[Report 1933] / Medical Officer of Health, Edinburgh City.

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PUBLIC HEALTH DEPARTMENT,
JOHNSTON TERRACE,
EDINBURGH, *June*, 1934.

MY LORD PROVOST, LADIES AND GENTLEMEN,

I have the honour to submit the Annual Report on the Health of the City for the year 1933.

The estimated population for the City is 452,773. Of this there were 205,077 males and 247,696 females. This is an increase of 4,973 persons over the previous year.

Births.—The birth-rate for the year is equal to that of 1918, being 15·1, the lowest that has ever been recorded. There is a total of 6,835 births. Of these, 3,509 were males and 3,326 females. Six per cent. of the births were illegitimate.

Deaths.—During the year there were 5,964 deaths; 2,857 males and 3,107 females. The death-rate was 13·2 per 1,000. This is approximately identical with the average for the past five years, viz., 13·6. Morningside Ward returned the highest death-rate, 15·7, and Gorgie the lowest, 11·1. It is somewhat arresting to find Morningside Ward returning the highest death-rate when its residential character is considered, but an analysis of the deaths shows that 68 per cent. of these occurred in people over 65 years.

Infantile Mortality.—The Infantile Mortality is the lowest ever recorded in the City, viz., 66 deaths per 1,000 births. This is an extremely satisfactory figure, but I think it can be improved still further. Some idea of the progress made in Child Welfare is obtained by comparing this figure with the rate of 132 for the year 1900. While many factors are in operation to secure this reduction, there can be no doubt but that a certain part of the credit is due to the work of the Child Welfare Department.

Housing.—The schemes promoted under the Housing (Scotland) Act, 1925, are now almost completed and, with the exception of parts of St. Leonard's (Second Section) Improvement Scheme, the tenants have removed to the new houses in the re-housing areas.

In terms of the Housing (Scotland) Act, 1930, a survey was made of the insanitary houses throughout the City and a report submitted to the Local Authority to assist them in the preparation of the Five Years' Programme (1934-38). In this connection it was decided that 750 houses per annum for the next five years were to be built by the Local Authority to assist in the clearance of insanitary houses and to relieve the extent of overcrowding, and also, that 750 houses per annum were to be built by private enterprise to meet the other needs of the populace, failing which the Corporation were to provide these houses.

It was proposed to deal with three Clearance Areas as part of the first year's programme, viz., Ann Terrace, etc ; Trafalgar Lane, Leith ; and Maryfield, etc., Portobello. The "Official Representation" in connection with the Ann Terrace, etc., Clearance Area was submitted to the Local Authority in December and was approved by them. This Area deals with 87 houses (69 occupied and 18 vacant) and affects a population of 301 persons.

Considerable inroads were made during the year into the list of "individual unfit houses" and altogether 512 houses were represented to the Public Health Committee and Closing or Demolition Orders were made. These houses, scattered throughout the City, included several of the most insanitary dwellings.

Overcrowding.—The problem of overcrowding in the smaller houses is still very acute. Fresh instances are either being discovered or reported frequently and, despite the efforts of the house-letting department in providing suitable accommodation for many of the worst cases, a considerable residue remains.

The extent of overcrowding in the individual cases is judged on the present standard of 400 cubic feet per person, but it is felt that a new standard is desirable and one similar to that laid down for Improvement Areas under the Housing (Scotland) Act, 1930, should be adopted and applied to all houses.

Proper housing is one of the essentials of Public Health and while the Corporation has accomplished much valuable work, to an extent for which it often does not receive credit, the problem is not yet solved because there are far too many inhabitants in the City living in houses which are only fit for condemnation, and this difficulty can only be overcome by building or re-conditioning as rapidly as possible, to provide accommodation for the tenants who should be displaced.

Tuberculosis.—There has been a very slight increase in the number of deaths from this disease during the past year, the number being 322 as compared with 313 for the previous year, representing a death-rate of 0·71 per 1000 as against 0·69 for the year 1932.

The highest incidence of the disease as judged by the number of deaths is found in St. Andrew's and St. Giles Wards with rates of 1·4 per 1000, as against 0·71 for the whole City. The effect of the improvement in housing in St. Leonard's area is reflected

in the deaths from tuberculosis. In this ward we have only 0·7 per 1000 for the year —a marked contrast to 1·7 for the year 1913 when the City began to take active steps in the anti-tuberculosis work. The lowest death-rate is in Morningside Ward, viz., 0·1 per 1000. Altogether there have been 3 deaths in that ward. In this respect Morningside is ideal.

In the non-pulmonary section of tuberculosis there is a marked decrease, viz., a total of 77 deaths as compared with 100 for the previous year. The fall in this form of tuberculosis has been most striking, 0·17 as compared with 0·48 in 1919.

In the year 1900 there were 270 deaths from non-pulmonary tuberculosis, and since then there has been a steady, progressive decline, year by year, until they have now dropped to the remarkable figure of 77. These figures give rise to thought as to what is the precise cause of such a phenomenal fall. The first question that arises is, has this fall any connection with the pasteurisation of milk? It is known that about 60 per cent. of the milk in the City is pasteurised, although not sold as such. Enquiry shows that pasteurisation did not come into force until about ten years ago, and it is only within the last half-dozen years that such a large proportion of the City's milk has been pasteurised. So that, whatever part pasteurisation may have played recently, it has nothing to do with the fall in the earlier years. My own opinion is that the fall in great part is due to the better standard of living and the wider spread knowledge of hygienic rules for personal and environmental health during the past generation. At the City Hospital we have just remodelled the arrangement of the pavilions for dealing with non-pulmonary disease. We expect these to have a life of 20 years at least. If the progressive fall continues, at the end of that time there should be very little non-pulmonary tuberculosis in our midst. To older members of the profession it is remarkable how comparatively few tuberculosis glands are now seen compared with the numbers seen 40 or 50 years ago.

Infectious Disease.—The noteworthy feature of the work with regard to infectious disease was an extensive outbreak of scarlet fever that occurred during the year. Altogether we had 4,516 cases notified to the Department, and of these 3,461 were removed to hospital. The disease was not confined to the City, but was widespread in many parts of the country. Fortunately, it was of a very mild type, so mild that in many cases the disease was missed altogether at first, and the only evidence of its presence was when the skin of the patient began to peel. In the minds of many medical men there was raised the question as to whether we had a form of scarlet fever without rash, and with only a sore throat.

The death-rate from the disease amongst hospital cases was 0·43 per cent., and amongst those treated at home 0·29 per cent. The numbers admitted taxed the resources of the hospital, but certain measures which were taken enabled us to cope with the situation. Two noteworthy steps were taken. One was to encourage practitioners to treat at home all cases where isolation and treatment could be properly carried out, and the other was by discharging uncomplicated cases of scarlet fever as early as from the 14th to the 21st day. In order to prevent complications, cases dis-

charged early from the hospital were asked to report at the Public Health Department for examination within a certain number of days after discharge from hospital. Such cases were given a very careful examination, and only four out of a total of 1,024 were returned to hospital. The cases discharged had also been treated while in hospital, with intravenous injection of scarlatinal antitoxin. The precise value of this treatment has yet to be estimated.

The earlier discharge from hospital has raised the interesting point as to whether we might further reduce the stay. During my term of service in the Corporation, the period of residence in hospital for cases of scarlet fever has been reduced from six weeks to four weeks without the slightest ill-effect to the patient, and at a very great saving in cost to the City. If the period could be further reduced from four weeks to two or three weeks without danger to the patient, it might be worth a trial. This, however, would not be undertaken without very grave consideration, as kidney complications are more apt to arise in the third week than at any other period. Indeed, this is one of the main reasons for hospitalisation in the fourth week. The matter, however, is being carefully investigated. It will be seen that the old idea of infectivity of the peeling skin has been discarded. The weight of evidence now points to the organism being carried by discharges from the nose and ears rather than the skin.

It is interesting to compare the number of " second cases " due to patients being kept at home with those removed to the hospital, or, as they are better known, " return cases." As far as can be judged, the figures are as follows :—

Second cases " at home " 25 or 2·3 per cent.

Return cases " in hospital " 104 or 3·05 per cent.

Bacteriological Services.—The co-operation betwixt the University and the City in the matter of bacteriological services continues to function very successfully. During the year, amongst other investigations, one has been carried out on the retail milk samples which produced some very disquieting results. Some 50 samples of milk as retailed by Edinburgh milk dealers were examined bacteriologically, the purpose of investigation being to ascertain the condition of milk when it reached the consumer under normal conditions. The results varied enormously—the best sample yielding 20,000 bacteria per c.c. and the worst showing 154,000,000. Of the 50 samples examined no fewer than 31 contained bacillus coli in greater number than is permissible in Grade " A " Milk. Ten samples of milk taken from the more congested areas of the town were compared with ten samples from Morningside district. The average count in the former group showed over 3,000,000 per c.c., while the samples from the latter district yielded a count of over 1,000,000, both results being extremely unsatisfactory. The whole investigation seemed to show that in a large proportion of the cases, raw milk, as ordinarily purchased in the small milk shop, is of a poor quality judged from a bacteriological standpoint, yet it was noted in the investigation that a pure, wholesome milk might be obtained from a small and apparently unhygienic-looking milk shop in the slums, and that a thoroughly bad sample might be procured from a more pretentious and superficially cleaner dairy in the suburbs. Taken as a

whole, the results seem to indicate that "improved methods of milk production on the farm will be completely nullified if the methods of distribution are not at the same time investigated and improved where necessary."

I have to express my thanks to the Bacteriological Department for kindly relieving the City Hospital of a large proportion of its bacteriological work during the stress of the scarlet fever epidemic.

Maternity and Child Welfare.—The work at the ante-natal clinics has increased markedly in volume. Last year approximately 75 per cent. of expectant mothers passed through the various clinics. As these clinics are all staffed by skilled obstetricians associated with one or other of our maternity hospitals, the result of the work done in the clinics should ultimately be reflected in reduced maternal and neonatal deaths.

I have already alluded to the general infantile mortality rate, but it is noteworthy that the neonatal mortality, viz., the number of deaths in the first four weeks, has not altered since the previous year. As the main causes of these deaths are congenital malformations, prematurity, injuries at birth, and debility, this would seem to point to the necessity for further research and study into the causes of these conditions.

In a survey of the whole of the activities of the Department, one is apt to miss the importance of the visits of the nurses to the homes, yet during the past year in connection with all our work, over 77,000 visits were made. The results of these visits cannot be shown in figures, but I have not the slightest doubt in my own mind that the continued visitation of the nurses with their friendly counsel and advice plays no small part in the general uplift of the hygienic standard of the citizens. Too much praise cannot be bestowed on them for the performance of their arduous and sometimes trying tasks.

The real essence of Child Welfare work is preventive, but it is impossible to draw an exact line at the clinics as to where preventive work finishes and curative work begins. The type of disease treated at curative clinics is such that it would only be on rare occasions that the patient would be seen by the ordinary practitioner, and because of this I should be extremely loth to say that no curative work whatever should be done at the clinics.

Venereal Diseases.—The extent of the work in this Department is shown in some measure by the patients attending. No fewer than 8,144 patients have been under treatment during the past year. Of these, 4,365 were new cases, but of this number only 2,775 were found to be suffering from venereal infection.

Gonorrhœa and syphilis are the two main infections, being 47 per cent. and 28 per cent. respectively of the total. It has, unfortunately, to be reported that the incidence of gonorrhœa has not shown any appreciable decrease for some years. This is one of the largest problems to be dealt with by the Department.

During the year, 35 cases of ophthalmia neonatorum were notified, but in no case was there loss of vision. Amongst the ten cases which were admitted by arrangement from neighbouring counties, one child lost the sight of one eye and a partial loss of vision in the other. This was almost certainly due to the fact that proper treatment had begun too late.

The "follow-up" work has been particularly successful, and as a result, over 70 per cent. of the women and children, who had defaulted, returned for treatment after visitation by the nurse.

The report on Venereal Diseases has a pathetic interest attached to it on this occasion as it is the last report made by Dr. David Lees. Unfortunately, he died early in the current year. I may be pardoned for making an allusion to him, although, strictly speaking, his death does not pertain to the year under review.

Dr. Lees had practically completed his report before he was disabled by the serious illness which eventually brought about his death. It was characteristic of his devotion to duty that he desired to put the finishing touches to the report the day before his operation, weak though he was after days of severe pain.

It would have given him great joy had he lived to see the opening of the splendid new building at the Royal Infirmary, to the planning of which he had given much earnest consideration, and the plans as they now stand bear evidence of the extraordinary measure of foresight and organising capacity which was his.

In his fourteen years as Chief of the Department, he impressed all with whom he came in contact with his enthusiasm, his amazing vitality and abounding energy, his incisive judicial thinking which enabled him to weigh the pros and cons of any problem and to arrive at a satisfactory solution with speed and sureness, and his sturdy determination which made light of obstacles. He inspired all who worked with him, and always created the impression that he could be depended upon to see a thing through. His high courage and confidence marked him out as an ideal pioneer in the campaign against disease. In losing him, the medical profession, the University, the Venereal Diseases Department, and his patients have lost a devoted worker and dauntless champion.

The Municipal General Hospitals.—There has been marked progress all round in each of the Hospitals during the year. For a considerable period, the Eastern General Hospital had to accommodate more patients than its normal complement. On the other hand, there has always been a considerable number of beds vacant in the Western General Hospital, but this was in great part due to the peculiar distribution of the beds, many of the "beds" being cots and not available, of course, for adults. Again, there might be vacancies in the female wards not available for the other sex, and so on. In the Western General Hospital, the equipment and the treatment are equal to those in the best voluntary hospitals, but from a structural point of view the building can never equal a modern hospital, having been planned originally for requirements other than a hospital.

The Municipal Hospitals occupy a unique position in the community, as the Local Authority has a statutory duty to perform as regards sickness, and they are not entitled to refuse admission to patients who are ill and without proper facilities for medical care and nursing. This re-acts on the hospitals in a two-fold way. Voluntary hospitals are prone to admit cases for operation and then discharge them for convalescence to a municipal hospital, or cases of accidents may be admitted, kept a day or two, and then discharged from the voluntary for admission to the municipal hospital. This, of course, makes the work at some of the municipal hospitals less interesting than it would be if they had had the patient for operation, or the accident case from the beginning. Again, inoperable cases suffering from malignant or other diseases are often admitted to the voluntary hospital for a week or two's observation and then discharged to be admitted to the municipal general hospitals. These varied causes give the municipal hospital an overwhelming mass of chronic invalids to deal with, and yet, though probably less engrossing than acute cases, or cases requiring operations, these patients furnish an opportunity for the cultivation of the highest qualities expected of a nurse. Too large a percentage of chronic illness makes the work in the municipal hospitals somewhat monotonous at times.

The Training of the Nurse.—The training of probationers in the General Hospitals has caused me much thought and anxiety. It seems to me a particularly anomalous thing that nurses from municipal hospitals in Edinburgh should require to be sent out of Edinburgh for a part of their training, and yet this is so, the reason being that the surgical side of the work in the municipal hospitals has not yet developed to such an extent as to enable us to give the requisite experience in surgery to all the nurses under our care. Until surgical work has developed to such an extent, the complete training of all our nurses will remain a difficulty. The position is all the more anomalous when one considers the term "general training," because the municipalities are the only bodies who can give a general training. In many voluntary hospitals there are no children's wards, no cases of tuberculosis, no cases of infection, no cases of mental disease, and no chronic invalids, yet nurses from such institutions, after having passed the requisite examination of the General Nursing Council, pass as nurses with a general training. In the municipal service we alone can give what should be called general training. We can give the nurse what is commonly called a general training, but, in addition, we can give all these subjects already mentioned, viz., fevers, tuberculosis, sick children, the care of healthy babies, maternity and mental work, and we can train them as health visitors or sanitary inspectors.

My own judgment is that the nurse going into the municipal service should have experience in all branches of the work. Whilst this may be the ideal, to make it a practical proposition presents considerable administrative difficulties, as, fortunately or unfortunately, there are certain rules laid down by the General Nursing Council which require to be observed. Whether these rules are elastic enough or broad enough in their conception is quite another proposition.

Complaint regarding the municipal nurse is that she does not get sufficient experience in surgery, but a wrong view appears to me to be taken with regard to the training

of the nurse in surgery. What a nurse requires to learn is operating theatre technique, and the principles underlying this technique appear to me to be the same whether the operation is on the abdomen or on an upper extremity. The fact that the operation may be a gastro-enteritis or the excision of ovarian tumour, is not of the slightest importance to the nurse. Her business is to know how to prepare the patient for operation and to play her part in the aseptic performance of the operation.

Many of the nurses, after leaving their training school, will not deal with major surgery again, and it appears to me that what the nurse requires to be taught is not the details of specialised operations but the principles of aseptic surgery. The real surgical nurse or theatre sister should be regarded as a specialist. Indeed, the whole training of nurses, like the training of medical students, seems to me to demand careful investigation.

Resident Students.—At the Western General Hospital, we have instituted, for Scotland at least, a unique procedure, namely, students in residence at the Hospital. At present, we have only accommodation for twelve, but the success of the scheme is so marked that it would be well if this could be developed further. There are still questions of policy, however, to be decided before I could advise embarking on this to a greater extent.

Making a tour of inspection through our hospitals where chronic and elderly patients are cared for, one is struck with the comfort and attention bestowed on these somewhat trying cases. Many of them do not require skilled medical investigation of their conditions, but they do require careful nursing attention. A comparison between the hospital conditions and what might obtain in the patients' homes shows an advantage every time for the hospital. The hospitalisation of chronic invalids is an aspect of the work of the municipality which tends to grow and increase.

The work of the nursing staffs at the General Hospitals merits the highest praise.

Mental Services.—There has been no new departure in this work compared with the preceding years. In Bangour Mental Hospital, the Superintendent reports that the number of voluntary admissions continues to increase. No fewer than 108 such admissions occurred during the year. This is a marked departure from the policy of municipal institutions in days gone by, when the sole idea of the hospital was custodianship and detention.

In Gogarburn Institution, we have a population of some 320 and very shortly we expect to have everything ready so as to reach the figure authorised by the Corporation, namely, 500. This figure is the limit which the Corporation have decided on so far, but while it is unsafe to prophesy, in the meantime it appears that this will not satisfy the demands likely to be made for the maintenance of mental defectives in Institutions.

