957

SUMMARY.

Number of complaints by citizens	3,397
" " " other Departments	99
Number of nuisances discovered and reported by District Inspectors	10,461
Total number of nuisances dealt with by the Department	<u>13,957</u>
Number of intimations of existence of nuisance served	1,741
" notices to remove nuisances served at the instance of the Local Authority	37
" notices delivered cautioning persons against casting garbage over windows	2,288
" notices served on occupiers failing to take due rotation of stair sweeping and washing	529
" notices served for the cleaning of dirty areas, cellars, etc.,	445
" notices and letters served for the whitewashing and cleansing of houses	96
" notices and letters served for the removal of accumulation of manure	51
" notices served in connection with defective drains and soil pipes	132
" intimations under the Housing (Scotland) Acts, 1925-1930	236
" letters sent to tenants and owners of shops with regard to cleansing and sanitary provisions	26

VETERINARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, 1, 15th April 1933.

To

*The Lord Provost, Magistrates, and
Council of the City of Edinburgh.*

MY LORD, LADIES AND GENTLEMEN,

I beg to submit, for transmission to the Department of Health for Scotland, my Report for the year ending 31st December, 1932, which has been called for by the Department in virtue of their powers under Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914.

I am,

Your obedient Servant,

A. GOFTON, F.R.C.V.S.,
Chief Veterinary Inspector.

To

*The Secretary,
Department of Health for Scotland,
Edinburgh.*

SIR,

I beg to submit herewith my Report for the year 1932, as required by Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914. An account of the year's work in connection with the inspection of meat and other foodstuffs, including port food inspection, is added.

MILK AND DAIRIES (SCOTLAND) ACT, 1914.

No administrative difficulties have been encountered during the year in the operation of the Act, and no points have arisen which merit special mention.

Inspection of Cows and Dairy Byres.—In terms of the Act, the Veterinary Inspector is required to inspect the cattle in all registered dairies in the City from time to time and once at least in each year. In accordance with practice, the cattle in all the registered dairies in the City have been examined at intervals of one month. During the year 919 visits were made to registered dairies and the cattle therein inspected. In determining the duties of the Veterinary Inspector, under the Act, the Local Authority made provision for the periodical inspection of all dairy cattle in premises which were exempt from registration under the Act. In accordance with this requirement, 67 visits were made to non-registered dairies.

The newly-calved cows offered for sale in the market at Gorgie on the Tuesday and Wednesday of each week were subjected to inspection and examination in the market identical to that which takes place in registered dairy premises. During

the year, 2,236 cows were so examined in the market, representing an average of 43 cows exposed for sale each week. Two cows suffering from tuberculosis, within the meaning of the Tuberculosis Order of 1925, were discovered in the markets, viz. :—Tuberculosis of the Udder 1, Chronic Cough and showing definite clinical symptoms of tuberculosis 1. In terms of Article 12 of the Tuberculosis Order, the owners were ordered to remove these cows from the market. Both animals were returned to the place of origin.

Health of Cows, etc.—Apart from tuberculosis, 141 diseased cows were detected in the course of inspections of cattle in registered or exempt premises. The diseases encountered were as follows :—

Mastitis	52
Suppurating conditions of udders and teats	14
Johne's Disease	7
Retained Placenta	10
Psoroptic Mange and Ringworm	38
Actinomycosis	2
Tumours	2
Injuries and General Disorders	16
	<hr/>
	141

The cows in question were removed permanently or temporarily from the milking herds as cases required. The milk was withdrawn from sale in all cases in which risk was entailed of contamination or infection from the diseased condition. In appropriate cases it was fed to pigs or calves after boiling, otherwise it was destroyed.

Tuberculosis in Dairy Cows.—During the year 21 cows, on registered dairy premises in the City, which were found to be tuberculous, within the meaning of the Tuberculosis Order of 1925, were dealt with in terms of that Order. These animals were classified as follows :—Tuberculosis of the Udder 8, tuberculous emaciation 4, chronic cough and showing definite clinical symptoms of tuberculosis 9. The total number of milk cows removed, on account of tuberculosis, from dairy herds and from the Market for dairy cows at Gorgie, during the year, was thus 23.

The tuberculin test was not applied in any case under the powers contained in Section 22 of the Act. So far as the test was employed for the diagnosis of tuberculosis it was used under the powers contained in the Tuberculosis Order.

The incidence of tuberculosis in dairy cows in the City and district revealed by post-mortem statistics at the Abattoirs during 1932, shows a higher occurrence than has been the average over a period of years. Of a total of 3,273 cows slaughtered 1,493 or 45·62 per cent. were affected with tuberculosis in some degree. This compares with an average of 42·3 per cent. over the previous five years. In 10·45 per cent. of cases, the disease was advanced and the whole of the carcase and all the viscera were condemned. In 18·89 per cent. tuberculosis affected the viscera and localised areas on the carcase, and in 70·46 per cent. it was confined to one or more of the visceral organs. The importance of the economic side of tuberculosis is well illustrated by the figures quoted in relation to meat inspection where it is shown that tuberculosis is responsible for 83·9 per cent. (by weight) of seizures of cow beef from all causes, and 83·3 per cent. (by weight) of seizures of all classes of beef.

Number of Cowsheds.—At December 1932, there were on the register 75 premises in the occupation of milk producers. The number of cowsheds on these premises was 130 and the number of cows accommodated therein was 2,193.

Four certificates of registration were transferred to new tenants during the year, and four were cancelled. There was thus a net reduction in the City of four dairy premises in the occupation of milk producers. Three producers extended their premises and certificates of registration approving of the additional accommodation were granted.