Hospital Expenditure.—Hospital expenditure, like all other expenditure, is carefully scrutinised, but the gross amount spent on hospitals reaches the not inconsiderable total of £193,370. The cost per occupied bed per week varies in the different hospitals, ranging from 20s. 9d. in Gogarburn Certified Institution to 39s. 7d. in the Royal Victoria Hospital. Comparing the General Hospitals together, the Western General is the highest in the group, being 34s. 11d. as against 22s. 1d. at the Northern General. In spite of the large sum expended on hospitals, I am assured in my own mind that full value is given.

School Medical Service.—In this Service we are responsible for the medical inspection of some 64,000 children. One noteworthy feature of the work has been another year's experience of the altered method of medical inspection. It will be remembered that the regulation times for examination of children is at their entrance to school, and again in their ninth year and in their thirteenth year.

With the consent of the Department of Health for Scotland, we made an experiment by omitting the nine-year-old examination and substituting for that a class-room inspection, during which inspection the school teacher and the doctor collaborate. I am quite clear in my own mind that this is an improvement on the routine examination of the children at the ninth year, because by class-room inspection we were able to pass under review some 25,000 children instead of 4,000 at the nine-year-old period.

Quoting the words from the School Report, "There have been brought under the direct purview of the Medical Officers, 20,722 more children than would have been, under the usual circumstances. Of the above, over 3,000 received "Notices to Parents" of defects of which the majority would probably not have been detected. Over 470 children were found to require specialist examination for visual defect two years earlier than under the prior system."

With regard to the physique of the school children I have a fixed idea that more time should be spent on physical exercise, as it is far more important that the child should reach adolescence with a well-developed physique, than with a poor physique and a diffuse educational knowledge. To attain this the curriculum should be so adjusted that all school children would get adequate physical exercise of modern type, adapted to the age and physique of the individual, and preferably in the open air. One's medical sense is offended by meeting ill-developed young people, of either sex, who have left school with poor physical development and without any sense of proper carriage.

Factory and Workshop Acts.—Much steady work has been done during the year in enforcing the provisions of the Factory and Workshop Acts. Generally speaking, there has been a very ready co-operation with workshop and factory owners in maintaining a satisfactory hygienic standard. A feature that is becoming prominent with regard to this work is the voluntary consultations which take place between the Department and the various employers.

Two important matters have been slowly developing for the last few years. The first relates to "home bakeries," *i.e.*, where foodstuffs are prepared in an ordinary dwelling-house for sale to the public. The majority of these bakeries are outwith the Factory Act, but regular inspection is made so as to maintain a good standard of cleanliness. The second is the result of the closing of houses under the 1930 Act. Where a house is closed for human habitation, a request often follows that the premises should be sanctioned for use as a workshop. These applications are rarely granted, the view being held that it is just as essential to have suitable workshops as suitable dwelling-houses.

During the year the work of the Department has been performed smoothly and efficiently and for this I have to thank all the members of the staff for their very loyal co-operation. The Heads of the Sub-Departments deserve a word of praise for the efficient manner in which they conduct their various duties and this efficiency is reflected in the hearty co-operation of all workers in the various branches of the Service.

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 1929, 1930, 1931, 1932 and 1933.

	1929	1930	1931	1932	1933
Population Estimated to middle of year . .	435,195	437,098	443,042	447,800	452,773
Area of City—Acres . .	32,526	32,526	32,526	32,526	32,526
Density of Population—					
Persons per acre . .	13·4	13·4	13·6	13·8	13·9
Houses Inhabited . .	107,704	108,375	109,421	111,241	113,497
Marriages Registered . .	3,955	3,693	3,788	3,932	4,037
Birth-rate (Corrected for Country Births) . .	16·8	16·7	16·2	15·5	15·1
Death-rate (Corrected for Country Deaths) . .	14·8	13·8	12·9	13·5	13·2
Infantile Mortality . .	80	82	69	73	66
Cancer Death-rate . .	1·7	1·6	1·5	1·9	1·7
Phthisis Death-rate . .	·8	·8	·7	·7	·7
Epidemic Diseases Death-rate	·3	·7	·2	·5	·3

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhœa 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 population of the City of Edinburgh for 1933 as estimated by the Registrar-General for Scotland was 452,773. This figure represents an increase of 4,973 persons over the estimate for the previous year.

As explained in former reports, the estimate is based on the number of inhabited houses on the Valuation Roll at Whitsunday. Certain adjustments are also made to allow for the movement of population due to emigration and other factors.

In the following table the distribution of the population throughout the three areas of the City, including persons resident in Institutions and Military quarters, is shown.

Area.	Males.	Females.	Total	Acres.	Persons Per Acre.
Edinburgh	148,007	184,579	332,586	10,877	30·6
Leith	41,065	44,458	85,523	1,641	52·1
Suburban	16,005	18,659	34,664	20,008	1·7
	205,077	247,696	452,773	32,526	13·9

Density.—The area of the City is 32,526 acres, and the density of population 13·9 persons per acre.

On page 6 the density in each of the municipal wards is tabulated. It should be noted that these rates are based on the total area of the districts, which include a large amount of space used for business and other purposes. Canongate ward, for instance, embraces, in addition to ground occupied by large industrial concerns, the whole of Holyrood Park, the boundaries of which adjoin the wards of St. Leonard's, Newington and Portobello.

HOUSING.

Inhabited Houses.—The accompanying table shows the number of inhabited houses in the City at Whitsunday 1933. This information has been supplied by the Burgh Assessor, and includes particulars regarding the number and the rentals of the occupied houses in each ward. An increase of 2,256 occupied houses is recorded as compared with the previous year, the number at Whitsunday 1933 being 113,497 as against 111,241 at the corresponding period in 1932.

NUMBER OF DWELLING-HOUSES OCCUPIED AT WHITSUNDAY 1933.

	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	286	1,350	1,451	1,537	493	105	188	5,419
2.	Canongate	65	907	1,597	1,051	1,194	288	82	109	5,293
3.	Newington	3	139	679	560	1,266	789	475	1,664	5,575
4.	Morningside	1	18	30	157	1,018	2,047	1,439	1,869	6,579
5.	Merchiston	...	13	230	562	2,189	1,509	431	959	5,893
6.	Gorgie	10	67	1,617	2,096	3,012	381	58	91	7,332
7.	Haymarket	3	145	368	366	1,195	717	248	1,570	4,612
8.	St. Bernard's	15	319	466	447	1,408	1,311	196	944	5,106
9.	Broughton	4	161	563	1,030	1,232	734	255	293	4,272
10.	St. Stephen's	13	485	763	883	1,031	430	297	720	4,622
11.	St. Andrew's	22	835	715	375	289	100	56	505	2,897
12.	St. Giles	40	1,205	1,559	632	733	134	64	181	4,548
13.	Dalry	1	218	2,006	1,922	988	34	6	51	5,226
14.	George Square	14	589	1,091	860	1,215	496	231	337	4,833
15.	St. Leonard's	30	1,077	1,847	831	616	230	103	136	4,870
16.	Portobello	7	195	492	875	2,340	1,670	714	686	6,979
17.	South Leith	4	278	1,493	2,174	2,530	328	153	192	7,152
18.	North Leith	10	828	1,726	986	524	97	30	98	4,299
19.	West Leith	9	578	1,047	627	718	783	407	734	4,903
20.	Central Leith	1	279	1,604	651	488	109	14	53	3,199
21.	Liberton	38	316	1,091	567	258	269	213	566	3,318
22.	Colinton	13	188	316	172	157	432	268	805	2,351
23.	Corstorphine and Cramond	23	151	228	235	522	1,468	619	973	4,219
	Total	334	9,278	22,878	19,510	26,460	14,849	6,464	13,724	113,497
	Edinburgh Area	236	6,660	15,373	14,098	21,263	11,363	4,760	10,303	84,056
	Leith Area	24	1,963	5,870	4,438	4,260	1,317	604	1,077	19,553
	Suburban Area	74	655	1,635	974	937	2,169	1,100	2,344	9,888

Housing Schemes.—Through the courtesy of the City Chamberlain, I am enabled to submit the following particulars regarding the number of houses erected in the Corporation housing areas.

	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	5·7
State-Aided	...	...	706	31	1,543	69	1	...	...	...	2,250	21·0
Provision of New Houses—												
Non-State-Aided	73	46	76	48	7	5	1	1	...	...	157	1·4
State-Aided: 1919 Act	...	...	179	12	915	63	242	16	129	9	1,465	13·7
1923 ,,	...	...	18	100	...	...	...	...	...	...	18	·2
1924 ,,	...	...	864	14	5,122	82	237	4	...	...	6,223	58·0
Totals	341	3	2,181	20	7,589	71	481	5	129	1	10,721	100·0

The total number of houses provided by the Corporation up to the end of the year was 10,721. Of these, 7,589 were of the three apartment type, 2,181 of two apartments, 481 of four apartments, and 129 of five apartments.

Since 1st January, 1919, to 28th December, 1933, plans have been passed by the Dean of Guild Court for 23,557 houses.

VITAL STATISTICS.

In the accompanying table 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, are given. The births and deaths with the rates per 1000 of the population are also shown, together with the infantile mortality rates per 1000 live 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
1933	452,773	5,964	13·2	6,835	15·1	66

* City boundaries extended.

MARRIAGES.

There were 4,037 marriages registered in the City during the year, as compared with 3,932 in 1932 and 3,788 in 1931. Of the total marriages registered, 1,096 were contracted by declaration before the Sheriff.

The marriage rate was 8·9 per 1000 of the population. When comparison is made with other large centres, it would appear that Edinburgh occupies a favourable position so far as the marriage rate is concerned, but in view of the large number of "irregular" marriages, it is not possible to make an accurate estimate, as many of the contracting parties come from places outwith the City boundaries.

The number of marriages registered in each quarter of the year was as follows :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
774	936	1361	966	4,037

BIRTHS.

The decline in the birth rate continues, and the figure of 15·1 per 1000 equals the lowest rate ever recorded for the City. From the table given above it will be seen that almost without exception there has been a steady decline year after year.

In the following table the actual number of children born to Edinburgh citizens during the year is shown. There were 7,518 births registered in the City, but as the result of a system of transfers adopted by the Registrar-General, 757 of these were transferred to the place of permanent domicile of the parents, while 74 births to Edinburgh citizens temporarily residing elsewhere in Scotland were transferred for inclusion in the City records.

After these adjustments had been made the net number of births allocated to the City was 6,835—3,509 males and 3,326 females. Of the total births 443 or 6·5 per cent. were illegitimate.

The number of births and the birth-rates in the various municipal wards will be found in the table on page 6.

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st . . .	1,702	1,604	98	5·8
2nd . . .	1,815	1,689	126	6·9
3rd . . .	1,672	1,566	106	6·3
4th . . .	1,646	1,533	113	6·9
Totals .	6,835	6,392	443	6·5

DEATHS AND DEATH RATES.

During the year there were 6,765 deaths registered in the City. Of this number 1,003 were of persons who had come to Edinburgh from districts outwith the City to receive treatment at the Royal Infirmary or other institutions, and whose deaths were transferred to the place of permanent residence. On the other hand, an inward transfer was made of the deaths of 202 Edinburgh citizens which occurred in various parts of Scotland. As a result of the adjustments, the corrected total was 5,964, of which 2,857 were males and 3,107 females. The death-rate for the year was 13·2 per 1000 of the estimated population, and the average for the past five years 13·6 per 1000.

The following table shows the allocation of the deaths in each quarter of the year, together with the equivalent death-rates :—

Quarter.	Number of Deaths.	Death-rates per 1,000.
1st . . .	1,875	16·8
2nd . . .	1,335	11·8
3rd . . .	1,232	10·8
4th . . .	1,522	13·4
Total .	5,964	13·2

A table showing the distribution of the deaths throughout the wards in the City, together with the death-rates applicable to each, appears on page 6. For the purpose of comparison, details extracted from the Registrar-General's preliminary statement for 1933 are given in the accompanying table, of the death-rates in the eight large centres of population in Scotland. From these it will be seen that Edinburgh occupies a very favourable position.

	Rate per 1000 of Population.		Rate per 1000 of Population.
Glasgow	13·3	Paisley	12·9
Edinburgh	13·2	Greenock	15·0
Dundee	14·5	Motherwell and Wishaw	12·2
Aberdeen	13·1	Clydebank	10·4

SCOTLAND . . . . 13·2

Ward Mortality.—On page 6 will be found a table showing the principal statistics in each ward of the City. In the Edinburgh area, the highest general death-rate (15·7) was returned for the residential ward of Morningside. Of the 344 deaths in the ward, 68 per cent. were of persons over 65 years of age. Diseases of the circulatory system caused 57 deaths in this age group, diseases of nervous system 33, cancer 32, while 26 were due to respiratory conditions. The infantile mortality and phthisis death-rates in the ward were 59 and ·1 respectively, as compared with 66 and ·7 for the City as a whole. St. Giles (15·1) and St. Stephen's (14·9) were other wards in which comparatively high death-rates prevailed. In both of these wards, building congestion and inferior housing conditions exist. The deaths of children under the age of one year in St. Stephen's Ward represented an infantile morality rate of 114 per 1000 live births. This was the highest rate returned for the City. In St. Giles the infantile mortality rate was 91. The latter ward also produced the largest number of deaths (30) from pulmonary tuberculosis, the death-rate from this cause being 1·4 per 1000 of the ward population.

Gorgie Ward, where the Corporation have carried out a very extensive housing scheme, returned the lowest general death-rate (11·1). The births numbered 549, representing a birth-rate of 20·9 per 1000 of the estimated population, while there were only 31 deaths of children under one year, giving an infantile mortality rate of 56. A feature worthy of note is the low infantile mortality rate recorded for St. Bernard's Ward. There were 243 births and only two deaths of infants under 1 year. This represents an infantile mortality rate of 8 per 1000 births. In the Leith area, all the wards with the exception of North Leith (13·9) returned general death-rates below that of the City. The infantile mortality rate in the North ward was 89, while there were 46 notifications of pulmonary tuberculosis and 18 deaths, representing a phthisis death-rate of ·9 per 1000 of the population. A measure of slum clearance has been effected, but many overcrowded and unhealthy areas are still present in this ward.

The general death-rates in the three suburban wards were :—Liberton, 16·0 ; Colinton, 13·5 ; and Corstorphine and Cramond, 14·4 per 1000.

Table showing the Population, etc., also the Births and Deaths in each Ward during 1933.

Ward.	Population.	Area in Acres.	Density of Population per Acre.	Births.		Infantile Mortality.		Deaths.			
								*Epidemic Diseases.		All Causes.	
				Number.	Rate per 1000.	Deaths.	Rate per 1000 Births.	Number.	Rate per 1000.	Number.	Rate per 1000.
Calton	22,200	228	97·4	314	14·1	21	67	4	·2	268	12·1
Canongate	21,791	965	22·6	361	16·6	25	69	9	·4	265	12·2
Newington	21,526	891	24·2	234	10·9	21	90	8	·4	292	13·6
Morningside	21,875	1,358	16·1	135	6·2	8	59	1	·1	344	15·7
Merchiston	20,457	677	30·2	175	8·6	10	57	1	·1	261	12·8
Gorgie	26,314	676	38·9	549	20·9	31	56	10	·4	293	11·1
Haymarket	17,783	959	18·5	158	8·9	7	44	3	·2	221	12·4
St. Bernard's	17,983	1,250	14·4	243	13·5	2	8	2	·1	228	12·7
Broughton	15,550	472	32·9	237	15·2	13	55	4	·3	204	13·1
St. Stephen's	17,622	190	92·7	246	14·0	28	114	8	·5	263	14·9
St. Andrew's	11,313	206	54·9	164	14·5	10	61	4	·4	146	12·9
St. Giles	20,791	266	78·2	419	20·2	38	91	11	·5	314	15·1
Dalry	21,380	187	114·3	371	17·4	19	51	7	·3	239	11·2
George Square	21,236	248	85·6	286	13·5	14	49	6	·3	289	13·6
St. Leonard's	20,713	104	199·2	340	16·4	20	59	4	·2	266	12·8
Portobello	26,568	2,200	12·1	466	17·5	28	60	13	·5	309	11·6
South Leith	29,814	819	36·4	457	15·3	34	74	7	·2	391	13·1
North Leith	20,413	218	93·6	395	19·4	35	89	11	·5	283	13·9
West Leith	19,359	462	41·9	271	14·0	25	92	6	·3	235	12·1
Central Leith	14,346	142	101·0	227	15·8	17	75	5	·3	162	11·3
Liberton	10,954	6,339	1·7	348	31·8	23	66	5	·5	175	16·0
Colinton	7,103	5,602	1·3	96	13·5	7	73	...	...	96	13·5
Corstorphine and Cramond	12,572	8,067	1·6	174	13·8	11	63	1	·1	181	14·4
Institutions	11,182	...	...	124	...	4	...	8	...	234	...
Military Quarters	1,928	...	...	45	...	2	...	2	...	5	...
Totals	452,773	32,526	13·9	6,835	15·1	453	66	140	·3	5,964	13·2

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhœa 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 (including Deaths transferred from other districts) and the Death-rates per 1000 of the Population during 1933 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	...	452,773	6,770	26,865	33,635	36,360	32,694	83,134	72,156	59,581	55,909	44,564	25,254	9,486	419,138
Deaths from all Causes	...	5,964	453	204	657	62	53	204	278	323	627	993	1,348	1,419	5,307
Annual Death-rate per 1,000	13·2	13·2	66·9	7·6	19·5	1·7	1·6	2·5	3·9	5·4	11·2	22·3	53·4	149·6	12·7
Enteric Fever	·01	3	...	...	...	...	...	...	...	...	2	1	...	...	3
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	2	2	...	2	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	·04	18	1	5	6	6	1	1	1	2	...	...	1	...	12
Whooping Cough	·14	65	26	38	64	1	...	...	...	...	...	...	...	...	1
Diphtheria and Croup	·04	19	...	7	7	7	3	1	...	...	1	...	...	...	12
Influenza (Sole Cause)	·04	20	...	...	...	...	...	1	3	1	3	2	1	9	20
Erysipelas	·05	21	2	...	2	...	...	1	2	2	1	3	7	3	19
Encephalitis Lethargica	·03	14	...	2	2	...	...	2	2	1	4	2	1	...	12
Cerebro-Spinal Meningitis	·05	21	11	5	16	1	...	1	3	...	...	...	...	...	5
Tuberculosis of Respiratory System	·71	322	1	3	4	1	7	61	84	55	54	35	15	6	318
Tuberculous Meningitis	·09	41	5	17	22	5	3	6	2	1	...	1	1	...	19
Tuberculosis of Intestines and Peritoneum	·03	15	...	2	2	1	3	6	...	1	1	...	1	...	13
Other Tuberculous Disease	·05	21	1	...	1	...	...	2	2	5	1	6	3	1	20
Malignant Disease	1·73	785	...	1	1	1	1	6	14	35	114	220	239	154	784
Rheumatic Fever	·04	17	...	...	...	4	3	3	1	2	2	...	2	...	17
Meningitis	·03	15	9	3	12	1	...	1	...	...	...	1	...	...	3
Cerebral Hæmorrhage, Embolism, Thrombosis	1·44	655	...	...	...	...	1	...	2	12	55	119	247	219	655
Other Nervous Diseases	·25	115	8	8	16	1	2	13	7	5	15	24	17	15	99
Heart Disease	2·26	1,025	...	...	...	3	3	13	27	41	89	208	313	328	1,025
Other Diseases of Circulatory System	·33	153	...	...	...	...	...	1	...	2	10	32	42	66	153
Bronchitis	·67	302	8	4	12	...	...	...	4	10	32	42	80	122	290
Pneumonia (all forms)	·86	389	57	57	114	6	2	15	17	24	51	47	61	52	275
Other Diseases of Respiratory System	·25	112	4	4	8	2	...	1	2	4	6	15	25	49	104
Gastric and Duodenal Ulcer	·12	56	1	...	1	...	...	...	4	6	15	12	14	14	55
Diarrhœa and Enteritis (under 2 years)	·07	33	29	4	33	...	...	...	...	...	...	...	...	...	...
Appendicitis	·08	37	...	2	2	2	2	7	6	1	6	7	3	1	35
Diseases of Liver and Gall Bladder	·14	62	...	...	...	...	...	1	2	4	6	15	23	11	62
Other Diseases of Digestive System	·32	146	9	7	16	3	5	4	6	14	18	25	29	26	130
Nephritis—Acute and Chronic	·34	154	2	2	4	...	...	6	5	14	30	32	36	27	150
Other Genito-Urinary Diseases	·22	100	4	3	7	...	...	1	3	6	7	14	29	33	93
Puerperal Sepsis	·02	11	...	...	...	...	...	2	7	2	...	...	...	...	11
Other Diseases associated with Childbirth	·08	37	...	...	...	...	...	5	14	16	2	...	...	...	37
Diseases of Early Infancy and Malformations	·55	251	244	4	248	2	...	1	...	...	...	...	...	...	3
Violent Deaths	·58	261	9	15	24	7	8	23	32	22	39	34	28	44	237
All Other Causes	1·47	666	20	11	31	8	9	19	26	35	63	96	130	249	635

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.—This group includes enteric fever, measles, scarlet fever, whooping cough, diphtheria, and diarrhœa and enteritis in children under the age of two years.

The deaths from these diseases during the year numbered 140, as compared with 208 in 1932 and an annual average of 178 for the five years 1929-1933.

There were only 2 deaths from measles throughout the year, whereas in 1932 this cause was given in 88 cases.

Deaths from whooping cough, however, numbered 65, and with one exception were all of children under 5 years of age.

A widespread epidemic of scarlet fever throughout the City was responsible for the increase in the number of deaths from this disease, there being 18 certified as against 8 in 1932 and an average of 8 for the past five years.

Further detailed information regarding the notification of the diseases enumerated in this group will be found under the heading " Infectious Diseases " on page 10, while the deaths and the death-rates per 1000 of the population in each municipal ward appears on page 14.

Influenza.—While there was an increased prevalence of influenza during 1933 as compared with the previous year, nothing in the nature of an epidemic falls to be recorded. In 20 cases only was influenza certified as the sole cause of death, and in a further 166 instances it was associated with other diseases. Of these latter deaths, 97 were complicated with pneumonia, 24 with bronchitis, and 45 with various other complications.

Tuberculosis.—In the report by the Tuberculosis Officer on page 19, the subject of tuberculosis is fully dealt with. Deaths from all forms of the disease amounted to 399—227 males and 172 females—and the death-rate was equivalent to ·9 per 1000 of the estimated population.

Cancer.—Deaths from cancer and other forms of malignant disease numbered 785, or 13 per cent. of the total deaths allocated to the City. The figure for the previous year was 849. There were 353 males and 432 females and the death-rate from this cause equalled 1·7 per 1000 of the population. Of the total deaths, 603 were attributed to carcinoma, 45 to sarcoma, 36 to epithelioma and 101 to other forms of malignant disease.

The accompanying table shows the deaths classified according to age, sex, and the organ or site affected. In the age groups under 45 years there were 67 deaths, between 45 and 65 years, 344 deaths, while 374 were of persons over 65 years of age.

In a large proportion of the cases the disease was located in the stomach and œsophagus (187) and the intestines and rectum (148). The female breast was stated to be the site in 71 deaths, and the uterus in 42 instances.

Site.	Sex and Age-Periods.																Totals.		
	Under 15.		-20.		-25.		-35.		-45.		-55.		-65.		-75.		75 and upwards.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Both Sexes.
Brain	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jaw, Face, and Ear	...	...	...	...	...	...	...	...	3	...	...	...	...	2	...	4	2	...	14
Tongue and Mouth	...	...	...	...	...	...	...	...	5	1	7	...	9	7	5	...	34	1	35
Larynx, Pharynx, and Neck	...	...	...	...	...	...	...	...	3	1	4	...	7	2	4	3	24	3	27
Thorax and Lungs	...	...	2	...	...	...	2	1	...	...	7	2	2	1	5	14	23	9	32
Breast	...	...	...	...	...	...	...	1	...	5	...	22	...	10	...	29	...	71	71
Stomach and Œsophagus	...	...	...	...	...	...	4	...	...	4	22	19	15	8	34	15	100	87	187
Liver and Gall Bladder	...	...	...	...	...	1	...	...	...	2	4	4	4	4	10	15	17	38	55
Intestines and Rectum	...	...	...	...	...	...	1	...	...	4	12	10	2	5	23	21	66	82	148
Pancreas	...	...	...	...	...	...	...	...	...	1	6	3	...	3	1	1	10	16	26
Pylorus	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	1	4	5
Uterus	...	...	...	...	...	...	...	3	...	4	...	10	...	5	...	2	...	42	42
Ovaries and Vagina	...	...	...	...	...	...	...	1	...	1	...	2	...	7	...	10	...	25	25
Penis and Scrotum	...	...	...	...	...	...	1	...	...	...	1	...	2	...	2	...	7	...	7
Abdomen and Pelvis	...	...	...	...	...	...	...	2	...	...	...	1	...	...	9	3	20	13	33
Kidney	...	...	...	...	...	...	...	...	...	...	4	...	1	2	3	...	10	3	13
Prostate	...	...	...	...	...	...	...	...	...	...	...	...	1	...	4	...	14	...	14
Bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	5	6	8	14
Bones	...	...	...	1	...	...	...	1	...	2	1	1	...	...	1	...	2	7	9
Ductless Glands	...	...	...	...	...	...	...	1	...	3	1	1	...	...	2	...	4	9	13
Otherwise specified	...	...	...	...	...	...	1	2	...	3	3	...	...	...	3	...	8	7	15
Totals M.	...		2		...		9		11		72		42		111		353		785
Totals F.		...		1		1		12		31		75		49		63		432	
																109	63	91	

Diseases of the Nervous System.—Deaths due to diseases ot the nervous system numbered 785, and 63 per cent. of these were certified as cerebral hæmorrhage, apoplexy and hemiplegia. Of the total deaths 498 were of persons over the age of 65 years. The deaths among children under 5 years were 28, and of these, 17 were infants under the age of one year. Convulsions were stated to be the cause of 14 deaths of children, while 12 were classified as meningitis.

Diseases of the Circulatory System accounted for 1,178 deaths. Of that number 1,025 were caused by various conditions affecting the heart. Diseases of the blood vessels were responsible for 153 deaths of which 101 were certified as arterio sclerosis and 16 as aneurysm.

Diseases of the Respiratory System.—Excluding influenza, there were 803 deaths attributed to respiratory diseases. The principal causes were pneumonia and bronchitis which together accounted for 691 deaths, including 126 children under five years of age of whom 65 were infants in their first year. Forty-eight per cent. of the total respiratory deaths occurred in persons over 65 years of age.

Diseases of the Digestive System.—The deaths recorded under this heading numbered 334. Diarrhœa and enteritis caused 66, non-malignant diseases of the liver 62, gastric and duodenal ulcer 56, and appendicitis 37. Of the deaths classified as diarrhœa and enteritis, 33 were children under 2 years of age.

Diseases of the Genito-Urinary System.—Acute and chronic nephritis were given as the cause of 154 of the 254 deaths from diseases of the genito-urinary system. Diseases of the prostate were responsible for 44 deaths, while 56 were due to various other conditions.

Deaths by Violence.—Included under this group were 65 suicidal deaths, 47 males and 18 females. In a further 196 instances death was due to motor accidents, falls, and other forms of violence.

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 (first case under 5 years of age, in each household), which have been made temporarily notifiable by the Local Authority.

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

Infectious Disease Notifications—1933.

Disease.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Diphtheria and Membranous Croup	52	42	61	41	34	35	44	31	41	67	91	67	606
Erysipelas	32	28	33	26	18	19	15	16	21	42	56	58	364
Scarlet Fever	100	79	127	124	226	228	308	242	468	924	942	748	4516
Typhoid Fever	4	...	...	4	4	9	8	9	6	4	...	2	50
Puerperal Fever	9	6	12	5	1	7	6	11	11	8	4	13	93
Puerperal Pyrexia	10	4	7	2	5	2	4	3	4	5	5	6	57
Cerebro-spinal Fever	5	6	4	3	5	6	4	1	...	...	2	5	41
Infective Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis, Pulmonary	63	48	55	42	48	54	48	43	44	38	39	31	553
Tuberculosis, other forms	28	25	26	33	29	17	16	19	15	20	6	9	243
Ophthalmia Neonatorum	3	2	...	4	1	4	1	3	5	5	4	3	35
Malaria	3	3	1	1	2	1	1	2	2	1	1	...	18
Dysentery	8	3	12	4	5	...	...	2	1	7	11	1	54
Acute Primary Pneumonia	76	68	56	30	34	40	23	25	36	36	39	97	560
Acute Influenzal Pneumonia	84	47	8	2	4	3	3	3	2	5	3	11	175
Measles	33	32	29	11	20	26	5	...	6	9	3	4	178
Whooping Cough	166	162	134	84	105	132	110	39	27	14	4	7	984
Poliomyelitis	...	...	...	1	1	...	...	1	3	3	...	1	10
Polio-encephalitis	...	...	...	...	...	...	1	...	...	...	1	...	2
Encephalitis Lethargica	5	1	...	...	...	1	4	5	1	1	...	1	19
Totals	681	556	565	417	542	584	601	455	693	1189	1211	1064	8558

Enteric Fever.—There were 50 cases of enteric fever intimated to the Department during the year. In 11 instances, the infection was definitely traced to outside sources. In another 5 cases the disease was contracted by patients in a large medical institution, through contact with an undetected case.

Only 3 deaths were recorded, the proportion being 6 per cent. of the intimations received.

Diphtheria.—Cases of diphtheria reported to the Department during the year numbered 606. There was no localised outbreak, but no district was free from the infection. The type of diphtheria present in the City was of a mild nature and only 19 deaths occurred among the cases notified.

The death-rate was equal to 3·1 per cent. of the cases. Twenty years ago, the mortality rate from this disease was 10·3 per cent. of the notifications.

Scarlet Fever.—This disease assumed epidemic form during the year, and 4,516, the largest number of scarlet fever cases ever recorded for the City, were reported to the Department. The increased incidence was first noted in the month of May when 226 cases occurred. The monthly notifications increased steadily until the maximum of 942 was intimated in November. The infection was widespread throughout the City and every ward was involved, Gorgie (495), Portobello (334), South Leith (323), North Leith (246), West Leith (235), and Calton (253), being the districts most heavily affected.

The disease was fortunately of a mild type and only 18 deaths were certified as directly due to scarlet fever. This represents a fatality rate of 0·39 per cent. of the total cases, and is equivalent to 0·04 deaths per 1000 of the estimated population.

Pressure on the accommodation at the City Hospital was very great and as a temporary measure, the smallpox hospital was used to house scarlet fever cases, while more beds were made available by the transference of one ward of tuberculosis patients to the Northern General Hospital.

Parents were encouraged to treat children at home where conditions were suitable, and during the year 1,055 patients received such treatment. It was also found necessary to discharge early from hospital, cases which were of a very mild nature and which had no complications. Such patients were returned home between the 14th-21st day of the disease, but were asked to report to the Public Health Department some days later for a final examination. Over 1,000 of these examinations were made, and as a result, only 4 cases were re-admitted to hospital for further treatment.

That the above procedure proved satisfactory is evidenced by the low return case rate quoted in the City Hospital report.

Cerebro-spinal Meningitis.—There were 41 cases of cerebro-spinal meningitis, and 25 deaths, 4 of which were children who had come from outside the City boundaries for treatment in the Royal Hospital for Sick Children or other institution where the disease was diagnosed and the patients transferred to the City Hospital.

The deaths represented a fatality rate of 61 per cent. of the total cases.

Erysipelas.—The number of erysipelas notifications received was 364, as compared with 340 in 1932, and 280 in 1931. There were 21 deaths certified to this cause, and the death-rate was equivalent to 5·8 per cent. of the notified cases.

Puerperal Fever and Pyrexia.—During the year under review 93 persons were declared to be suffering from puerperal fever, and 57 from puerperal pyrexia, compared with 116 and 68 respectively in 1932.

Reference to these diseases is made by the Child Welfare Medical Officer in his report on page 56.

Ophthalmia Neonatorum.—The notification of 35 cases of ophthalmia neonatorum was recorded during the year.

Reference to this disease is made by the Child Welfare and Venereal Diseases Medical Officers in their reports on pages 56 and 78 respectively.

Measles and Whooping Cough.—It was decided by the Public Health Committee that notification of measles and whooping cough should in future apply only to children under 5 years of age and to the first case of either disease occurring in each household. The usual fees of 2s. 6d. in respect of the notification of a patient from a private practice and 1s. for institutional notifications would apply solely to such cases.

The City was, however, comparatively free from measles, only 175 cases being reported to the Department, and 2 deaths certified as due to the infection. In the previous year, there were 8,786 first cases notified and 88 deaths, 82 of which referred to children under 5 years of age.

Whooping Cough, on the other hand, was present more or less throughout the whole year. There were 984 cases reported, while the deaths numbered 65. With one exception all these deaths were of children under the age of 5 years.

Facilities for hospital treatment were available for patients in whom serious complications arose, or whose home conditions were prejudicial to recovery. These facilities were fully taken advantage of.

Tuberculosis.—An increase in the number of notifications of pulmonary tuberculosis is noted as compared with the previous year, 553 cases being intimated as against 513 in 1932.

Notifications of non-pulmonary forms of the disease, however, showed a decrease compared with the preceding year, the number being 243, while in 1932 there were 272 intimations.

On page 19 will be found a full report by the Tuberculosis Officer of the work done in his Department.

Other Diseases.—The other notifiable diseases are enumerated in the table on page 11. The usual enquiries were made regarding these, but no special feature calling for comment emerged.

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 1933.

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	...	2	...	27	...	253	...	17	2	1	1	5	...	36	2	45	21
2	Canongate	2	...	4	1	37	1	168	1	14	...	3	2	6	...	56	7	46	15
3	Newington	2	...	3	1	12	1	165	...	11	1	...	...	18	1	25	3	26	16
4	Morningside	2	...	3	...	15	...	117	1	14	2	...	...	6	...	6	...	4	13
5	Merchiston	3	1	1	...	15	...	174	...	11	...	...	...	4	...	21	...	17	12
6	Gorgie	1	...	...	...	16	...	495	3	25	...	1	1	35	...	94	6	40	20
7	Haymarket	2	1	3	...	8	...	126	2	13	...	1	...	4	...	15	...	12	20
8	St. Bernard's	1	...	3	1	15	...	238	1	15	...	1	1	5	...	49	1	24	9
9	Broughton	...	...	3	1	14	2	190	...	12	2	...	...	4	...	36	...	13	8
10	St. Stephen's	...	...	3	...	10	1	159	...	13	...	1	1	3	...	52	2	23	17
11	St. Andrew's	...	...	2	...	20	...	83	...	4	1	...	...	2	...	34	4	9	9
12	St. Giles	3	...	10	1	37	...	133	1	13	1	5	3	10	...	56	8	30	29
13	Dalry	...	...	3	1	23	1	218	...	20	...	3	...	12	...	46	4	23	13
14	George Square	4	...	2	...	40	3	186	...	17	2	1	1	9	...	34	3	42	23
15	St. Leonard's	1	...	4	...	28	...	148	1	21	...	6	3	10	...	52	3	50	26
16	Portobello	7	...	2	1	50	5	334	4	19	...	...	...	10	...	66	2	41	22
17	South Leith	5	...	4	1	63	...	323	...	38	3	1	...	6	...	80	5	58	34
18	North Leith	1	...	6	1	26	3	246	...	15	2	2	2	3	...	57	2	47	31
19	West Leith	...	...	3	...	39	1	235	1	13	2	1	1	7	...	39	3	35	14
20	Central Leith	...	...	2	...	23	1	181	...	15	1	1	...	2	1	34	2	42	12
21	Liberton	1	...	2	...	18	...	80	...	8	...	7	5	9	...	31	4	24	8
22	Colinton	...	...	1	...	8	...	46	1	2	...	...	...	2	...	3	...	4	4
23	Corstorphine and Cramond	...	...	1	1	10	...	76	1	4	...	...	...	3	...	10	...	8	5
	Institutions	14	1	26	3	52	2	139	4	30	4	6	4	3	...	51	4	65	8
	Military Quarters	...	...	...	...	...	...	3	...	...	...	...	...	...	...	1	...	7	...
	Totals	50	3	93	*13	606	†21	4516	‡21	364	‖23	41	§25	178	2	984	65	735	389
	Case- and Death-rates (per 1000 population) for year	·11	·01	·21	·03	1·34	·05	9·97	·05	·80	·05	·09	·06	·39	·00	2·17	·14	1·62	·86
	Case- and Death-rates (per 1000 population) for year 1932	·06	·01	·26	·04	1·48	·06	2·41	·02	·76	·04	·13	·09	19·62	·20	2·69	·13	1·72	·98

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

The Notifications of measles and whooping cough refer only to the first case under 5 years of age occurring in a household.