At December 1932, the number of exempted premises was 27 and the number of cows therein 70. These premises are all licensed under the Cattle-sheds in Burghs (Scotland) Act, 1866. In only a few cases is milk sold from these premises. Exemption from registration under the Milk and Dairies (Scotland) Act, continued to be granted in those cases in which the amount of milk sold per day did not exceed two gallons.

Milk and Dairies Order, 1925.—Articles 5 to 16 of the Milk and Dairies Order 1925, have been complied with so far as these articles apply to the premises of milk producers in the City.

Tuberculous Infection of Milk.—The investigation which was undertaken at the instance of the Department of Health with the object of ascertaining the extent of the tuberculous infection of milk as sold to the public in Scotland, to which reference was made in the last two annual reports, was completed during the year. The work was carried out jointly in this Department and in the Bacteriology Department of the University under Professor Mackie. The total number of samples of milk examined in connection with this special investigation was 1,004, comprising 336 farm samples as delivered in the City by the producers, 333 samples of pasteurised milk and 335 samples as sold over the counter by retailers.

The result of the biological test was inconclusive in respect of 16 farm samples owing to the premature death of the experimental animals. The balance of 320 farm samples, from which definite conclusions were drawn, gave 39 positive results equivalent to 12·2 per cent. Of the samples of pasteurised milk, 311 which had been treated by the holder process gave 3 positive results, equivalent to 0·9 per cent., and of 22 samples treated by the flash method, 5 or 22 per cent. were positive. Inconclusive results were obtained in respect of 17 retailed samples and, deducting these from the total number, the balance of 318 gave 48 positive results, equal to 15 per cent. None of the retail samples had been previously subjected to treatment by heat.

After completion of the above investigation, 199 samples of farm milk were subjected to the biological test in the Department during the year. The results were positive in respect of 22 samples. As shown elsewhere, the total number of positive samples detected during the year was 27, of which 2 were retailers' samples. In conjunction with the local authorities of the districts from which the positive samples originated, investigations were made to detect the source of infection. The offending animals were located in respect of 20 farm samples and were dealt

with under the Tuberculosis Order. In four cases, biological tests of group samples of milk from the herds concerned gave negative results indicating that the source of infection had been removed, and in one case the investigation was incomplete at the end of the year. Of the two retailers' samples, a cow with a tuberculous udder was detected on a farm contributing to one of the supplies, but the source of infection could not be traced in respect of the second.

Milk and Dairies (Scotland) Act, 1914 (Sections 13, 14 and 21).—The City dairy-men continue to observe the terms of Sections 13 and 14 of the Act with regard to the withdrawal from sale of the milk from a diseased cow and notification of the existence of disease.

The City being entirely a receiving and consuming district no question of taking samples of milk under Section 21 of the Act has arisen.

Milk (Special Designations) Order (Scotland), 1930.—The two producers' licences for the sale of designated milk under this Order have been continued, namely, one "Grade A" and one "Certified." The licence for the production and sale of certified milk is held by the Royal Victoria Hospital Tuberculosis Trust, Grace-mount Farm, Liberton. The average number of cows in the herd is 40, and the production is approximately 24,000 gallons, all of which is retailed in the City by the producers. The tuberculin test was applied twice during the year to the dairy herd and to the young stock belonging to the Trust, with negative results. The herd is entirely self-contained and there have been no reactors to the test for a period of seven years.

All milks sold in the City under licences granted in terms of the Milk (Special Designations) Order, have been periodically sampled and subjected to bacteriological examination. During the year, 132 samples of graded milk were thus examined. Of these, 23 were samples of pasteurised milk and were representative of milk from both licensed and non-licensed pasteurisers.

Milk Supply—City Hospitals.—The dairy herd at Colinton Mains Farm belonging to the Corporation, has continued the supply of milk to certain of the Hospitals. The herd was subjected to the subcutaneous tuberculin test twice during the year and tubercle-free condition has been maintained. The milk was repeatedly sampled during the year for bacteriological examination and conformed to the bacterial standard for certified milk.

The average number of cows in milk during the year was 90, and the total output of milk for the year was approximately 75,000 gallons. Five cows in the herd gave a production exceeding 1,000 gallons during the year, the maximum production being obtained from a cow which gave 1,500 gallons in 48 weeks.

BACTERIOLOGICAL LABORATORY.

The following summary of work performed in the Laboratory during the year has been furnished by Mr W. Jowett, F.R.C.V.S., D.V.H.

(1) **Enumeration of Bacteria in Milk.**—During the year 150 samples of milk as shown below were subjected to bacteriological examination for the purpose of ascertaining their respective hygienic standards:—

Certified Milk	64
Grade " A " (Tuberculin Tested) Milk	36
Grade " A " Milk	9
Pasteurised Milk	27
Ordinary Market Milk	7
Milk for City Hospitals	7
	150

Eight samples of Certified and six of the Grade " A " samples fell below the standard specified in the Milk (Special Designations) Order. In each case the attention of the producer and of the Local Authority concerned was directed to the fault. Subsequent test samples taken at an early date complied with the requirements of the Order and indicated that the faults had been remedied, or removed.

Five samples of pasteurised milk failed to conform to the bacterial standard specified in the Milk (Special Designations) Order and the action necessary to remedy the defects was taken. Although not required under the Milk (Special Designations) Order, the coliform test has been applied to all samples of pasteurised milk using 1/10 c.c. in each of three tubes. Coliform organisms were demonstrated in 7 samples equivalent to 25·9 per cent. of the samples of pasteurised milk examined. In the opinion of certain authorities living coliform organisms should not be present in 1 c.c. of any sample of milk which has been efficiently pasteurised, so that the test applied in this Department cannot be regarded as of too high a standard.

(2) **Milk from Individual Cows**, examined for the presence of Tubercle Bacilli and other Specific Organisms.

Number examined.	Object.	Nature of Examination.	Result.
108	Detection of Tubercle Bacilli.	Microscopical.	Positive 7 Negative 101

Of the 101 milk samples above shown as microscopically negative to tuberculosis, streptococci were detected on microscopical examination alone in 15. Of the remainder 7 were subsequently submitted to the biological test and 64 to cultural tests, with the following results:—

Number examined.	Object.	Nature of Examination.	Result.
7	To determine the presence of Tubercle Bacilli	Biological	Positive 3 Negative 4
64	To determine the presence of other Specific Organisms	Cultural	Streptococci 35 Staphylococci 1 Mixed infection 19 C. pyogenes 7 Coll Type bacillus 2

(3) **Mixed or Bulk Milk Samples** collected at Railway Stations, Milk Depots, or Retailers' Premises in Edinburgh, and subjected to biological test for tuberculosis :—

(Brought forward incomplete at the end of 1931) :—

Farm Milk	Positive	3	
	Negative	30	33
Retailer Milk	Positive	2	
	Negative	32	34
Pasteurised Milk	Negative	34	34
			<u>*101</u>

Number tested and test completed at 31st December 1932 :—

Farm Milk	Positive	22	
	Negative	174	
	Inconclusive	3	199
			<u>300</u>
Total completed			

Total number of positive samples :—

Farm Milk	25	
Retailer Milk	2	27
		<u>27</u>

Remaining under test and incomplete at 31st December 1932 :—

Farm Milk	32
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* 69 of these samples were subjected to test in the Bacteriological Department of the University.

In tracing the origin of infection of the above samples, biological tests were made of milk samples from the premises of producers as follows :—

Bulk Samples	Positive	2	
	Negative	5	
	Inconclusive	1	8
Group Samples	Positive	1	
	Negative	8	9
Milk from individual cows	Positive	1	
	Negative	10	11
			<u>28</u>
Total			

In conjunction with the biological testing of milk samples, attention has been again directed to the detection of *Brucella abortus* infection so far as macroscopically evident in the experimental animals. Of 256 milk samples examined during the year with this object, 45 or 17·5 per cent. have furnished evidence of *Br. abortus* infection, the identity of the organism concerned being established by cultural or sero-agglutination tests. This figure must be regarded as an underestimate of the actual incidence of *Br. abortus* infection in bulked milk samples since it is based primarily on macroscopic evidence of infection. If serological tests had been applied to all the experimental animals they would no doubt have revealed the presence of infection in a number in which macroscopic evidence was not present on post-mortem.

(4) Miscellaneous.

Material.	Number Examined.	Nature of examination.	Result.
Blood preparations	161	Microscopical and cultural (one or both)	<i>Anthrax</i> — Positive 2 Negative 159
Do. (Bovine)	63	Sero-Agglutination	<i>Br. Abortus infection</i> — Positive 18 Doubtful 4 Negative 41
Do. (Guinea Pig)	25	Sero-Agglutination	Positive 23 Negative 2
Skin scrapings	6	Microscopical	<i>Mange</i> — (Scheduled Forms) Positive 0 Negative 6
Expectorate (Cow's)	4	Microscopical	<i>Tuberculosis</i> — Positive 2 Negative 2
Diseased organs and materials	92	Microscopical, and, in certain instances, Cultural and Biological in addition	<i>Tuberculosis</i> 29 <i>Br. Abortus infection</i> 45 <i>C. pyogenes infection</i> 2 Other pyogenic infections 5 <i>Actinobacillosis</i> 3 Neoplasms 12 <i>B. purificiens infection</i> 5 <i>Coccidiosis</i> 1
Milk	40	Cultural	Suspected bacterial "food poisoning" 2 Suspected dysentery 1 <i>re</i> Complaints "flaky" and "coloured" milk 2 <i>re</i> Fitness for use after mastitis 32
		Chemical	<i>re</i> presence Acetone, etc. 1
		Microscopical	<i>re</i> presence of Blood 2
Other materials	3	Microscopical	Defective of suspicious (adulterated) food materials 3

In addition to the above detailed investigations and examinations, vaccines (autogenous and stock) were prepared in the laboratory during the past year. These were utilised in the treatment of cases of bovine mastitis in the farm stock and also for certain other diseases.

INSPECTION OF MEAT AND OTHER FOODS.

(a) *Fat Stock Markets.*—The usual observation has been maintained in the fat stock markets throughout the year, a Veterinary Officer being detailed for duty in the markets on each market day. Twenty cattle, 4 calves, 10 sheep and 2 pigs were ordered out of the markets by the Veterinary Officer, on account of disease or injury. In all cases the animals were removed to the slaughterhouses and slaughtered at the owners' risk.

The following table shows the number of animals exposed for sale in the fat stock markets during 1932 :—

Cattle	46,686
Calves	5,690
Sheep	281,605
Swine	22,391
	<hr/>
	356,372

(b) **Abattoirs.**—Supervision has been maintained in accordance with the usual practice at Gorgie and Leith Abattoirs.