* Includes 2 deaths transferred out

† Includes 1 death transferred out.

‡ Includes 1 death transferred out.

‖ Includes 1 death transferred out.

§ Includes 4 deaths transferred out.

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	43	7·1	193	31·8	200	33·0	56	9·2	17	2·8	45	7·4	52	8·6	606
Erysipelas	12	3·3	134	36·8	86	23·6	57	15·7	21	5·8	24	6·6	30	8·2	364
Scarlet Fever	224	4·9	1,547	34·3	1,439	31·9	579	12·8	238	5·3	347	7·7	142	3·1	4,516
Typhoid Fever	2	4·0	7	14·0	11	22·0	3	6·0	1	2·0	12	24·0	14	28·0	50
Puerperal Fever and Puerperal Pyrexia	5	3·3	54	36·0	31	20·7	16	10·7	4	2·7	3	2·0	37	24·6	150
Cerebro-spinal Meningitis . .	5	12·2	19	46·3	8	19·5	2	4·9	1	2·4	...	...	6	14·6	41
Totals . . .	291	5·1	1,954	34·1	1,775	31·0	713	12·5	282	4·9	431	7·5	281	4·9	5,727

MOTOR AMBULANCE SERVICES.

Cases of infectious disease are removed to the City Hospital by three motor ambulances belonging to the Public Health Department. The cars are garaged at the Hospital and are available night and day, the drivers being quartered within the Hospital.

Transport to the three General Hospitals is undertaken partly by two ambulances belonging to the Public Assistance Department and partly by one ambulance controlled by the Public Health Department. The two Public Assistance ambulances also convey patients to Bangour Mental Hospital and Gogarburn Certified Institution.

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. Andrew's Ambulance Association have three ambulances which are sent on request to convey patients to nursing homes and other institutions.

DISINFECTION.

The disinfection of houses is carried out by a Special Staff attached to the Public Health Department. Bedding and other infected articles are conveyed to the disinfecting station in motor vans, and there treated under high-pressure steam or formaldehyde gas.

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

	1931.		1932.		1933.	
	Number.	Apartments.	Number.	Apartments.	Number.	Apartments.
Dwelling-houses, etc. :—						
After Tuberculous Disease . .	911	1,414	804	987	950	1,310
,, other ,, ...	2,640	6,147	3,754	5,910	4,843	6,438

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 .	700	2,113	Body Clothes . . .	1,507	11,706
Blankets, Sheets, Quilts, etc.	2,594	7,149	Carpets and Rugs . .	97	676
Beds, Pillows, Bolsters, etc. .	1,641	3,719	Miscellaneous . . .	368	646
Curtains, Table Covers, Wraps, etc. . . .	69	111	Destroyed by request .	1,843	376
Table Napery, Toilet Covers, Towels, etc. . . .	76	756	Totals . . .	8,895	27,252

Second-Hand Clothing.—Irish Free State regulations make it compulsory for exporters of second-hand clothing, boots, etc., to produce a certificate from the Medical Officer of Health showing that disinfection has been properly carried out at the place of despatch, or to arrange for their goods to be sent through certain specified ports, where disinfection would be carried out free of charge.

In order to comply with these regulations, 89 consignments of second-hand clothing and boots were disinfected in the course of the year and the necessary certificates granted.

Straw Packing.—The fumigation of straw packing used in connection with the export of certain goods is necessary to comply with regulations issued by various foreign countries. This work was carried out at the Northern General Hospital, and during the year, 15 consignments were dealt with.

Cleansing of Persons.—Facilities are provided at the disinfection station for personal cleansing, and during the year 696 individuals attended for baths and disinfection of clothing. Of these, 385 adults and 1 child were in a verminous condition, and 72 adults and 238 children were treated for scabies.

RECEPTION HOUSE.

There was no smallpox or other disease calling for the quarantine of contacts in the Reception House, but the building was kept in readiness to deal with any emergency that might have arisen.

INTERMENTS.

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

Application was made in 202 instances by relatives of deceased persons for assistance towards the cost of interment. After careful enquiry had been made, 10 applicants were refused assistance, and 11 others withdrew their claims. The remaining 181 burials were arranged by the Department at a total cost of £386 14s.

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.
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
1933 . . .	181	386 14 0	38 16 1	347 17 11

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, 1933, 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 1933.	Cost per Occupied Bed per Week.
City Hospital	496	£47,814	36/11
Western General Hospital	236	21,527	34/11
Northern General Hospital	275	15,888	22/1
Eastern General Hospital	287	21,859	29/2
Royal Victoria Hospital	71	7338	39/7
Royal Victoria Farm Colony	13	1,334	37/8
Victoria Park House	22	1,541	26/4
Bangour Mental Hospital	1,020	62,001	23/3
Gogarburn Certified Institution	259	14,068	20/9

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
1932–33		* 381,293	82,596	298,697

* Interest and Debt Charges included.

TUBERCULOSIS.

Report by Tuberculosis Officer.

It is to be regretted that an increase in the number of deaths from pulmonary tuberculosis has to be recorded for the past year—the actual number being 322 as compared with 313 for the previous year. This represents a death-rate of ·71 per 1000 as against ·69 per 1000 for 1932.

This increase is due to the greater number of deaths in the male sex. During the past year 137 females died of pulmonary tuberculosis and this figure represents the smallest number recorded for the female sex since the extension of the city boundaries in 1921.

An increase of 40 is to be noted in the number of cases of pulmonary tuberculosis notified during the past year. Of the 553 notifications, 33 per cent. of the total are of persons under 25 years of age. The majority of the notifications were reported from the central wards of the City. The highest notification incidence was recorded for North Leith, viz., 2·3 per 1000 as compared with 1·2 for the City.

In the non-pulmonary forms of tuberculosis, it is gratifying to have to report a decline both in the number of deaths and notifications. For the past year there were 23 fewer deaths—representing a death-rate of ·17 per 1000 as compared with ·22 per 1000 for 1932. The notifications showed a decrease of 29 over the previous year.

Whilst these figures appear to indicate that tuberculosis is under control, the present position still leaves much to be desired. Until the discovery of a specific remedy for this disease—which unhappily seems yet afar off—our chief hope in its control and eradication must lie along the lines of prevention.

In the hospital treatment of cases of tuberculosis—both pulmonary and surgical—it not infrequently happens that the patient insists on returning home prematurely, thereby jeopardising or actually losing his prospects of recovery or improvement. It is in consequence felt that much disillusionment could be prevented and much time and expense saved had there been the necessary powers to retain such patients under treatment till satisfactory results had been achieved.

The structural alterations which have been taking place in the surgical tuberculosis wards at the City Hospital are now nearing completion. The additional facilities for the treatment of the cases which are now provided by the sun balconies, artificial sun-ray rooms and plaster-rooms, are much appreciated by patients and staff alike.

Since the last report, the open-air shelters in use at the Royal Victoria Hospital have been fitted with electric light—their utility has, in consequence, been greatly enhanced, especially during the winter months.

The figures representing the attendance of patients at the Royal Victoria Dispensary for the past year constitute a record and would seem to indicate that the work undertaken there meets a real need.

The detailed account of the work and statistical data relating to the various Tuberculosis Institutions will be found in the following pages.

It is a duty and a pleasure to acknowledge my extreme indebtedness to all the members of the Tuberculosis staff, both at the dispensaries and in the hospitals, for their unfailing loyalty and devotion to the work of the Department.

PULMONARY TUBERCULOSIS.

Notifications.—The number of cases of pulmonary tuberculosis reported to the Department during the year was 553, representing an incidence rate of 1·2 per 1000 of the estimated population. In the previous year the notifications numbered 513, and the incidence rate was 1·1 per 1000. The average annual number of cases during the past ten years has been 608, and whilst the figure for 1933 represents a slight increase when compared with the previous year, it will be seen that the disease is well under control.

In the following table the patients are classified according to age and sex. Males numbered 309 and females 244, as compared with 298 and 215 respectively in 1932.

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 .	4	10	4	30	41	40	28	29	25	30	28	14	12	7	7	309
Female .	6	6	18	25	39	37	26	25	22	6	7	9	12	3	3	244
Total .	10	16	22	55	80	77	54	54	47	36	35	23	24	10	10	553

Notifications of persons under the age of 25 years numbered 183, or 33 per cent. of the total.

The strict attention given to the examination of young persons and family contacts during the past few years, has, in many cases, resulted in early detection of the disease, and has made it possible to begin treatment sooner than would otherwise have been the case.

The following table shows the cases notified in the various municipal wards :—

	Notifications.	Rate per 1000.		Notifications.	Rate per 1000.
Calton	29	1·3	George Square . . .	30	1·4
Canongate	46	2·1	St. Leonard's	29	1·4
Newington	16	·7	Portobello	24	·9
Morningside	10	·5	South Leith	36	1·2
Merchiston	13	·6	North Leith	46	2·3
Gorgie	33	1·3	West Leith	27	1·4
Haymarket	19	1·1	Central Leith	23	1·6
St. Bernard's	14	·8	Liberton.	13	1·2
Broughton	13	·8	Colinton	4	·6
St. Stephen's	17	1·0	Corstorphine and Cramond .	4	·3
St. Andrew's	18	1·6	Institutions (other than Sanatoria)	12	...
St. Giles	42	2·0	Military Quarters . . .	7	...
Dalry	28	1·3			

The congested ward of North Leith returned the highest incidence, the rate being 2·3 as compared with 1·2 for the City as a whole. The central wards of the City continued as in former years to furnish a large proportion of the cases. This is to be expected from districts such as Canongate, St. Giles and St. Andrew's, where the environment from a health point of view is far from ideal. A feature worthy of note is the diminution in the number of cases from St. Leonard's Ward, where the removal of much old, unsatisfactory property and the transfer of a large proportion of the population to new houses, having a sunny exposure at Prestonfield, has proved beneficial.

The accompanying table shows the type of house occupied by the infected persons :

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging-Houses.	Institutions, Etc.	Total.
50	202	131	125	18	27	553

Deaths.—The deaths from pulmonary tuberculosis numbered 322, which included 3 Edinburgh citizens who died in Bangour Mental Hospital and 7 whose deaths were intimated from other parts of Scotland. This represents a death-rate of ·71 per 1000 of the population, as compared with ·69 in 1932 and ·74 in 1931.

The deaths are classified according to municipal 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	9	·4	8	1	...	...	...	...	1	...	...	1	3	...	2	...	2	...	...	...
Canongate	19	·9	9	10	1	...	1	...	...	1	3	2	2	...	...	2	2	3	...	2
Newington	14	·7	6	8	...	...	...	...	...	2	4	1	...	1	2	1	...	3	...	...
Morningside	3	·1	2	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
Merchiston	9	·4	6	3	...	...	...	1	1	...	2	2	2	...	...	...	...	...	1	...
Gorgie	26	1·0	16	10	...	1	...	...	2	1	6	5	1	...	3	2	4	1	...	...
Haymarket	15	·8	9	6	...	1	...	...	...	...	6	1	1	3	2	1	...	...	...	...
St. Bernard's	9	·5	1	8	...	...	...	1	...	3	1	...	...	1	...	...	...	2	...	1
Broughton	11	·7	6	5	...	...	...	1	...	1	...	1	1	1	4	...	...	1	1	...
St. Stephen's	8	·5	5	3	...	...	...	1	...	...	...	1	2	...	...	...	3	1	...	...
St. Andrew's	16	1·4	11	5	...	...	1	...	...	1	3	1	4	1	2	2	1	...	...	...
St. Giles	30	1·4	21	9	...	2	2	1	2	1	4	4	5	...	3	1	2	...	3	...
Dalry	17	·8	14	3	...	...	2	1	2	...	4	1	2	1	2	...	2	...	...	...
George Square	17	·8	14	3	...	...	1	...	...	1	2	...	2	2	5	...	3	...	1	...
St. Leonard's	14	·7	9	5	...	...	1	...	...	1	2	2	1	...	2	...	...	...	3	2
Portobello	18	·7	8	10	...	...	...	1	2	3	2	2	1	3	2	1	1	...	...	...
South Leith	21	·7	11	10	...	1	...	1	...	3	6	4	2	...	1	...	1	1	1	...
North Leith	18	·9	7	11	...	3	...	1	2	3	...	...	2	1	2	2	...	1	1	...
West Leith	14	·7	5	9	...	1	...	1	1	1	...	2	1	...	3	3	...	...	...	1
Central Leith	9	·6	5	4	1	...	1	...	...	2	2	...	1	2	...	...	...	...	...	...
Liberton	11	1·0	7	4	...	...	...	...	2	1	...	2	2	1	2	...	1	...	...	...
Colinton	3	·4	...	3	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...	...
Corstorphine and Cramond	5	·4	3	2	...	...	...	...	...	...	3	...	...	2	...	...	...	...	...	...
Institutions (other than Sanatoria)	5	...	2	3	...	...	...	1	...	...	...	1	...	...	1	...	...	...	1	1
Military Quarters	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	322	·7	185	137	2	10	9	11	15	26	50	34	36	19	38	16	22	13	13	8
Edinburgh Area	235	·7	145	90	1	4	8	7	10	15	39	24	28	13	29	10	20	11	10	6
Leith Area	62	·7	28	34	1	5	1	3	3	9	8	6	6	3	6	5	1	2	2	1
Suburban Area	19	·6	10	9	...	...	...	...	2	2	3	3	2	3	2	1	1	...	...	...
Institutions	5	...	2	3	...	...	...	1	...	...	...	1	...	...	1	...	...	...	1	1
Military Quarters	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...

The following Table shows the number of deaths from pulmonary tuberculosis intimated annually since 1921, together with the death-rates, sex and age groups :—

YEAR.	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.
1921 . .	381	·9	187	194	20	30	52	81	83	65	30	20
1922 . .	367	·9	187	180	12	31	42	87	75	54	42	24
1923 . .	397	·9	214	183	10	21	42	94	96	71	39	24
1924 . .	424	1·0	225	199	19	29	57	104	83	69	28	35
1925 . .	401	·9	215	186	21	29	57	82	83	66	45	18
1926 . .	356	·8	201	155	18	31	35	84	59	56	42	31
1927 . .	381	·9	193	188	23	26	51	83	71	67	40	20
1928 . .	345	·8	195	150	20	40	40	69	70	54	38	14
1929 . .	362	·8	198	164	19	30	47	80	69	56	42	19
1930 . .	333	·8	174	159	15	17	49	67	60	62	45	18
1931 . .	326	·7	185	141	16	24	41	61	63	58	41	22
1932 . .	313	·7	170	143	12	10	40	90	59	52	31	19
1933 . .	322	·7	185	137	12	20	41	84	55	54	35	21

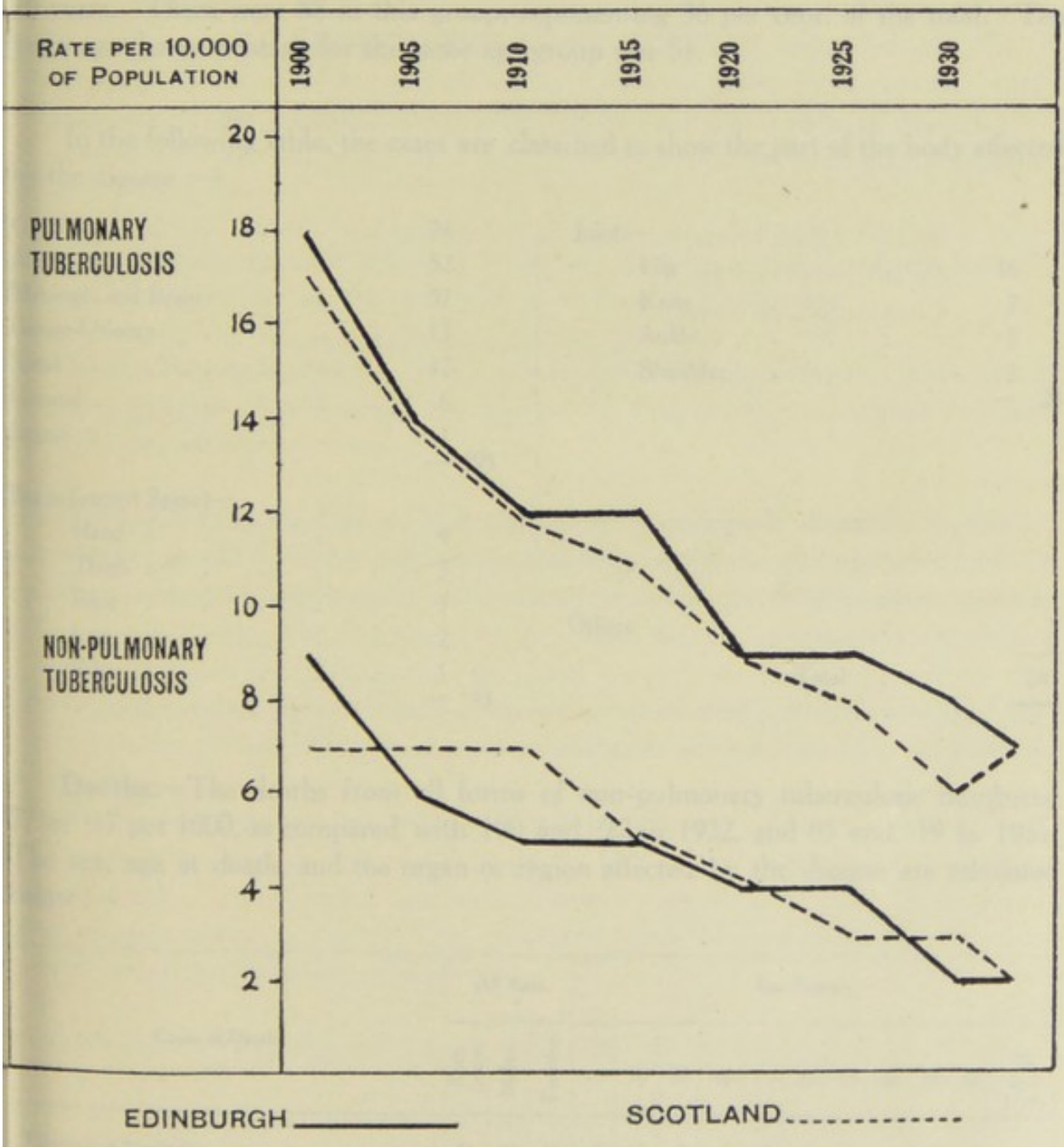
Deaths in Relation to Notification.—The deaths from pulmonary tuberculosis since 1921 are tabulated to show the lapse of time between notification and death. In previous reports I have directed the attention of the medical profession to the importance of immediate intimation of cases to the Public Health Department. It is gratifying to be able to report a measure of improvement, but there were still 35 or 11 per cent. of the total deaths, of which the Registrar's weekly returns provided the first intimation of the disease. If we are to be of any assistance to the unfortunate sufferers, early notification of the existence of the disease is essential.