The number of animals passing through the slaughterhouses during 1932 is shown in the following table :—

	Gorgie.	Leith.	Total
Cattle	Oxen	22,789	25,344
	Bulls	649	728
	Cows	2,511	3,273
	Heifers	1,501	1,657
	<u>27,450</u>	<u>3,552</u>	<u>31,002</u>
Calves	3,567	41	3,608
Sheep	147,640	12,138	159,778
Swine	15,045	1,272	16,317
	<u>193,702</u>	<u>17,003</u>	<u>210,705</u>

(c) **Carcases and offal condemned in Abattoirs.**—Carcases partially or wholly condemned in the City abattoirs weighed 140·29 tons. To this there falls to be added 100·16 tons (weight estimated) of condemned offal, making a total of approximately 240·45 tons. The apparent increase in the weight of offal seized as compared with previous years is accounted for by a closer approximation to the actual weights of the different viscera in arriving at an estimate for the year 1932. Tuberculosis was responsible for 41·23 per cent. of the number of carcass seizures and for 33·38 per cent. of the number of offal seizures. If, however, a comparison be made between the weight of meat seized on account of tuberculosis and of non-tuberculous disease, it may be observed that tuberculosis is responsible for 83·3 per cent. of all beef seized and destroyed, for 64·4 per cent. of veal and 43·8 per cent. of pork. Details of the seizures are shown in the following tables :—

Number and weight of carcasses in the different classes of animals condemned at Abattoirs during 1932 :—

	Totally Condemned.		Partially Condemned.		Total Weight in lbs.
	Number.	Weight in lbs.	Number.	Weight in lbs.	
Oxen	70	41,267	292	39,748	81,015
Bulls	12	10,325	27	4,802	15,127
Cows	211	112,678	302	51,228	163,906
Heifers	12	5,646	16	1,642	7,288
Calves	38	2,395	22	671	3,066
Sheep	380	14,662	504	11,147	25,809
Swine	107	14,491	78	3,540	18,031
Total	830	201,464	1,241	112,778	314,242

Number of carcasses condemned in the different classes of animals slaughtered in Abattoirs during 1932, and causes of condemnation.

	CATTLE.										Sheep.		Swine.		TOTAL.
	Oxen.		Bulls.		Cows.		Heifers.		Calves.		Total.	Partial.	Total.	Partial.	
	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.					
Tuberculosis	54	212	11	19	159	282	9	15	20	9	...	...	32	45	867
Œdema and Emaciation	3	...	...	...	21	...	...	...	4	...	193	202	1	...	424
Traumatism . . . . .	...	7	...	...	...	3	...	1	...	3	4	23	2	5	48
Septic conditions	3	10	1	1	6	4	2	...	...	3	16	36	4	9	95
Pericarditis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Peritonitis and Enteritis	3	14	...	2	2	...	...	...	1	...	11	12	10	1	58
Pleurisy and Pneumonia . . . . .	...	28	...	2	2	7	...	...	1	6	14	217	2	14	293
Dead, Moribund & Illbled	6	...	...	...	12	...	1	...	6	...	133	...	13	...	171
Jaundice . . . . .	...	...	...	...	1	...	...	...	1	...	...	...	9	...	11
Neoplasms . . . . .	...	4	...	1	...	1	...	...	...	...	2	3	...	2	13
Actinomycosis and Actinobacillosis . . . . .	...	17	...	2	...	3	...	...	...	...	...	...	...	...	22
Melanosis . . . . .	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Swine Erysipelas . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3
Swine Fever . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	26	...	26
Mastitis . . . . .	...	...	...	...	5	...	...	...	...	...	2	8	2	2	19
Metritis . . . . .	...	...	...	...	3	...	...	...	...	...	1	...	1	...	5
Immaturity . . . . .	...	...	...	...	...	...	...	...	3	...	...	...	...	...	3
Nephritis . . . . .	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2
Arthritis . . . . .	...	...	...	...	...	...	...	...	1	1	2	3	...	...	7
	70	292	12	27	211	302	12	16	38	22	380	504	107	78	2,071

Comparison between tuberculous and non-tuberculous diseases as causes of condemnation in carcasses of animals slaughtered in Abattoirs during 1932.

By numbers.	CATTLE.						Sheep.	Swine.	TOTAL.
	Oxen.	Bulls.	Cows.	Heifers.	Calves.	TOTAL.			
Tuberculosis	54	11	159	9	20	253	...	32	285
Partial	212	19	282	15	9	537	...	45	582
Total and Partial	266	30	441	24	29	790	...	77	867
Non-tuberculous diseases } Total	16	1	52	3	18	90	380	75	545
Partial	80	8	20	1	13	122	504	33	659
Total and Partial	96	9	72	4	31	212	884	108	1,204
By Weight.	Tuberculosis. (lbs.)			Non-tuberculous Disease. (lbs.)			Percentage tuberculous.		
Oxen	66,036			14,979			81.5		
Bulls	13,484			1,643			89.1		
Cows	137,190			26,716			83.9		
Heifers	6,029			1,259			82.7		
Calves	1,974			1,092			64.4		
Swine	7,899			10,132			43.8		

Number of organs condemned in the different classes of animals at Abattoirs during 1932 (excluding organs of animals totally condemned).

	CATTLE.						Swine.	Sheep.	TOTAL.
	Oxen.	Bulls.	Cows.	Heifers.	Calves.	TOTAL.			
LUNGS :—									
Tuberculosis	752	108	1,112	45	50	2,067	221	...	2,288
Other Causes	297	17	76	5	15	410	371	317	1,098
HEARTS :—									
Tuberculosis	2	...	...	...	...	2	...	...	2
Other Causes	10	...	...	...	...	10	3	1	14
BOWELS :—									
Tuberculosis	351	39	450	20	1	861	94	...	955
Other Causes	24	2	12	...	...	38	3	3	44
STOMACHS :—									
Tuberculosis	65	5	57	3	1	131	30	...	161
Other Causes	165	9	29	...	1	204	3	61	268
SPLEENS :—									
Tuberculosis	49	5	53	2	1	110	35	...	145
Other Causes	4	1	3	...	...	8	...	...	8
LIVERS :—									
Tuberculosis	340	24	186	14	20	584	201	...	785
Other Causes	7,826	181	823	76	6	8,912	131	1,777	10,820
KIDNEYS :—									
Tuberculosis	53	5	60	2	...	120	...	...	120
Other Causes	36	1	28	3	...	68	7	1	76
UDDERS :—									
Tuberculosis . . . . .	...	...	11	...	...	11	1	...	12
Other Causes . . . . .	...	...	136	...	...	136	2	...	138
HEADS AND FEET :—									
Tuberculosis	673	74	384	25	1	1,157	703	...	1,860
Other Causes	130	5	7	4	2	148	4	9	161
Total	10,777	476	3,427	199	98	14,977	1,809	2,169	18,955

Percentage incidence of Tuberculosis in animals slaughtered at Abattoirs during 1932.