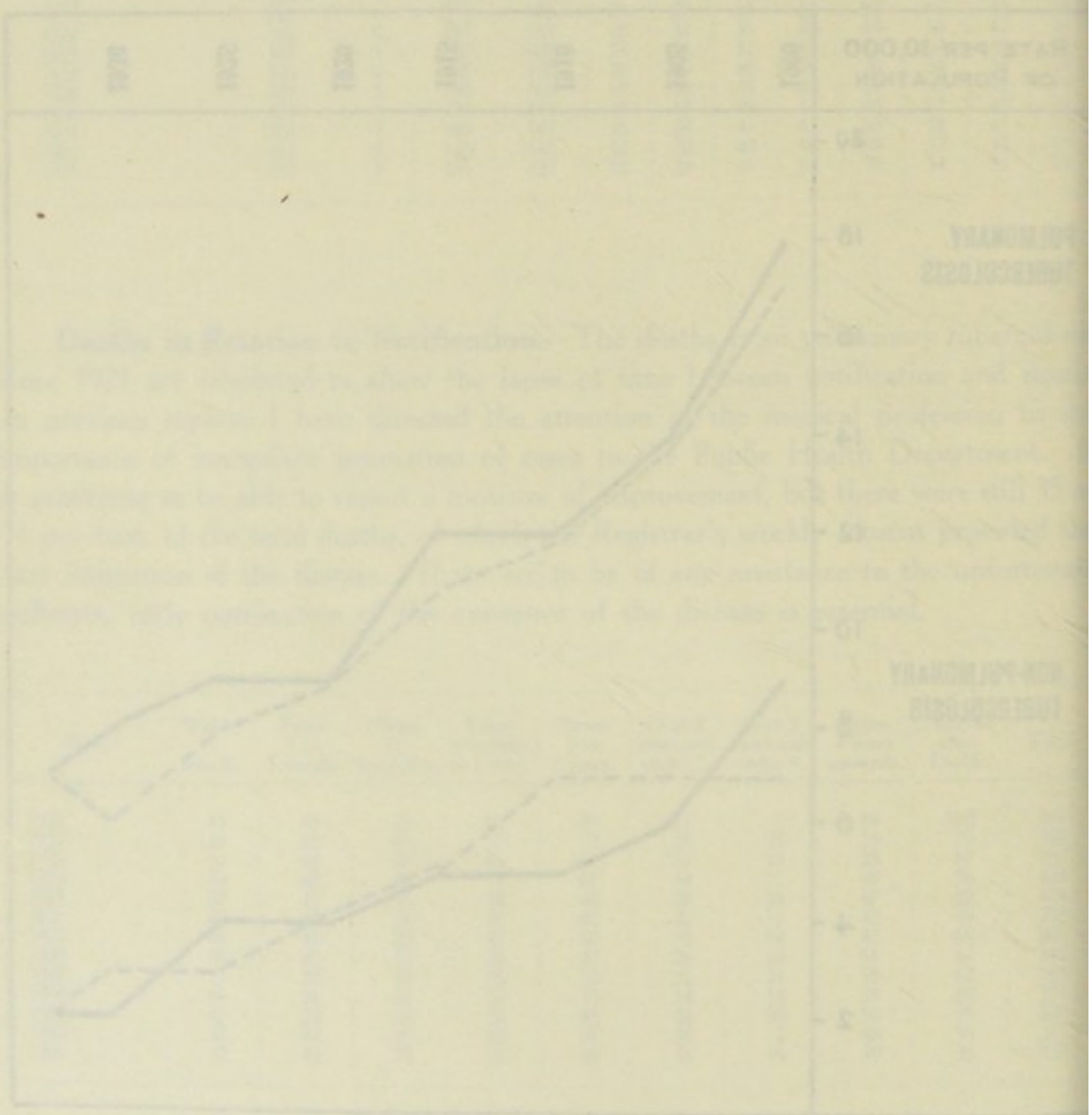
Year.	Within 1 month.	From 1 to 3 months.	From 3 to 6 months.	From 6 months to 1 year.	From 1 to 2 years.	Over 2 years and under 3.	Over 3 years and under 4.	From 4 years upwards.	Notified after Death.	Total
1921 . .	45	47	29	60	43	21	7	19	110	381
1922 . .	38	37	43	56	53	23	13	25	79	367
1923 . .	51	49	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
1933 . .	32	43	29	30	49	36	19	49	35	322

NON-PULMONARY TUBERCULOSIS.

Notifications.—A decrease among cases of non-pulmonary tuberculosis reported to the Department is recorded. The number was 243, representing an incidence rate of ·5 per 1000 of the estimated population as compared with 272 in 1932 and 254 in 1931, with rates of ·7 and ·6, respectively.

DEATH RATES PER 10,000 OF POPULATION 1900-1933





The age incidence of the notified cases is shown in the following 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 . .	28	16	20	14	9	10	2	3	4	2	1	3	1	2	2	117
Female . .	25	19	18	10	15	7	11	6	5	1	...	4	1	1	3	126
Totals . . .	53	35	38	24	24	17	13	9	9	3	1	7	2	3	5	243

The largest proportion of the notified cases related to children under the age of 10 years. There were 88 in this group, representing 36 per cent. of the total. Ten years ago the percentage for the same age group was 51.

In the following table, the cases are classified to show the part of the body affected by the disease :—

Glands	74	Joints—	
Abdomen	52	Hip	16
Meninges and Brain . . .	37	Knee	7
Genito-Urinary	13	Ankle	3
Spine	12	Shoulder	2
General	6		— 28
Lupus	1		
	— 195		
Bones (except Spine)—			
Hand	4		
Thigh	3		
Foot	3	Others	7
Leg	2	Total . .	243
Rib	1		
	— 13		

Deaths.—The deaths from all forms of non-pulmonary tuberculosis numbered 77 or ·17 per 1000, as compared with 100 and ·22 in 1932, and 85 and ·19 in 1931. The sex, age at death, and the organ or region affected by the disease are tabulated below :—

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	23	18	5	17	5	3	6	2	1	...	1	1	...
Tuberculosis of Intestines and Peritoneum . .	15	7	8	...	2	1	3	6	...	1	1	...	1	...
" " Vertebral Column . .	6	3	3	...	...	...	...	...	1	...	1	2	2	...
" " Other Bones and Joints . .	4	3	1	...	...	...	...	1	...	...	...	1	1	1
" " Skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...
" " Lymphatic System . .	1	1	...	...	...	...	...	...	...	1	...	...	...	...
" " Genito-urinary System .	5	2	3	...	...	...	...	1	1	2	...	1	...	...
Disseminated Tuberculosis, acute and chronic .	5	3	2	1	...	...	...	...	...	2	...	2	...	...
Other Non-Pulmonary Tuberculosis . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	77	42	35	6	19	6	6	14	4	7	2	7	5	1

The death-rates given in the next table are extracted from the Registrar-General's preliminary statement for 1933.

Town.	Death rate per 1000.		Town.	Death rate per 1000.	
	Pulmonary Tuberculosis.	All forms of Tuberculosis.		Pulmonary Tuberculosis.	All forms of Tuberculosis.
Glasgow	·82	1·06	Paisley	·76	·99
Edinburgh	·71	·88	Greenock	·88	1·05
Dundee	·57	·83	Motherwell & Wishaw	·56	·84
Aberdeen	·54	·66	Clydebank	·96	1·15

INSTITUTIONAL TREATMENT.

The total number of beds provided for 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	315 beds.

Royal Victoria Hospital.—The beds at this hospital are utilised for the treatment of patients in the early stages of pulmonary tuberculosis. The demand for admission is invariably heavy, and preference is given to cases most likely to benefit from a course of treatment.

Improvement was noted in most of the cases after discharge, and in a large number the progress of the disease was definitely arrested.

The following table shows the number of patients who passed through the hospital in the course of the year.

	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Men	29	69	71	1	26
Women	31	73	70	...	34
Children	9	9	13	...	5
Totals	69	151	154	1	65

There were 154 patients discharged from the hospital, and of that number 18 had been admitted for observation purposes and were eventually diagnosed as suffering from non-tubercular affections. The remaining 136 patients were cases of tuberculosis and they are shown in age groups as follows :—

	Under 5	5–10	10–15	15–20	20–30	30–40	40–50	50–60	Over 60	Total.
Males	...	2	5	14	24	19	7	1	...	72
Females . . .	...	1	7	7	24	18	6	1	...	64
Totals . .	...	3	12	21	48	37	13	2	...	136

The average length of residence of the discharged patients was 206 days.

The mental outlook of the patients is not neglected and the various forms of light work provided, under medical supervision, have proved beneficial.

The female open-air shelters which have recently been erected at the Royal Victoria Hospital now afford accommodation for the patients who were formerly housed in the annexe. The two wards thus vacated in the annexe have been transformed into a sitting room and recreation room for the female patients, who hitherto have been without such facilities.

At this hospital special attention is devoted to the diligent use of any new remedy likely to prove a benefit in the treatment of pulmonary tuberculosis.

Colinton Mains Hospital.—The accommodation for tuberculosis at this hospital consists of 221 beds, 148 of which are reserved for the reception of pulmonary cases and 73 for non-pulmonary cases.

Pulmonary Tuberculosis.—The majority of the patients admitted are usually in the later stages of the disease, and it is remarkable how many of them respond to open-air treatment and regular diet, and show a decided improvement in their general health. It is to be expected, keeping in view the condition of the patients on admission to hospital, that the mortality rate is heavy, and during the year 36 per cent. of the cases died. Many of those discharged showed marked improvement in health and in addition their period of residence in the institution inculcated lessons in personal hygiene and discipline.

An extensive outbreak of scarlet fever in the City caused pressure on the accommodation at the City Hospital, and as a temporary measure 43 male tuberculosis patients were removed to a ward at the Northern General Hospital. The beds thus liberated helped to bridge an emergency.

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

	Remained at 1st January.	Admitted	Discharged.	Died.	Remaining at 31st December.
Men . .	87	230	152	87	78
Women . .	45	138	90	47	46
Children . .	2	5	4	...	3
Totals .	134	373	246	134	127

In the course of the year, 246 patients were discharged and 134 died. Of these 380 cases, 18 were found to be suffering from diseases other than tuberculosis.

The age and sex distribution of the remaining 362 patients were as under :—

	Under 5	5–10	10–15	15–20	20–30	30–40	40–50	50–60	Over 60	Total.
Males	1	1	1	19	60	43	48	36	17	226
Females . . .	...	...	4	16	58	38	12	6	2	136
Totals . .	1	1	5	35	118	81	60	42	19	362

The average duration of treatment of the discharged patients was 152 days.

Non-Pulmonary Tuberculosis.—During the year 106 cases of non-pulmonary tuberculosis were admitted to the hospital wards, and in 30 or 28·3 per cent., the disease was localised in the spine. In 18 or 17 per cent. of the cases the hip joint was the part affected, while 25 or 23·6 per cent. suffered from abdominal tuberculosis.

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

Sex.	Remained at 1st January.	Admitted.	Discharged.	Died.	Remaining at 31st December.
Males . .	37	53	43	10	37
Females . .	36	53	46	7	36
Totals .	73	106	89	17	73

The sex and age distribution of the patients admitted was :—

Sex.	Under 5	5–10	10–15	15–20	20–30	30–40	40–50	50–60	Over 60	Total.
Males	5	14	7	4	12	3	3	5	...	53
Females . . .	4	9	8	11	8	6	3	3	1	53
Totals . .	9	23	15	15	20	9	6	8	1	106

The part affected by the disease in the 106 patients admitted to hospital was as under :—

Part Affected.	Males.	Females.	Part Affected.	Males.	Females.
Spine	19	11	Kidney	...	1
Abdomen	9	16	Rib	...	2
Glands	2	2	Leg, Foot	2	3
Hip	7	11	Genito-Urinary	3	1
Knee	7	5	Lupus	...	1
Elbow	2	...	Dactylitis	1	...
Malar	1	...	Totals . .	53	53

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.
Rib	1	1	...	...	...	2	...	2	...	...	3
Kidney	1	...	1	...	...	...	...	...	...	...	1
Abdomen	7	3	2	...	2	14	...	11	1	2	21
Foot	3	1	1	1	...	5	1	4	...	...	8
Glands	5	1	4	...	...	3	1	2	...	...	8
Hip	5	1	2	1	1	7	1	4	...	2	12
Knee	6	2	2	1	1	4	1	2	...	1	10
Spine	19	...	10	5	4	15	1	10	2	2	34
Malar	1	1	...	...	...	...	...	...	...	...	1
Generalised T.B.	1	...	...	...	1	...	...	...	...	...	1
Elbow	...	...	...	...	...	1	...	1	...	...	1
Dactylitis	2	1	1	...	...	...	...	...	...	...	2
Salpingitis	...	...	...	...	...	2	...	2	...	...	2
Epididymitis	2	...	...	1	1	...	...	...	...	...	2
Totals	53	11	23	9	10	53	5	38	3	7	106

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—			
	Epididymis	1	Acute Phthisis and Generalised T.B.
	Spine	4	T.B. Meningitis (3).
	Hip	1	Generalised (1).
	Knee	1	Generalised T.B. and Toxæmia (1).
	Abdomen	2	Generalised T.B. (2).
	Generalised	1	Generalised T.B. (1).
Females—			
	Spine	2	Generalised Tuberculosis (2).
	Abdomen	2	Tubercular Meningitis (1). Acute Phthisis (1).
	Hip	2	Generalised Tuberculosis (2).
	Knee	1	Generalised Tuberculosis (1).

The treatment of non-pulmonary tuberculosis by Ultra-Violet ray therapy is extensively employed at the hospital, open arc lamps for the production of "Artificial Sunlight" being provided in both the male and female wards. The results obtained by this form of treatment have continued to be most encouraging. In various tuberculous conditions, especially where glands or the abdomen are affected, the patients have benefited materially.

Polton Farm Colony.—When it is considered that a period of residence in the country would prove beneficial, certain selected cases are sent to Polton Farm Colony for a course of occupational treatment. Under the supervision of an experienced farm grieve, the patients, both male and female, assist in the rearing of pigs and poultry.

The number of patients in residence during the year was 19.

The expenditure for the upkeep of the institution and the farm for the year to 15th May, 1933, was £2,677, while the revenue from the sale of pigs, poultry, eggs, etc., for the same period amounted to £1,295. This represents a loss on the year's working of £1,382.

TUBERCULOSIS DISPENSARIES.

The tuberculosis dispensaries play an important part in the scheme for the treatment and repression of tuberculosis. Advice is sought not only by the patients themselves but by medical practitioners who refer difficult and doubtful cases for diagnosis.

The Child Welfare and School Medical departments continue to make full use of this service in the interests of young children, and much good work is done.

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	749	77	3,942	796
Women	748	121	3,859	611
Children	992	284	4,129	957
Totals	2,489	482	11,930	2,364

Home Visitation.—Persons suffering from tuberculosis are visited regularly at their homes by the medical officers and nurses attached to the dispensaries. In the course of the year 14,388 such domiciliary visits were made, the number in each month being as follows :—

	Insured.	Not Insured.	Total.
January	560	737	1,297
February	561	691	1,252
March	688	768	1,456
April	519	592	1,111
May	773	752	1,525
June	639	716	1,355
July	409	572	981
August	255	531	786
September	319	485	804
October	606	793	1,399
November	606	806	1,412
December	469	541	1,010
Totals	6,404	7,984	14,388

The improvement noted last year in the number of attendances at the tuberculosi dispensaries of the patients discharged from hospitals after treatment for the diseas is being maintained. This is an encouraging fact and is a reward for the untirin efforts of the medical and nursing staff in stressing the importance of attendance at on or other of the clinics for periodic overhaul.

Artificial Sunlight Treatment.—The Ultra-Violet Ray Clinic at the Roy Victoria Dispensary was again the scene of great activity during the year, and 32 patients, 282 medical and 44 surgical, received a course of treatment.

The installation consists of four arc and one mercury vapour lamps, and a specially-trained nurse superintends the treatment which usually extends over a period of from one to six months. Exposures made during the year numbered 15,018.

Children suffering from debility and other conditions are referred to the centre by the School Medical Officers, who report very favourably on the results achieved.

Extra Nourishment.—When in the opinion of the Tuberculosis Officer, the health of the sufferer is likely to benefit, a course of special food consisting of milk, butter and fresh eggs is prescribed for those who would otherwise be unable to provide the nourishment for themselves. The course usually covers a period of two months, and where improvement is noted this period is extended. Good results have attended this form of treatment in many cases.

Drugs.—The Public Health Department makes itself responsible for the issue, free of charge, of all necessary drugs and medicines, to patients attending the tuberculosis dispensaries.

The cost of prescriptions granted by medical practitioners to tuberculous patients, and dispensed by panel chemists, is also borne by the Department.

In order to secure uniformity in pricing, these prescriptions are checked by the Central Checking Bureau for Scotland, and in all 1,701 were issued in the course of the year at a total cost of £153 8s. 3d.

CITY HOSPITAL FOR INFECTIOUS DISEASES.

REPORT BY MEDICAL SUPERINTENDENT.

During the year there were 6,033 patients admitted to the Wards, of whom 454 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 924. The average daily number under treatment was 622.

The number of patients admitted during 1933 exceeded the total of any previous year by no less than 1,500.

Scarlet Fever and Diphtheria.—An unusually extensive epidemic of scarlet fever during the latter half of the year severely taxed the resources of the hospital. From October onwards it was only by discharging "clean" cases of scarlet fever as early as the 14th to 21st day of disease that we were just enabled to cope with the steady influx of cases; several hundred cases were treated at home. Fortunately, the disease was of a mild type—the fatality rate for 3,461 cases treated in hospital was 0·55 per cent.

A mild form of diphtheria still prevails in Edinburgh. The lessened tendency to laryngeal involvement has been a striking feature in recent years. This change has been noted in other countries.

Immunization against Diphtheria and Scarlet Fever.—One apparently successfully immunized nurse suffered from a mild attack of diphtheria. That only three nurses, all Dick positive reactors, should have contracted scarlet fever during a year of exceptional prevalence of the disease is noteworthy. Over 1,000 scarlet fever patients under 10 years of age were, with the consent of their parents, immunized against diphtheria whilst in hospital. The consent rate was 80 per cent. Formol toxoid (B.W. & Co.) was the immunizing agent.

Health of Staff.—The following infections were noted in the nursing staff:—diphtheria (1); scarlet fever (3); erysipelas (3); rheumatic fever (1); rubella (8); mumps (2); influenza (15); pulmonary tuberculosis (1); primary pneumonia (1); catarrhal jaundice (3). No deaths occurred.

Training of Nurses.—Of 45 nurses who completed their training during the year 39 went to various hospitals for general training, and 3 obtained posts as staff nurses. Forty-one nurses passed the State Examination.

Teaching.—Two hundred and fifty undergraduates attended clinics at the hospital. These were divided into six sections entailing 90 hours' instruction. Two courses were held for 17 candidates for the Diploma in Public Health. Three meetings were held during the summer vacation for post-graduate instruction. Including lectures to the nursing staff, 236 hours were devoted to teaching during the course of the year.

Medical Staff.—Following the resignation of Dr. W. T. Gardiner, owing to ill health, Dr. C. E. Scott, F.R.C.S., was appointed aural surgeon and commenced duties

in July. Dr. Scott's activities may be gauged from the fact that tonsils and/or adenoids were removed in 362 patients, many by dissection, and mastoidectomy was performed in 40 cases. I have nothing but praise for the skilful and willing manner in which he performed his duties during an exceptionally heavy winter.

Mr C. F. W. Illingworth, F.R.C.S., who succeeded Mr Frank Jardine, F.R.C.S., has been of great help in surgical problems. He performed major operations for the relief of appendicitis, intussusception, volvulus, peritonitis, pelvic abscess, etc. The keen interest he has shown in the cases of surgical tuberculosis is being followed by excellent curative results.

Dr. A. L. K. Rankin, the senior assistant, again proved a tower of strength. The resident medical officers deserve special praise for the efficient and conscientious manner in which they discharged duties of an exceptionally heavy nature. The services of Dr. A. Reid, an ex-resident medical officer were of great value during November and part of December ; he acted as a supernumerary.

Laboratory.—During the year 6,107 reports were issued from the hospital laboratory. Mr Craig, the laboratory assistant, deserves praise for the work he has performed. We are deeply indebted to Professor Mackie and his assistants at the Bacteriology Department of the University for taking all the hospital laboratory work off our hands for a period of thirteen weeks during the height of the epidemic.

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 during an exceptionally trying year. 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, porters, and domestic staff have all carried out their duties in a very satisfactory manner.

Mr Stirling's duties entailed, for one period of the year, the feeding of over 1,200 individuals. The results proved him to be a most capable and efficient steward.

Structural Alteration.—The male surgical tuberculosis pavilion was reconstructed and a new light room and plaster room provided. A great improvement in accommodation has resulted. The pavilion, for female cases of surgical tuberculosis, is in course of reconstruction.

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

DIPHTHERIA.

Of 865 cases admitted to the diphtheria pavilions, 590 were finally diagnosed as suffering from diphtheria. The addition of five cases erroneously diagnosed as suffering from scarlet fever bring the diphtheria total to 595. Of the remainder 157 were

" carriers " and 118 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 85 cases ; naso-pharyngeal catarrh, laryngitis, bronchitis or pneumonia was present in 17 ; 14 were cases of scarlet fever. One patient suffered from acute poliomyelitis and another from tuberculous peritonitis.

Twenty-eight of the diphtheria patients had an intercurrent infection, namely, haemolytic streptococcal tonsillitis in 18, scarlet fever in 4, chickenpox in 3, pneumonia in 2, and whooping cough in 1.

There were 22 deaths ascribed to diphtheria. The fatality rate calculated on actual clinical cases was 3·7 per cent. Excluding laryngeal cases the fatality rate was 2·9. The mortality of 20 laryngeal cases was 25 per cent. (5 deaths). Three hopeless cases died within a few hours of admission.

Two cases tracheotomied prior to admission died 7 and 12 hours respectively after entering hospital. One child of two years, moribund on admission, died before any operative procedure could be carried out. Six patients were treated by aspiration only—one of these, a child of three years died in the fifth week. The actual cause of death was an intercurrent pneumonia and empyema. Four cases were intubated following aspiration—one died of toxic myocarditis on the ninth day of disease. Respiratory obstruction had been relieved by aspiration and intubation. No operation was required in 8 patients ; all recovered. The actual operative death rate, including treatment by suction was 33·3 per cent. This disappointingly high figure is readilly explained by the facts detailed above.

The paralysis rate, excluding cardiac involvement, was 5·7 per cent.

Serum rashes were noted in 76 cases or 12·7 per cent. of the diphtheria patients treated.

Of the 22 deaths from diphtheria, 6 occurred within 24 hours of entering hospital. Sixteen deaths (72·7 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 years.	1+ years.	2+ years.	3+ years.	4+ years.	5–9 years.	10–14 years.	15–19 years.	20–29 years.	30–39 years.	40–49 years.	50+ years.	Total.
Recovered	Males	4	7	15	11	20	94	63	11	7	3	1	1	237
	Females	4	5	10	18	14	128	62	36	33	18	6	2	336
Died	Males	...	1	1	1	1	4	...	...	...	...	...	...	8
	Females	...	...	...	1	2	6	3	1	...	...	1	...	14
Total		8	13	26	31	37	232	128	48	40	21	8	3	595

Diphtheria fatality rate, 3·7 per cent.

SCARLET FEVER.

During the year there were 3,567 cases admitted to the hospital notified as suffering from scarlet fever. The diagnosis was confirmed in 3,439 cases. The addition of 14 cases notified as suffering from diphtheria, 3 from rubella and 5 from measles brings the scarlet fever total to 3,461.

Amongst the 128 cases erroneously diagnosed the following diseases were noted :— Tonsillitis (53) ; erythema (17) ; rubella (16) ; chickenpox (8) ; pneumonia (7) ; diphtheria (5) ; otitis media (4) ; catarrh (3) ; bronchitis (2) ; whooping-cough (2) ; rubella and whooping-cough (1).

There were 19 deaths. The case mortality was 0·55 per cent. Four of the deaths occurred within a few hours of admission, death being due to toxic scarlet (1), septic scarlet (2) and septicæmia (1).

Of the remaining deaths two were due to scarlet fever and septicæmia ; three to septic scarlet fever ; one to toxic scarlet fever ; one followed double mastoidectomy ; two resulted from pneumonia ; two from peritonitis ; and one from streptococcal meningitis.

The following are the principal complications which were noted :—

Rhinitis (purulent)	256	cases or 7·39	per cent.
Adenitis	279	,, 8·06	,,
Otorrhœa	219	,, 6·32	,,
Arthritis, myofibrositis	66	,, 1·90	,,
Nephritis, albuminuria	28	,, ·80	,,
Vaginitis	27	,, ·78	,,
Endocarditis	2	,, ·06	,,

Forty-seven of the scarlet fever patients were suffering from an intercurrent infection, namely, 23 from chickenpox, 3 from pneumonia (2 died), 2 from rubella, 12 from whooping-cough, 6 from rheumatic fever, and 1 from dysentery.

Table showing age and sex of scarlet fever patients :—

Age—Period in Years.		0–1 yrs.	1+ yrs.	2+ yrs.	3+ yrs.	4+ yrs.	5–9 yrs.	10–14 years.	15–19 years.	20–29 years.	30–39 years.	40–49 years.	50–59 years.	60+ years.	Total.
Recovered	Males	11	47	86	129	126	645	302	73	86	30	10	3	...	1548
	Females	12	38	87	107	141	768	420	105	147	54	11	3	1	1894
Died	Males	...	...	...	1	2	2	...	...	...	1	...	1	...	7
	Females	1	...	3	...	...	4	...	...	2	1	...	...	1	12
Total		24	85	176	237	269	1419	722	178	235	86	21	7	2	3461

Scarlet Fever fatality rate, 0·55 per cent.

There were 91 alleged "infecting cases" or 2·63 per cent. of the total number of scarlet fever convalescents discharged. Of the 91 alleged "infecting cases" 82 were "clean cases" whilst in hospital. The 91 "infecting cases" were responsible for 105 "return cases." The return case rate was 3·03 per cent.

Anti-toxic serum was administered to 2,080 cases (60·10 per cent.). The intravenous route was employed in over 1,200 patients.

Tonsils and adenoids were removed in 336 cases or 9·70 per cent.

Mastoidectomy was performed in 31 cases or 0·89 per cent.

Relapse occurred in 21 cases or 0·60 per cent.

ENTERIC FEVER.

Sixty cases were admitted to the hospital notified as suffering from enteric fever. The diagnosis was confirmed in 44 patients. The corrected diagnosis in 16 cases was as follows :—typhoid contact (7), gastro-enteritis (3), rheumatic fever (1), pulmonary tuberculosis (1), sub-acute bacterial endocarditis (1), splenomegaly (1), bronchitis (1), and pneumonia convalescent (1).

The infecting organism was the bacillus typhosus in 8 cases, and the bacillus paratyphosus B. in 36 cases. One of the cases of paratyphosus B. infection was admitted by arrangement from the country.

No deaths occurred.

The following complications were noted :—Intestinal hæmorrhage (3), phlebitis (2), cystitis (2), lobar pneumonia (1), orchitis (1).

Table showing 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.	Total
Recovered	Males .	3	1	4	1	4	1	2	1	...	17
	Females .	3	...	2	5	10	2	3	1	1	27
Died	Males .	...	...	...	...	...	...	...	...	...	...
	Females .	...	...	...	...	...	...	...	...	...	...
Total .		6	1	6	6	14	3	5	2	1	44

ERYSIPELAS.

There were 229 cases admitted to the wards notified as suffering from erysipelas. The diagnosis was confirmed in 185 patients.

The corrected diagnosis in the remaining 44 cases was as follows :—cellulitis (17), dermatitis (7), erythema (5), septic phlebitis (2), herpes (2), dental abscess (2), abscess (2), mastoid abscess (1), dacryocystitis (1), septic wound (1), seborrhœa (1), eczema (1), blepharitis (1), constipation (1).

Sixteen of the 185 cases of erysipelas died. Four deaths occurred in the non-erysipelatous group. The actual cause of death in six of the erysipelas patients was as follows :—Septicæmia (2), bronchitis (1), diabetes (1), cerebral tumour (1), chronic mitral disease (1).

The inflammation primarily affected the face in 168 (90·81 per cent.) of the 185 cases. Fifteen patients (8·1 per cent.) had suffered from a previous attack. One patient had had two previous attacks and another three.

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.	Total.
Recovered	Males	7	...	3	8	16	15	12	7	4	72
	Females	7	2	6	12	9	23	25	8	5	97
Died	Males	1	...	1	...	1	...	2	...	3	8
	Females	1	...	...	2	...	...	3	2	...	8
Total		16	2	10	22	26	38	42	17	12	185

Erysipelas fatality rate, 8·64 per cent.

CEREBRO-SPINAL MENINGITIS.

Forty-nine suspected cases of cerebro-spinal fever were admitted to hospital, of which 36 proved to be meningococcal infections. In addition there was one case of meningococcal meningitis misdiagnosed as whooping-cough, making a total of 37.

The following diseases were noted in the group of 13 misdiagnosed cases :—tubercular meningitis (2), tonsillo-pharyngitis (2), acute pneumonia (1), bronchitis (1), neuralgia (1), nasal catarrh (1), otitis media, bronchitis and malnutrition (1).

Twenty-two cases of meningococcal meningitis died.

Excluding infants the death rate was 47·8 per cent ; under one year 78·5 per cent.

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

Age—Period in Years.		Under 1 year.	1–4 years.	5–9 years.	10–14 years.	15–19 years.	20–29 years.	30–39 years.	Total.
Recovered	Males	...	2	1	...	...	1	2	6
	Females	3	...	2	1	...	3	...	9
Died	Males	5	3	...	1	1	2	...	12
	Females	6	2	...	1	...	1	...	10
Total		14	7	3	3	1	7	2	37

Cerebro-spinal meningitis fatality rate, 59·45 per cent.

PUERPERAL INFECTION.

Of 155 cases notified as puerperal fever or puerperal pyrexia, the diagnosis of puerperal infection was confirmed in 139. Fifty-six patients were admitted from districts outwith the City boundaries.

There were 17 deaths, the mortality rate being 12·2 per cent.

Sixty-nine patients were primiparæ and seventy multiparæ. Nine deaths (13·04 per cent.) occurred among the primiparæ and eight (11·4 per cent.) among the multiparæ.

The corrected diagnosis in 16 cases was as follows :—urinary infection (3) ; secondary anaemia (2) ; mastitis (2) ; pulmonary tuberculosis (2) ; phlebitis (2) ; pulmonary congestion (1) ; puerperal mania (1) ; sciatica (1) ; gonorrhœa (1) ; and pyelitis (1).

Pyelitis, cystitis or bacilluria was present in 55 patients (39 per cent.).

Table showing age of puerperal infection patients :—

Age-period in Years.	15–19 years.	20–29 years.	30–39 years.	40+ years.	Total.
Recovered	7	79	27	9	122
Died	1	7 (8·1%)	9 (25·0%)	...	17
Total	8	86	36	9	139

Puerperal Infection fatality rate, 12·2 per cent.

Forty-one per cent. of the cases were admitted on or before the third day of illness. The average day of illness on which the patient first received treatment in hospital was the fifth.

Streptococcus hæmolyticus was isolated from the blood in 17 patients (12·2 per cent.) and from the uterus in 67 (48·0 per cent.).

PNEUMONIA.

There were 89 patients admitted to the wards notified as suffering from either primary pneumonia, or influenzal broncho-pneumonia. The presence of pneumonia was confirmed in 54 cases. The addition of 16 cases—7 erroneously diagnosed as suffering from scarlet fever, 2 from diphtheria, 3 from cerebro-spinal meningitis, 3 from whooping-cough and 1 from measles—brings the total number of cases of pneumonia to 70.

Thirty-five cases were finally diagnosed as primary or lobar pneumonia, and 35 as broncho-pneumonia.

Five deaths occurred from lobar pneumonia, and 15 from broncho-pneumonia.

The corrected diagnosis in 35 patients was as follows :—influenza (10) ; influenza complicated by bronchitis (9) ; bronchitis (9) ; tonsillitis (1) ; influenza and tracheitis (1) ; pleurisy and bronchitis (1) ; pyelitis (1) ; cellulitis of chest wall (1) ; empyema (1) ; and gastric carcinoma (1). Three deaths occurred in this group ; the cellulitis and two cases of bronchitis.

Table showing age and sex of pneumonia patients :—

Age-period in Years.		0–1 years.	1–2 years.	3–4 years.	5–9 years.	10–14 years.	15–19 years.	20–29 years.	30–39 years.	40–49 years.	50–59 years.	60+ years.	Total.
Recovered	Males	1	2	1	5	5	2	6	7	4	2	...	35
	Females	...	1	...	2	...	5	3	2	1	1	...	15
Died	Males	2	1	1	...	...	...	2	3	1	3	...	13
	Females	4	1	...	...	...	...	...	1	...	...	1	7
Total		7	5	2	7	5	7	11	13	6	6	1	70

Pneumonia fatality rate, 28·57 per cent.

MEASLES.

There were 35 cases admitted to the wards notified as suffering from measles. The diagnosis was confirmed in only 4 patients. In addition there was one case of measles misdiagnosed as scarlet fever, making a total of 5 cases. The corrected diagnosis in 31 patients was as follows:—rubella (20); scarlet fever (5); erythema (3); seborrhœic dermatitis (1); lobar pneumonia (1); and Flexner dysentery (1). There were no deaths. The only complication noted was otorrhœa in one case.

Table showing age and sex of measles patients :—

Age-period in Years.		2–3 years.	3–4 years.	5–9 years	20–29 years	Total.
Recovered	Males	...	...	...	1	1
	Females	1	1	1	1	4
Died	Males	...	...	...	...	...
	Females	...	...	...	...	...
Total		1	1	1	2	5

WHOOPING-COUGH.

The number of cases admitted to the wards notified as suffering from whooping-cough was 196. The diagnosis was confirmed in 188 patients. The addition of two cases notified as scarlet fever brings the total to 190. Of the 8 erroneously diagnosed cases 3 were found to be suffering from broncho-pneumonia, 2 from bronchitis, 2 from catarrh, and one from cerebro-spinal meningitis. Broncho-pneumonia was present as a complication in 54 cases on admission.

There were 43 deaths, of which 33 (76·8 per cent.) were due to broncho-pneumonia.