	Per cent.
Cattle	10.11
Oxen	5.53
Bulls	23.76
Cows	45.62
Heifers	3.92
Calves	2.22
Swine	4.88

(d) (1) **Wholesale Dead Meat Markets.**—During the year meat (fresh and frozen) estimated to be equivalent to 60,075 carcasses was imported into the City for sale in the wholesale dead meat markets. In addition, considerable quantities of frozen boneless meat, kidneys, livers, tripe, etc., were received. It is not possible to ascertain with any approach to accuracy the amount of this class of material which arrives in the City. Daily visits of inspection were made to the dead meat markets and to the premises of wholesale meat traders. No case of caseous lymphadenitis was detected in imported sheep.

(2) **Retail Shops, Street Hawkers, etc.**—Periodical visits were made during the year to shops, etc., in which foodstuffs are prepared or exposed for sale.

Number of visits paid to Shops, etc., during 1932 :—

Butchers' Shops	1,201
Provision Shops	2,178
Fishmongers' Shops	445
Fruiterers' Shops	926
Meat Sales and Wholesale Meat Shops	2,349
Live Stock Sales and Markets	258
Street Hawkers	25
Hide and Skin Merchants	388
Fish Markets	309
Restaurants	372
	8,451

Inspectors are instructed to observe and to report on the sanitary condition of food premises and on the condition under which foodstuffs are stored. In some instances there appears to be a complete absence of understanding of the risks of contamination of food stored under inappropriate conditions, and of the dangers associated therewith. During the year action was taken in a number of cases to remedy faulty conditions of storage, of exposure, and of preparation for sale of food, which, under conditions prevailing, was exposed to serious risk of contamination. Action was also taken in respect of the general cleanliness of certain premises used for the storage and preparation of food.

The Sale of Food Order requires butchers and others offering imported meat for sale to attach a label or notice to the meat, bearing the word "Imported" in such a way as to be easily observed by a purchaser. In view of the continued laxity of some tradesmen, especially in the poorer areas of the City, to observe the requirements of the Order, special attention was directed to this matter during the year and an improvement can be reported in respect of observance of the requirements of the Order.

Numbers and weights of foodstuffs seized in markets, shops, and other premises in the City, during 1932 :—

	No.	Weight in lbs.
Beef	97	7,795 $\frac{1}{2}$
Mutton	47	2,143 $\frac{1}{2}$
Pork	44	2,436 $\frac{1}{2}$
Veal	20	894
Poultry and Game	25	574 $\frac{1}{2}$
Edible Offal	15	399
Fruit and Vegetables	255	4,133 $\frac{3}{4}$
Provisions	49	418
Fish	51	11,440
Total	603	30,234 $\frac{1}{4}$

(3) **Carcases, etc., submitted for Inspection** in terms of Article 8 (4) of the Public Health (Meat) Regulations (Scotland), 1930. This regulation places an obligation on the consignee of a carcass which he has reason to believe has not been inspected in the manner specified by the Public Health (Meat) Regulations, to report its receipt to the Local Authority of the district. In practice, the wholesale meat traders of the City notify the Veterinary Department in all cases in which they receive home-killed carcasses from beyond the City boundaries. During the year

notification was received in respect of 1,511 carcasses and 36 parts of carcasses. After inspection of these, 36 carcasses, 18 parts of carcasses and 3 heads were seized and destroyed.

(4) **Approval of Meat Storage.**—Article 13 of the Public Health (Meat) Regulations (Scotland), 1930, requires persons selling meat from vans, carts, etc., who do not also keep an open shop for the sale of meat, to obtain from the Local Authority a certificate of approval of the accommodation provided for the storage of meat overnight. In the City, six traders fall into this category. The storage accommodation provided is in each case very satisfactory and the necessary certificates of approval have been granted by the Local Authority on report as to the condition of the premises.

PORT FOOD INSPECTION.

The usual supervision has been maintained as to the condition and soundness of foodstuffs landed at the Port of Leith during 1931. No feature of outstanding interest has arisen.

The appended summary will serve to show the origin and the kinds of foodstuffs falling under the supervision of the Department at the Port of Leith.

Imported Foodstuffs Inspected under the Public Health (Imported Food) Regulations (Scotland), 1932, during 1932 :—

Country of Origin.	Foodstuffs.	Number of Consignments.	
Holland	Bacon	166	
	Canned Meats	16	
	Fruit	232	
	Oysters	14	
	Pigs' Feet	8	
	Provisions	817	
	Tongues (Pigs')	2	
	Vegetables	752	
	Yeast	99	
	—	2,106	
Denmark	Bacon	104	
	Canned Meats	71	
	Fish	9	
	Fruit	10	
	Gut	18	
	Hams	25	
	Lard	45	
	Pigs' Feet	35	
	Pigs' Heads	55	
	Pork in Brine	3	
	Provisions	518	
	Vegetables	37	
	Sausages	7	
Yeast	51		
	—	988	
U.S.A.	Canned Meats	6	
	Cereals	35	
	Fruit	8	
	Hams	1	
	Lard	6	
	Pork and Beans	6	
	Provisions	29	
Vegetables	1		
	—	92	
	Carry forward		3,186

Summary, showing total diseased and unsound Foodstuffs dealt with by the Department in the City, during 1932.

	Weight in Lbs.
At Abattoirs—Carcases	314,242
Offal (weight estimated)	224,355½
In Shops, Warehouses, etc.	30,234¼
At the Port of Leith	134,380½
	703,212¼
	703,212¼
Equal to	Tons. Cwts. Lbs.
	313 18 76¼

I am,

Your obedient Servant,

A. GOFTON, F.R.C.V.S.,
Chief Veterinary Inspector.

To

*Chairman and Members of the
Public Health Committee.*

DISEASES OF ANIMALS ACTS.

LADIES AND GENTLEMEN,

The Acts confer power on the Ministry of Agriculture to make Orders for the control and prevention of animal diseases, to govern the import and export of animals and carcasses, to control the conditions of transport of animals by land and sea, and for other similar purposes. The following diseases are subject to administrative control by means of Orders made by the Minister:—

- Anthrax.
- Foot and Mouth Disease.
- Parasitic Mange of Horses.
- Sheep Scab.
- Swine Fever.
- Bovine Tuberculosis and Contagious Abortion (for certain purposes only.)
- Cattle Plague or Rinderpest. (1877.)
- Contagious Bovine Pleuro-Pneumonia. (1898.)
- Glanders and Farcy. (1928.)
- Epizootic Lymphangitis. (1906.)
- Rabies. (1922.)
- Sheep Pox. (1850.)

There have been no cases of the last six diseases in Great Britain since the dates shown against each.

Anthrax.—Two cases of anthrax occurred in the City during the year, one being a bullock consigned to the fat stock markets from the County of Midlothian, which died in the market. Forty deaths of bovine animals on farms were reported and investigated in terms of the Edinburgh and Midlothian Order of 1910, the main object of which is to eliminate risk of a case of anthrax escaping detection.

One animal proved to be affected with anthrax and the remaining 39 were negative so far as anthrax or other notifiable disease was concerned. The carcasses of the affected animals were cremated. The cause of death was similarly investigated in respect of 121 cattle, sheep and pigs found dead on arrival of trains and boats, or which died, without previously observed illness, in the lairages attached to the markets and slaughterhouses.

Foot-and-Mouth Disease.—Twenty-five outbreaks of foot-and-mouth disease occurred in Great Britain during 1932 entailing the slaughter of 2,659 animals, as compared with 97 outbreaks and 10,648 animals slaughtered in 1931. The last outbreak of foot-and-mouth disease in the City occurred in 1922, and, though in the interval cases have occurred in relatively close proximity to the boundaries, and the City has been included in areas subject to the restriction and the regulation of movement of live stock, Edinburgh has been fortunate in escaping infection, especially having regard to the extraordinary infectivity of the disease and the ease with which it may be spread.

In addition to the principal foot-and-mouth disease Order for the control of the disease, a number of Orders of a preventive character have been issued from the Ministry of Agriculture from time to time. Of these, the more important are the Foreign Hay and Straw Order which prohibits the importation of hay and straw; the Foot-and-Mouth Disease (Packing Materials) Order, which prohibits hay or straw which has been used for packing from being used as bedding for, or being brought into contact with animals; the Foot-and-Mouth Disease (Boiling of Animal Foodstuffs) Order, which requires meat, bones, offal, etc., or swill containing meat, bones or offal, to be boiled before being fed to or placed in contact with animals; and the Importation of Carcasses (Prohibition) Order, which forbids the import of fresh meat from the continent of Europe. A new Order, the Importation of Meat, etc. (Wrapping Materials) Order, has been added to this group during the year. The purpose of the Order is to prevent jute, hemp and other cloths which have been used as wrappings for meat imported from countries in which foot-and-mouth disease exists, from being used subsequently as containers or packing for animal feeding stuffs, fertilisers, horticultural produce, etc.

In last annual report attention was directed to the difficulties which were experienced by officers of local authorities when the Ministry of Agriculture found it necessary to issue a far-reaching "standstill" Order taking immediate effect, and it was suggested that many of these difficulties could be obviated by standardising the titles of such Orders and the form and conditions of licences authorised to be issued thereunder. These suggestions were submitted to, and have been accepted by the Ministry of Agriculture with the result that the officers of local authorities are now in a position to make preparations in advance to meet the immediate needs of the situation as and when an emergency arises. Admittedly, emergencies of the kind contemplated are of infrequent occurrence, but that fact rather emphasises the advisability of being prepared in advance and it may be mentioned that early in the current year the Ministry found it necessary to issue a standstill Order involving a very large area in the South of England and having operative effect immediately on issue.

Movement of Animals (Records) Order.—In order to facilitate tracing the origin

of infection and the distribution of contacts in outbreaks of contagious animal disease, owners of cattle, sheep, goats and pigs are required to keep records of the movements of these animals on to or out of their premises together with the place of origin or destination as the case may be. In consequence of the laxity with which some of the records were kept by stock owners in the City, it was considered desirable to make a check of the whole of the records, and, with the aid of the Police, this was carried out in the month of February. This check had a salutary effect and resulted in a satisfactory improvement. Notwithstanding, it was found to be necessary to take proceedings in one case, the person charged being convicted and fined £5.

Parasitic Mange in Horses.—Five suspected cases of parasitic mange were reported during the year and proved negative on investigation.