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.	Total.
Recovered	Males	14	32	10	6	7	6	75
	Females	17	22	16	9	7	1	72
Died	Males	9	11	1	...	...	...	21
	Females	11	2	5	3	1	...	22
Total		51	67	32	18	15	7	190

Whooping-cough fatality rate, 22·63 per cent.

CHICKENPOX.

The diagnosis was confirmed in 129 out of 135 patients admitted to the wards notified as suffering from chickenpox. The addition of 8 cases erroneously diagnosed as scarlet fever brings the total to 137.

The corrected diagnosis in six cases was impetigo (2), septic rash (2), ringworm (1), and no disease (1).

One chickenpox patient died from an intercurrent influenzal meningitis.

Table showing age and sex of chickenpox 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.	Total.
Recovered	Males .	9	13	15	9	2	10	1	1	4	64
	Females .	4	21	18	9	6	11	1	1	1	72
Died	Males .	...	...	...	...	...	...	...	...	...	...
	Females .	1	...	...	...	...	...	...	...	...	1
Total .		14	34	33	18	8	21	2	2	5	137

Chickenpox fatality rate, 0·73 per cent.

RUBELLA.

The diagnosis was confirmed in 89 out of 94 patients admitted to hospital alleged to be suffering from rubella. In addition there were 37 cases of rubella which were notified as scarlet fever (17) and measles (20). This makes a total of 126 cases of rubella. All the cases recovered. Three patients were suffering from intercurrent whooping-cough and one from tonsillitis.

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.	30–39 years.	40–49 years.	Total.
Recovered	Males . .	...	1	3	4	3	6	3	7	11	...	...	38
	Females . .	2	1	1	4	6	9	1	23	35	4	2	88
Died	Males . .	...	...	...	...	...	...	...	...	...	...	...	...
	Females . .	...	...	...	...	...	...	...	...	...	...	...	...
Total . .		2	2	4	8	9	15	4	30	46	4	2	126

BACILLARY DYSENTERY.

Fifty-six cases were admitted to the wards notified as dysentery. The diagnosis was confirmed in 44. Two cases erroneously diagnosed as measles and scarlet fever respectively were found to be suffering from dysentery. This makes a total of 46 cases of bacillary dysentery. Various strains of B. dysenteriæ Flexner were isolated from 40 cases and B. dysenteriæ Sonne from six. There were two deaths from Flexner infection.

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.	Total.
Recovered	Males	...	6	3	1	...	1	1	2	1	1	16
	Females	...	3	4	3	1	10	1	1	3	2	28
Died	Males	1	...	1	...	...	...	...	...	...	...	2
	Females	...	...	...	...	...	...	...	...	...	...	...
Total		1	9	8	4	1	11	2	3	4	3	46

Bacillary Dysentery fatality rate, 4·3 per cent.

OTHER DISEASES.

Epidemic Parotitis.—Twenty-three cases were admitted as suffering from mumps. The diagnosis was confirmed in 22 patients, all of whom recovered.

Epidemic Encephalitis.—Five cases were admitted as suffering from epidemic encephalitis. The diagnosis was confirmed in four patients, of whom one died. One patient, erroneously diagnosed, died from tubercular meningitis.

Undulant Fever.—Two cases of undulant fever were admitted. Infection with Br. abortus (bovine) was confirmed in both. Recovery ensued.

Anterior Poliomyelitis.—Two cases, one notified as diphtheria and the other as cerebo-spinal meningitis, were found to be suffering from acute poliomyelitis. Both patients recovered.

Glandular Fever.—One case was admitted to the wards notified as suffering from glandular fever. The diagnosis was confirmed and the case recovered.

Smallpox.—One patient admitted for observation from the country was found to be suffering from erythema iris.

Vincent's Angina.—The exhibition of salvarsan caused a rapid cure in the solitary case of Vincent's Angina admitted during the year.

LABORATORY ANNUAL REPORT.

Nature of Specimen.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Total.
Throat Swabs for B. diphtheriæ	335	343	420	320	261	218	234	215	242	152	...	...	2740
Urines	66	38	35	34	27	39	56	64	61	51	37	60	568
Stools	44	38	21	25	23	33	28	31	17	19			279
Cerebro-spinal Fluid	52	50	67	23	42	57	27	4	2	...			324
Blood Cultures	22	17	27	19	16	21	15	17	27	14			195
Uterine Cultures	24	12	21	14	11	14	18	15	28	17			174
Blood Plates for S. Hæmolyticus	56	76	45	67	59	47	57	56	81	91			635
Widals	9	1	...	6	8	13	7	3	2	3			52
Sputum (T.B.)	103	90	113	104	93	97	114	102	114	98			1028
General	11	7	15	7	11	15	10	14	9	13			112
Totals	722	672	764	619	551	554	566	521	583	458	37	60	6107

Specimens submitted to the Bacteriological Department of the University.

Laboratory closed from 9th October, 1933, till 11th January, 1934.
Sixteen post-mortem examinations were performed.

BACTERIOLOGICAL SERVICES.

Carried out for the City by the Bacteriology Department of Edinburgh University from January to December, 1933.

ROUTINE EXAMINATIONS.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Swabs and Cultures from Throat and Nose for Examination for B. diphtheriæ :													
Total	400	356	508	405	391	389	492	347	353	680	1305	1021	6647
Positive	58	60	95	47	54	50	68	57	49	106	272	189	1105
Negative	342	296	413	358	337	339	424	290	304	574	1033	832	5542
Cultures for B diphtheriæ Virulence Test :—													
Total	10	11	23	3	14	12	10	5	6	4	52	20	170
Positive	4	5	8	1	7	4	4	0	1	0	27	11	72
Negative	6	6	15	2	7	8	6	5	5	4	25	9	98
Throat swabs for Hæmolytic Streptococci :													
Total	16	4	7	...	17	12	9	14	18	202	205	240	744
Positive	3	0	5	...	10	7	9	9	12	82	118	101	356
Negative	13	4	2	...	7	5	0	5	6	120	87	139	388
Throat swabs from suspected cases of Vincent's Angina :—													
Total	7	6	22	...	2	2	...	...	6	5	10	2	62
Positive	5	3	13	...	2	1	...	...	2	2	4	0	32
Negative	2	3	9	...	0	1	...	...	4	3	6	2	30
Sputa for B. tuberculosis :—													
Total	223	235	209	160	191	152	108	116	114	151	222	191	2072
Positive	35	23	19	18	28	19	26	28	22	23	45	49	335
Negative	188	212	190	142	163	133	82	88	92	128	177	142	1737
Urine for B. tuberculosis :—													
Total	1	3	...	2	4	5	...	1	2	1	4	9	32
Positive	0	0	...	0	0	0	...	0	0	0	0	4	4
Negative	1	3	...	2	4	5	...	1	2	1	4	5	28
Fæces and Urine for Organisms of Enteric Fever or Dysentery :—													
Total	2	21	11	14	8	15	...	9	1	18	66	13	178
Pos. Typh.	0	2	0	0	0	0	...	0	0	0	1	0	3
Pos. Para B.	0	0	0	0	1	3	...	0	0	1	2	1	8
Pos. Dys. Flexner-Y.	0	4	6	3	1	0	...	0	0	0	2	1	17
Pos. Dys. Sonne.	0	0	0	0	0	0	...	0	0	0	3	0	3
Negative	2	15	5	11	6	12	...	9	1	17	58	11	147
Blood for Widal Reaction :—													
Total	2	3	2	9	9	8	12	9	4	10	7	12	87†
Pos. Typh.	1	0	0	0	0	3	1	1	2	0	0	2	10
Pos. Para B.	0	0	0	2	4	2	0	0	0	2	0	2	12
Pos. Br. Abor.	0	0	0	0	1	0	2	0	0	1	0	0	4
Pos. Dysent.	0	0	0	0	0	0	0	0	0	0	3	0	3
Negative	1	3	2	7	4	3	9	8	2	7	4	8	58
Blood for Syphilis Flocculation Test :—													
Total	12	19	14	15	17	17	20	5	12	9	26	51	217
Positive	1	4	1	3	3	1	2	1	0	1	5	7	29
Negative	11	15	13	12	14	16	18	4	12	8	21	44	188
Vaginal, Cervical and Urethral smears and swabs for Gonococci :—													
Total	2	...	...	...	1	16	7	...	4	2	24	23	79
Positive	1	...	...	...	1	6	0	...	1	0	0	5	14
Negative	1	...	...	...	0	10	7	...	3	2	24	18	65
Rats examined for Plague Infection* :—													
Total	10	15	...	...	15	4	...	...	8	12	10	...	74
Positive	0	0	...	...	0	0	...	...	0	0	0	...	0
Negative	10	15	...	...	15	4	...	...	8	12	10	...	74

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

† Some of these were repeat examinations from the same patient.

Other Examinations	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Brought forward.
Classified as follows :—	19	25	28	30	53	47	52	57	46	56	156	228	10,362

Nature of Specimen.	Examination Requested.	Total.	
Throat, nasal and ear swabs	General Examination	107	
Throat swab	For Bacillus tuberculosis	1	
Sputum	General Examination	16	
Sputum	For Type of Pneumococcus	2	
Sputum	For Actinomyces	1	
Blood	For Malaria Organisms	1	
Blood Culture	General Examination	73	
Blood Culture	For Brucella abortus	7	(1 pos.)
Blood Culture	For Enteric Group	5	(1 pos.)
Blood Culture	For Hæmolytic Streptococci	11	(3 pos.)
Blood	Wassermann Reaction	70	(10 pos.)
Urine	General Examination	55	
Urine	For Leptospira icterohæmorrhagiæ	4	(2 pos.)
Fæces	For Amœbæ, Enteric, Food-poisoning or other Pathogenic Organisms	26	
Pus	General Examination	52	
Cerebro-spinal Fluid	Wassermann Reaction	4	(1 pos.)
Cerebro-spinal Fluid	General Examination	90	
Cerebro-spinal Fluid	For Cells, Wassermann Reaction, Globulin and Colloidal Gold Tests	13	
Ascitic Fluid	General Examination	7	
Inflammatory Exudate	For Bacillus tuberculosis	8	(1 pos.)
Inflammatory Exudate	General Examination	24	
Pleural Fluid	General Examination	9	
Inflammatory Exudate	For Enteric Group	1	
Inflammatory Exudate	For Hæmolytic Streptococci	1	(pos.)
Uterine and Vaginal swabs	General Examination	68	
Cultures	For Enteric Group	6	
Cultures	General Examination	10	
Culture	For B. paratyphosus C. Agglutination Test	1	
Film from Conjunctiva	For Gonococcus	1	
Discharge from Gland	General Examination	1	
Swab from Gums	For Organisms of Vincent's Infection	1	
Ear swab	For Bacillus tuberculosis	2	(1 pos.)
Organs, Post-mortem	General Examination	4	
Aural Discharge	For Bacillus diphtheriæ	1	(pos.)
Naso-pharyngeal swab	For Meningococcus	1	
Scraping from Joint	For Bacillus tuberculosis	1	(pos.)
Lung-puncture Fluid	For Type of Pneumococcus	1	
Stomach Contents	For Bacillus tuberculosis	2	
Stomach Contents	General Examination	1	
Hair	For Ringworm Infection	2	
Excised Growth in Region of Eye	For Nature of Growth	1	
Tuberculous Tissue	For Type of Tubercle Bacillus	1	
Soup	For Bacteria and Bacterial Toxins	1	
Diphtheria Prophylactic	Sterility Test	5	
Pasteurised Butter	General Examination	1	
Milk	General Examination	1	
Milk	For Bacillus tuberculosis	3	
Milk Bottles	General Examination	6	
Water Specimens	General Examination	73	
	Autogenous Vaccines prepared	14	
		—	797
	Total		11,159

LABORATORY EXAMINATIONS FOR MUNICIPAL HOSPITALS.

In the year 1932 arrangements were made to supply bacteriological services for the Municipal General Hospitals. This service was in operation during the year 1933. A tabular statement of the routine work is given.

In addition to the routine examinations special investigations were undertaken. In collaboration with one of the assistant surgeons, cultures have been made and animals inoculated with material from cases of genito-urinary tuberculosis. The object of the work is to ascertain the proportion of such disease due to the human and bovine types respectively of tubercle bacillus.

Members of the staff of the Bacteriology Department paid frequent visits to the Western General Hospital and, when requested, gave their help and advice on bacteriological questions.

During the scarlet fever epidemic of 1933 it was found difficult for the staff of the City Fever Hospital to continue the routine bacteriological work usually carried out in the hospital. Under these conditions of exceptional stress, this work was undertaken by the University Bacteriology Department from 9th October, 1933, till 11th January, 1934.

City Hospital for Infectious Diseases.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs and Cultures for B. Diphtheriæ	937	309	628
Throat swabs and B. Diphtheriæ Cultures for Virulence Test	109	53	56
Throat, Nose and Ear swabs for Hæmolytic Streptococci	224	125	99
Throat, Nose and Ear swabs for General Examination	3	...	...
Sputum for B. Tuberculosis	44	34	10
Blood for Widal reaction	12	0	12
Blood for Wassermann reaction and Flocculation Test for Syphilis	1	0	1
Blood Cultures	36	...	...
Cerebro-spinal Fluid for Wassermann reaction	1	0	1
Cerebro-spinal Fluid for Cytological Examination	18	...	...
Cerebro-spinal Fluid for Biochemical Examination	1	...	...
Cerebro-spinal Fluid for Meningococcus	18	12	6
Cerebro-spinal Fluid for B. Tuberculosis	1	0	1
Cerebro-spinal Fluid for General Examination	12	...	...
Pleural, Peritoneal and other Fluids for General Examination	10	...	...
Pus for General Examination	7	...	...
Fæces and Urine for Organisms of Enteric and Dysentery Groups	82	16	66
Fæces for B. Tuberculosis	1	0	1
Fæces for General Examination	11	...	...
Uterine swabs for Hæmolytic Streptococci	16	9	7
Smears for Gonococcus	23	1	22
Animal Inoculation Tests for B. Tuberculosis	4	1	3
Autogenous Vaccines prepared	4	...	...
Miscellaneous	9	...	...
	1,584		

Western General Hospital.

	Total.	Positive.	Negative
Throat, Nose and Ear swabs for B. Diphtheriæ	84	27	57
Throat swabs for B. Diphtheriæ Virulence Test	7	0	7
Throat, Nose and Ear swabs for Hæmolytic Streptococci	19	10	9
Throat, Nose and Ear swabs for General Examination	13	...	...
Throat swabs for Organisms of Vincent's Angina	43	24	19
Sputum for B. Tuberculosis	16	0	16
Sputum for General Examination	4	...	...
Blood for Widal reaction	2	0	2
Blood for Wassermann reaction and Flocculation Test for Syphilis	33	8	25
Blood Cultures	5	...	...
Cerebro-spinal Fluid for Wassermann reaction	2	0	2
,, ,, ,, for Colloidal Gold Test	4	...	...
,, ,, ,, for Cytological Examination	4	...	...
,, ,, ,, for Biochemical Examination	2	...	...
,, ,, ,, for B. Tuberculosis	5	0	5
,, ,, ,, for General Examination	8	...	...
Pleural, Peritoneal and other Fluids for General Examination	12	...	...
Pus for General Examination	8	...	...
Fæces and Urine for Organisms of Enteric and Dysentery Groups	44	12	32
Fæces and Urine for B. Tuberculosis	14	0	14
Fæces and Urine for General Examination	28	...	...
Smears for Gonococcus	11	1	10
Animal Inoculation Tests for B. Tuberculosis	4	1	3
Autogenous Vaccines prepared	2	...	...
Miscellaneous	10	...	...
	384		

Eastern General Hospital.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs for B. Diphtheriæ	11	2	9
Throat swabs for Organisms of Vincent's Angina	1	0	1
Throat, Nose and Ear swabs for General Examination	2	...	...
Blood for Widal reaction	3	0	3
Blood for Wassermann reaction and Flocculation Test for Syphilis	1	0	1
Blood Cultures	2	...	...
Cerebro-spinal Fluid for Wassermann reaction	2	0	2
,, ,, ,, for Colloidal Gold Test	3	...	...
,, ,, ,, for Cytological Examination	4	...	...
,, ,, ,, for Biochemical Examination	3	...	...
,, ,, ,, for B. Tuberculosis	3	1	2
,, ,, ,, for General Examination	2	...	...
Pleural, Peritoneal and other Fluids for General Examination	4	...	...
Pus for General Examination	6	...	...
Fæces and Urine for Organisms of Enteric and Dysentery Groups	3	0	3
Fæces and Urine for B. Tuberculosis	1	0	1
Animal Inoculation Tests for B. Tuberculosis	2	1	1
Autogenous Vaccines prepared	1	...	...
Miscellaneous	1	...	...
	55		

Northern General Hospital.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs for B. Diphtheriæ	3	0	3
Throat, Nose and Ear swabs for General Examination	2	...	...
Sputum for B. Tuberculosis	20	2	18
Sputum for General Examination	1	...	...
Blood for Widal reaction	2	0	2
Blood for Wassermann reaction and Flocculation Test for Syphilis	1	0	1
Blood Culture	1	...	...
Cerebro-spinal Fluid for B. Tuberculosis	1	1	0
Pleural, Peritoneal and other Fluid for General Examination	1	...	...
Pus for General Examination	2	...	...
Fæces and Urine for B. Tuberculosis	1	0	1
	35		

Bangour Mental Hospital.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs for B. Diphtheriæ	3	0	3
Blood for Widal reaction	2	0	2
Blood for Wassermann reaction and Flocculation Test for Syphilis	141	21	120
Cerebro-spinal Fluid for Wassermann reaction	8	2	6
,, ,, ,, for Colloidal Gold Test	7	...	...
,, ,, ,, for Cytological Examination	5	...	...
,, ,, ,, for Biochemical Examination	5	...	...
Fæces and Urine for Organisms of Enteric and Dysentery Groups	2	0	2
	173		

Gogarburn Certified Institution.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs for B. Diphtheriæ	169	58	111
Throat swab for B. Diphtheriæ Virulence Test	1	0	1
Throat, Nose and Ear swabs for Hæmolytic Streptococci	46	15	31
Sputum for B. Tuberculosis	3	0	3
Fæces and Urine for Organisms of Enteric and Dysentery Groups	3	1	2
Fæces and Urine for B. Tuberculosis	2	0	2
	224		

Royal Victoria Dispensary.