Sheep Scab.—The City has again a clean record in respect of this disease. The Regulations made by the Local Authority, under the Sheep Scab Order, which require the dipping of all sheep in the City during the period July 15th to August 31st, and again during the period September 1st to November 30th have remained in force. In terms of the Regulations, 15,903 sheep were dipped under supervision during the year. Proceedings were taken in two cases for failure to dip and, on conviction, fines of £3 and 15s. were imposed.

As a result of representations from the Association of County Councils in Scotland, the National Farmers' Union of Scotland, and the Scottish Chamber of Agriculture, the Ministry of Agriculture approached the English local authorities in October 1932, with a view to revocation of their regulations requiring the double-dipping of sheep imported into England from Scotland. It is clear that the position in Scotland in relation to sheep scab does not justify the continuance of the discrimination on the part of English local authorities against Scottish sheep. The number of outbreaks on the mainland of Scotland has fallen steadily over a period of years and during 1932 only three cases occurred. So far as Scotland is concerned sheep scab is virtually confined to the islands off the west coast, and the Orders of the Ministry controlling the movement of sheep from the islands to the mainland have proved effective in preventing the introduction of disease from that source. The Ministry appear to have reached the conclusion that the continuance of the English regulations can no longer be justified, and, having explained the disease position in Scotland to the English local authorities concerned, there is reason to believe that the Ministry will now take such steps as may be necessary to ensure the withdrawal, at an early date, of the existing restrictions which hamper the trade in Scottish sheep with buyers from south of the border.

Swine Fever.—Twelve reports of suspected swine fever were received during the year and, after investigation, the existence of disease was confirmed by the Ministry of Agriculture in 11 cases. In connection with these outbreaks, the Local Authority became responsible for the removal and destruction of 677 carcasses and a large amount of offal from the infected premises. Proceedings were taken against two owners for failure to report the suspected existence of disease and, in each case, a fine of £5 was imposed.

In the last annual report it was suggested that the abnormal prevalence of swine fever throughout the year was to be explained by the operations of pig dealers in

the local store markets. It may now be stated that the cessation of the activities of dealers in the local markets was followed by a steady decline in the number of cases of swine fever, and that the position gradually cleared up, the last case being reported in July, since when the City has been free from swine fever.

Regulation of Movement of Swine Order.—Twenty pigs were moved in terms of this Order under licence from scheduled areas in England to various premises in the City, subject to detention and isolation for twenty-seven days after arrival. Periodical visits were made to these premises with the double object of seeing that the conditions of the licence were fulfilled and to maintain observation on the health of the pigs.

Bovine Tuberculosis.—Twenty-three animals were dealt with under the Tuberculosis Order of 1925. Three were returned to the district of origin and were there slaughtered by the local authorities concerned. The 23 animals were grouped as follows:—(1) Tuberculosis of the udder, 9; (2) Tuberculous emaciation, 4; (3) Chronic cough and showing definite clinical evidence of tuberculosis, 9; and (4) Not affected, 1. Tuberculosis of the udder constituted 39·1 per cent. of the cases dealt with in the City. This figure compares with 20·95 per cent. of milk and udder cases out of the total number of cows and heifers slaughtered in Great Britain under the Order in 1931. The 20 animals slaughtered by the Local Authority were classified for compensation into—Advanced 17 (85 per cent.), Not advanced 2 (10 per cent.), and—Not affected 1 (5 per cent.).

The aggregate value of the twenty animals was £186, and the compensation paid amounted to £67, 5s., an average of £3, 7s. 3d. per animal. Seventy-five per cent. of the gross compensation is refunded by the Treasury and the proportion payable by the Local Authority was thus £16, 16s. 3d. The gross salvage realised was £17, 15s. 10d. After deducting outlays a deficit of £14, 7s. 7d. remained to be met by the Local Authority.

Control of Dogs Order.—This Order and the Regulations made in terms thereof require (1) the wearing by dogs of a collar bearing the name and address of the owner, and (2) the maintenance of dogs under effective control between sunset and sunrise. The object of the Order is the prevention of sheep-worrying. Proceedings were taken against 58 persons for breach of the Order or the Regulations. Of these, 4 cases were dropped or withdrawn, 10 persons were admonished, and 44 were fined sums varying from 1s. upwards.

Importation of Animals—Irish and Canadian Cattle.—New consolidating Orders were issued during the year controlling the importation of cattle from Ireland and Canada. The Order relating to Canadian cattle relaxed to some extent the conditions previously applicable to these animals on importation and modified them to permit of the admission of animals capable of breeding. Briefly outlined, the Orders provide that the imported cattle must be landed at ports approved for the purpose, where, on arrival, they are inspected and thereafter they may be moved on licence, in the case of fat cattle, to a slaughterhouse either direct or through an authorised market, and, in the case of store cattle, to (a) a specially authorised market, or (b) farms or other premises where they must be detained for six days after arrival. 20,474 Irish cattle were received at Gorgie Market under

licence from ports, and 1,337 licences were issued authorising movement of these cattle from the Market. 4,330 Irish and 59 Canadian cattle were moved to farms in the district of the Local Authority from the Market or direct from the ports, and were maintained under observation during the period of detention. 1,050 Irish and 170 Canadian cattle were licensed from the Markets or ports to Gorgie Abattoir.

Importation of Dogs and Cats Order.—This Order is intended to protect Great Britain against the introduction of rabies through the agency of canine or feline animals brought from overseas. The landing of such animals in Great Britain is prohibited except under licence granted by the Ministry of Agriculture. After landing, the animals must be detained for six months in a place of detention or quarantine approved by the Minister for the purpose. Performing animals may be moved from place to place under strictly controlled conditions which are endorsed on the licence and subject to the previous approval of the Ministry in respect of each movement.

During the year 24 canine and feline animals were received and detained in the City in quarantine. They were maintained under observation and police supervision.

Horses.—Six consignments comprising 108 horses were landed at Leith Docks from Iceland. The horses were released after inspection and on submission of the necessary certificates.

The Animals (Importation) Order of 1930.—This Order makes it unlawful to bring into any port in Great Britain ruminating animals or swine which have been on board a vessel whilst in a port in a prohibited country, whether taken on board the vessel in a prohibited country or not. There was no breach of this Order at the Port of Leith during the year.

Certification for Export.—The Dominions of Canada and New Zealand require disinfection and certification of straw and hay used for packing goods exported from the Country to the Dominions. Facilities are provided for the disinfection of straw and hay used for packing, at an old Municipal Disinfecting Station, at a small charge to cover costs. During the year, 254 certificates were issued to cover goods exported in disinfected straw. Surprise visits were paid, from time to time, to the packing establishments of exporters to ensure that the conditions necessary for certification were being complied with. There has been a steady increase in the use of wood wool and cardboard cartons as packing, and, since these materials do not require disinfection, it seems probable that ultimately they will entirely, and with advantage, replace hay and straw.

In addition to the above, certificates were granted, after the necessary inspection, to cover exports of pigs to Northern Ireland and the Irish Free State, of wool to Italy, and of various prepared meat products to Switzerland and the United States.

Transport of Animals.—The Animals (Sea Transport) Order prescribes the accommodation and fittings which must be provided on board ship for transport of animals by sea. It deals also with the protection of animals against unnecessary

suffering during sea transport to or from Great Britain. Inspectors of the Ministry maintain supervision of the oversea transport and especially of the export of horses to the Continent, but supervision of the coastwise traffic devolves, in a large measure, on the officers of the Local Authority. Animals were landed at Leith Docks from coastwise vessels, during the year as follows:—Horses 105, Cattle 210, Sheep 34,059, Pigs 13. The cleansing and disinfection of the vessels after landing of the animals was carried out under the supervision of the Officers of the Local Authority.

The Transit of Animals Orders are similarly designed to protect animals during transport by road or rail and, in addition, prescribe cleansing and disinfection of cattle trucks, motor and horsedrawn vehicles used in the transport of animals. The Markets Committee have continued to provide facilities and labour at Gorgie Markets for the cleansing and disinfection of road vehicles. Approximately 100 vehicles are disinfected on Market days each week and the number tends to increase. The Railway Companies have satisfactorily discharged their obligations in the cleansing and disinfection of cattle trucks, railway sidings, and approaches. One road contractor was prosecuted and fined 10s., for failing to furnish the tail-board of his motor vehicle with side rails for the loading and discharging of animals.

The Markets, Sales and Lairs Order.—This Order regulates many features in the construction of live stock markets, and provides for cleansing and disinfection on each occasion after use. All the Markets at Gorgie are well constructed for efficient and relatively easy disinfection. Regular supervision has been maintained and the work has generally been well done.

Summary of Contraventions of the Diseases of Animals Acts and Orders dealt with during the year:—

Orders.	Number of Cases.	Results.
Transit of Animals Order	1	Fined 10s.
Swine Fever Order	2	Fined £5 each
Movement of Animals (Records) Order	1	Fined £5.
Control of Dogs Order	44	Fined 1s. upwards.
	10	Admonished.
	4	Dropped or withdrawn.
Sheep Dipping Regulations	2	Fined £3 and 15s.

Protection of Animals (Scotland) Act, 1912.—During the year, 29 animals were found in the Markets suffering from disease or injury which exposed them to unnecessary suffering if put through the ordinary procedure of exposure for sale and disposal. As the result of the action taken, all of these animals were passed to the local Abattoir and there slaughtered.

Lighting and Cleansing Department Stud.—Five hundred and thirty-seven visits of attendance were made to the stud under the control of the Lighting and Cleansing Department, and 14 horses were subjected to inspection and examination prior to consideration of purchase for the Lighting and Cleansing Department.

Bangour Farm.—The Department have continued to provide the veterinary services required in connection with the dairy herd and farm stock. After consideration of a report as to the prevalence of tuberculosis in the dairy herd, which

was submitted to the Corporation in June 1931, a decision was reached in the early part of the year, to dispose of the existing dairy stock gradually and to re-stock with tubercle-free animals. Most of the old stock were slaughtered in the Abattoir on the farm, and post-mortem examinations confirmed the accuracy of the results of the tuberculin tests on which the report referred to was based. By the end of June, the old stock had been sufficiently reduced in numbers to permit of separate housing, grazing and attendance, and the first purchases of new stock were made. The new stock were all purchased from clean herds and were subjected, before purchase, to a tuberculin test and to a blood test for contagious bovine abortion. In December, the new stock numbered 45 cows and heifers and 2 bulls, whilst, of the old stock, approximately 25 head remained. The new stock were subjected to the tuberculin test in November and there were no reactors, a result which was a testimony to the adequacy of the separation of the clean and infected stocks although both were accommodated on the same farm.

The Officers of the Department have continued to inspect the carcasses of all animals slaughtered for food in the Abattoir on the farm before issue to the store-keeper of the Institution. During the year the numbers of carcasses subjected to inspection were as follows :—

Cattle 65, Calves 4, Sheep 41 and Pigs 108.

Staff and Police.—I desire to express my thanks to the Staff of the Department for their assistance and for the efficient manner in which they have carried out their duties during the year. I also wish to express my gratitude to the Chief Constable for his willing co-operation, and to the Officers of the Police Force, whose assistance has contributed materially to the efficient performance of the duties under the Diseases of Animals Acts.

I am,

Ladies and Gentlemen,

Your obedient Servant,

A. GOFTON, F.R.C.V.S.,
Chief Veterinary Inspector.