	Total.	Positive.	Negative.
Throat, Nose and Ear swabs for B. Diphtheriæ	6	0	6
Throat swab for Hæmolytic Streptococci	1	0	1
Sputum for B. Tuberculosis	1,214	165	1,049
Blood Culture	1	...	...
Pleural, Peritoneal and other Fluids for General Examination	4	...	...
Pus for General Examination	1	...	...
Fæces and Urine for Organisms of Enteric and Dysentery Groups	6	0	6
Fæces and Urine for B. Tuberculosis	6	0	6
	1,239		

Total Examinations for Municipal Hospitals . . 3,694

SPECIAL INVESTIGATIONS.

UNDULANT FEVER.

The search for cases of this disease was continued during the year. As in previous years all sera submitted for the Widal reaction were examined also for the presence of agglutinins for *Br. abortus*. Out of 87 such examinations there were found 5 sera which, in dilutions high enough to be considered significant, agglutinated *Br. abortus*. One of these came from a child in whose case the diagnosis of dysentery had been established. This serum also agglutinated *B. dysenteriæ Flexner-Y*. In the other four cases the final diagnosis was that of undulant fever. These four cases of undulant fever may be compared with the number of cases of enteric or dysentery also diagnosed by the agglutination reaction. The results were—paratyphoid B—10 cases; typhoid—6 cases; undulant fever—4 cases; dysentery—3 cases.

In view of the fact that in other countries, notably the United States of America, contact with infected animals is considered one of the commonest modes of infection, the sera of slaughter-house workers, farm workers, ham curers, veterinary officers and veterinary students were examined for agglutinins for *Br. abortus*.

In all, 101 sera were examined with only four positive results. Two of these were slaughter-house workers whose sera reacted only to a titre of 1:25 and two were veterinary students. The serum of one of these reacted to a titre of 1:80, and of the other to a titre of 1:10. Both had been in intimate contact with cattle infected with contagious abortion, but their contact was no greater than that experienced by many of their co-workers who were tested at the same time and gave no reaction. Moreover, two veterinary officers who had frequently removed placentæ from cows infected with contagious abortion did not react to the test.

The small number of reactors in this group was somewhat surprising and would suggest that the type of *Br. abortus* found in the Edinburgh region is of low virulence for man. (*C. P. Beattie.*)

BACTERIOLOGICAL EXAMINATION OF RETAILED MILK SAMPLES.

During the period June 1st to July 11th, 1933, fifty samples of milk as retailed by Edinburgh milk dealers were bacteriologically examined in the laboratory. The purpose of the investigation was to ascertain the condition of the milk when it reached the consumer under normal domestic conditions. For this reason no special sterile sampling containers were used, the milk being purchased by a laboratory assistant between the hours of 10 a.m. and 12 noon, conveyed to the laboratory in a receptacle provided by the retailer and at once placed in the refrigator till the necessary cultures were made. Never more than two hours elapsed between the receipt of the milk and the inoculation of cultures.

No examination was made for pathogenic organisms, the tests used being simply to ascertain the standard plate-count and the smallest quantity of milk which contained *B. coli*.

The plate-count was made in a new medium of rather acid reaction, containing a small proportion of sterile milk. The purpose of the latter is to compensate for the diff-

erences in milk after the medium has been inoculated with varying dilutions of the sample to be tested. Counts were made after 48 hours incubation at 37°C. It must be noted that the standard plate-count is in no sense an estimate of the total viable bacteria since only those organisms grow which flourish at 37°C in the acid medium employed. The count is, however, an excellent indication of deterioration and to a less extent of cleanliness.

The *B. coli* content is a very sensitive index of contamination with manurial matter and so of the hygienic conditions under which the milk is produced and handled. Four samples of milk known to have been heat-treated were included. The remainder were of unheated milk.

RESULTS.

Standard Plate-Count.—The bacterial counts varied enormously, the best non-pasteurised samples yielding figures of the order of 20,000 per c.c. The worst sample showed a count of 154,000,000.

The results may be summarised as follows :

Bacterial Count.	*Number of Samples.*
Under 200,000.	18 (including 4 samples of pasteurised milk).
200,000—1,000,000.	14
1,000,000—5,000,000.	8
5,000,000—10,000,000.	5
Over 10,000,000.	5

For comparison it may be noted that the lowest grade of designated milk (Grade A) is required to have a standard plate-count of not more than 200,000 per c.c. It will be seen that 32 out of 46 non-pasteurised samples were of a bacteriological quality inferior to that standard.

B. coli Content.—The conventional method of expressing the *B. coli* content of milk is to state the largest quantity of milk in which *B. coli* cannot be demonstrated. Thus the legal requirement in regard to certified milk is that *B. coli* should be absent from 0·1 c.c., while in the case of Grade A milk *B. coli* should be absent from 0·01 c.c. The results of examination of 50 milk samples may be summarised as follows :

Largest Volume of Milk from which B. coli. was absent.	*Number of Samples.*
0·1 c.c.	8 (1 pasteurised)
0·01 c.c.	11 (2 pasteurised)
0·001 c.c.	7 (1 pasteurised)
0·0001 c.c.	12
0·00001 c.c.	7
0·000001 c.c.	3
0·0000001 c.c.	2
Total	50

Thus 31 of the samples contained *B. coli* in greater number than that permissible in Grade A milk.

The milk shops from which samples were purchased were selected as representative both of the congested areas of the old part of the city and also of the suburban residential districts. In general the samples taken from the former were of poorer quality bacteriologically than those from the latter, though many exceptions were noted. Thus 10 samples from the High Street, Canongate and St. Leonards showed an average count of 3,375,000, while 10 samples from the Morningside district yielded a count of 1,113,000 per c.c. It is obvious, however, that both are unsatisfactory as representing milk vended to the consumer and later to be consumed in the raw state.

Of the 50 samples purchased, 15 were received in cans and in these the average count was 2,290,000 per c.c. In 5 cases, samples of the same milk were bought in can and bottle, the portions being measured into the different receptacles from the same churn at the same time. No significant and constant difference was observed which could be related to the type of container in which the milk was delivered. Thus the bottle under milk-shop conditions would not appear to be superior to the milk-can for the reason that both are probably inefficiently sterilised. In individual cases the samples received in cans were remarkably good. This may be accounted for by the fact that cans may be boiled while bottles are as a rule merely rinsed in warm water.

Samples of pasteurised milk delivered in bottles sterilised and filled by the large distributing milk organisations were all of satisfactory quality. The actual figures were as follows :

Distributor.	*Standard Plate Count.*	*B. coli absent from*
A	24,400	0·1
B	20,200	0·001
C	26,200	0·01
D	21,700	0·01

This investigation seems to show that in a large proportion of cases, raw milk as vended by the small milk-shop is of poor quality from the bacteriological standpoint. It is a striking fact that over one-third of the samples examined contained more than one million bacteria per c.c., and it is not unlikely that such milk is responsible for gastro-intestinal disorders in infants. A fact which was observed throughout the investigation was that pure and wholesome milk may be obtained from a small and apparently unhygienic milk-shop in the slums and that conversely a thoroughly bad sample might emanate from a more pretentious and superficially clean dairy in the suburbs. The source of the milk and the care taken in the cleansing of containers, whether cans or bottles, appear to be all-important.

Taken as a whole the results reveal a state of affairs which is far from satisfactory. In a large proportion of cases where milk is received by the retailer in bulk and transferred to bottles or cans for distribution, the facilities for adequate sterilization of milk containers appear to be insufficient. Improved methods of milk production on the farm will be completely nullified if the methods of distribution are not at the same time investigated and improved where necessary. (*H. J. Gibson.*)

A CLINICAL, PATHOLOGICAL AND BACTERIOLOGICAL INVESTIGATION OF CASES OF TUBERCULOUS MENINGITIS.

(In Collaboration with Dr Agnes Macgregor and Dr W. S. Craig of the Royal Hospital for Sick Children).

The investigation was started at the beginning of 1933 with the object of correlating the clinical and environmental history of cases of tuberculous infection of the central nervous system with pathological and bacteriological data. Through the courtesy of the physicians in charge of wards, case histories and material available in the Royal Edinburgh Hospital for Sick Children and other Edinburgh hospitals are being utilised.

A bacteriological data at present available refer to :

1. A group of 35 cases clinically diagnosed as cases of tuberculous meningitis, and

2. The examination of specimens of cerebro-spinal fluid from a group of 20 patients suffering from conditions clinically other than tuberculous meningitis, who showed transient signs of intra-cranial irritation and reacted positively to the tuberculin skin test.

Among the first group of cases the human type of tubercle bacillus was isolated from cerebro-spinal fluid in 26 patients, and the bovine type of bacillus in 9 patients. In the second group of cases the tubercle bacillus was isolated from 3 patients. In two of these cases the bacillus was the bovine type, in one the human type.

Infection was thus due to the human type of tubercle bacillus in 71·1 per cent. of cases, and to the bovine type of tubercle bacillus in 28·9 per cent. of cases.

The isolation of the tubercle bacillus from the cerebro-spinal fluid of three patients of the second group, all of whom have made apparent recovery from the infection of the central nervous system, is of special interest.

In a recent paper on the pathogenesis of tuberculous meningitis, Rich and McCordock put forward the view that acute diffuse tuberculous meningitis results from the reactivation of a local focus of tuberculous infection in the central nervous system. If this view be correct, it follows that a patient who develops tuberculous meningitis has at some previous time suffered an infection of his central nervous system by tubercle bacilli, which have set up a localised lesion. The isolation of the tubercle bacillus from the cerebro-spinal fluid of three patients who showed only transitory signs of intra-cranial irritation suggests that in some instances initial infection of the central nervous system by the tubercle bacillus may be associated with such transitory signs, and the recognition of such an incident in a patient's history as a danger signal may be a step in the direction of prevention of the deadliest of all forms of tuberculosis.

(*H. J. R. Kirkpatrick.*)

Reference :—

Rich, A. R., and McCordock, H. A., *Bull. J. Hop. Hosp.*, vol. 52, p. 5, 1933.

A BIOLOGICAL TEST IN THE DIAGNOSIS OF HODGKIN'S DISEASE.

Enlargement of lymphatic glands situated in the cervical, axillary or inguinal regions may be produced by a variety of different pathological processes, and in clinical diagnosis, tuberculous and syphilitic adenitis, leukæmia, lymphosarcoma and Hodgkin's disease have to be considered. As a rule the diagnosis can be established by histological examination of an excised gland but not infrequently this method of examination fails to yield conclusive results, since the histological appearances of the tissue may not be typical of any one of the above mentioned conditions. In these cases Gordon's biological test (see van Rooyen, 1932) is of particular value.

The test has been based on Gordon's original observation that the intracerebral inoculation of a rabbit with a suitable suspension of lymphadenomatous tissue is followed by highly characteristic nervous changes (encephalitic syndrome) in the animal after a period of 3-4 days. Thus the test has been found to give a positive result in 15 out of 20 cases of Hodgkin's disease that have been examined, and has proved to be negative in 15 cases of lymphatic gland involvement other than Hodgkin's disease, including the conditions mentioned above.

The specificity of this reaction produced in the rabbit, combined with the high percentage of positive results obtained, strongly supports the application of the test as a standard routine laboratory procedure for the diagnosis of Hodgkin's disease. Specimens of lymphatic tissue from suspected cases of Hodgkin's disease, if sent to the laboratory, will be submitted to the biological test and reported on. Material should be placed in a sterile test tube or jar and forwarded without delay. (*C. E. van Rooyen.*)

References :—

Gordon, M. H. (1932). Rose Research on Lymphadenoma.
van Rooyen, C. E. (1933) *British Medical Journal*, ii., 562.

THE FLOCCULATION TEST IN THE DIAGNOSIS OF SYPHILIS.

In association with the Venereal Disease Clinic of the City a certain number of sera from suspected cases of syphilis were examined by the Flocculation reaction. During the last three months of 1933, 128 such examinations were carried out and a comparison has been made between the results obtained and the findings in the Wassermann reaction as reported from the laboratory of the Royal Infirmary. In addition, Dr Robert Lees has kindly supplied the final clinical diagnosis in most cases, thus enabling a comparison to be made between clinical and laboratory findings.

The results may be conveniently tabulated as follows :

		Flocculation Reaction.			Total.
		Positive.	Weakly Positive.	Negative.	
Wassermann Reaction	Positive +++ or ++	11	0	2	13
	Weakly positive or doubtful	5	3	3	11
	Negative . . .	12	2	90	104
	Total . . .	28	5	95	128

From this table the following figures may be abstracted :

Positive in both tests	11	
Weakly positive in both tests	3	
Negative in both tests	90	
Complete agreement in	104	= 81·2 per cent.

F.R. weakly positive	:	W.R. negative	2	
F.R. weakly positive	:	W.R. positive	0	
F.R. negative	:	W.R. weakly positive	3	
F.R. positive	:	W.R. weakly positive	5	
		Partial agreement in	10	= 7·8 per cent.

Complete or partial agreement in 114 = 89 per cent.

F.R. positive	:	W.R. negative	12	
W.R. positive	:	F.R. negative	2	
		Complete disagreement in	14	= 11 per cent.

It will be seen from a consideration of the discrepant results that the Flocculation reaction tended to be more sensitive than the Wassermann test. An examination of the circumstances attending the tests in which complete disagreement occurred showed that four sera received on the same day gave a positive Flocculation reaction in the presence of a negative Wassermann reaction. The positive results in these cases were possibly due to technical causes, such as the time elapsing before examination of the sera. If these four cases be excluded, the percentage of completely divergent reports fell to 6.

The clinical diagnosis in the 14 cases where the two tests disagreed completely showed the following distribution :

F.R. positive, W.R. negative	Syphilis	2	
	Not diagnosed clinically as syphilis	6	
	No diagnosis given	4	
			12
F.R. negative, W.R. positive	Syphilis	1	
	No diagnosis given	1	
			2
	Total		14

The results recorded support the view generally held that the two tests for the serological diagnosis of syphilis show a high percentage of agreement with one another. In certain cases either may give results which disagree with the clinical diagnosis. By the use of both tests a maximum of accuracy is attained and all sera submitted from the Municipal General Hospitals are now tested for both reactions when the volume of serum is adequate.

(*H. J. Gibson.*)

THE INVESTIGATION OF BIOLOGICAL TYPES OF B. DIPHTHERIÆ.

With the co-operation of Dr Adam L. K. Rankin of the City Fever Hospital, the investigation of the biological types of the diphtheria bacillus and their clinical significance which was begun in 1932 has been continued. Strains of *B. diphtheriæ* were isolated from swabs sent to the laboratory for routine examination. They were then classified according to the criteria of Anderson, Happold, McLeod and Thomson of Leeds (*J. Path. Bact.*, 1931, 34, 667) and the clinical condition noted. The Leeds investigators maintained that there is a definite relationship between the bacteriological type and the clinical severity, the starch-fermenting *gravis* strains usually being associated with the more severe cases.

In Edinburgh in 1932 the *intermediate* type predominated. During 1933, however, although this type still prevailed there was an increase in atypical forms, particularly in strains showing a *gravis* colony but failing to ferment starch. It has been shown that colony structure and certain associated characters are variable *in vitro*, whereas fermentation of starch is a much more stable feature. (*Christison, J. Path. Bact.* 1933, 37, 243). The question therefore arises : is the occurrence of a considerable number of atypical forms due to certain characters of the organism undergoing alteration *in vivo* and are these aberrant forms the precursors of a different prevailing type ? Undoubtedly the number of cases showing the *gravis* colony type is increasing but at present the disease in Edinburgh remains mild. The findings, therefore, are in contradistinction to those of Leeds, Hull and Berlin where the *gravis* type predominates and where there is also a high death rate. Indeed statistical analysis of a group of strains isolated in Berlin has shown the distribution of types in that city to be highly significant (Christison, unpublished).

Although the contentions of the Leeds investigators are by no means proved, a marked increase in the *gravis* type in a district such as Edinburgh where it was previously absent or relatively infrequent is of special interest and may prove significant. The importance therefore of knowing the prevailing biological type of *B. diphtheriæ* is obvious. The investigation is being continued.

(*M. H. Christison.*)
(*H. A. Wright.*)

THE EXPERIMENTAL PRODUCTION OF FOOD-POISONING IN ANIMALS BY FEEDING WITH STAPHYLOCOCCUS TOXIN.

In the Annual Report for last year, work was described on the toxins produced by the *Staphylococcus* and the use of an antitoxin in clinical practice. It was then noted that the toxin when ingested by man produces acute gastro-intestinal symptoms and that the *Staphylococcus* could thus be regarded as an organism of food poisoning. Laboratory animals were apparently insusceptible to its action, a circumstance which prevented close experimental study of the condition. Further research has shown that the gastro-intestinal symptoms may be reproduced in animals by intra-gastric or intra-rectal introduction of toxin when the reaction of the contents of the stomach or rectum has been adjusted to a point near neutrality (pH 7·3). When the contents are more acid or alkaline than this, the toxin is rapidly destroyed on administration. This finding was confirmed by *in vitro* experiments which showed rapid inactivation of toxin at slightly acid (pH 6·8) or slightly alkaline (pH 7·8) reactions.

(*G. R. Borthwick.*)

SEROLOGICAL EXAMINATION OF HÆMOLYTIC STREPTOCOCCI ISOLATED FROM SCARLATINA.

In collaboration with Dr Rankin, a study of the hæmolytic streptococci isolated from cases of scarlet fever admitted to the City Fever Hospital, Edinburgh, during the period February 1933-January 1934, is at present being made. The usual method of inoculating the surface of a blood-agar plate with a throat swab has been employed. A throat-swab from each case on admission was examined for the presence of hæmolytic streptococci and on discharge both throat and nose were similarly examined. As far as possible each case was completed in this manner. An indication of the general results of the work is given by the following figures :

\+ = 1 — 10 colonies hæmolytic streptococci.
++ = 10 — 40 colonies hæmolytic streptococci.
+++ = More than 40 colonies.
— = No colonies of hæmolytic streptococci.

Number of swabs showing	+	growth of hæmolytic streptococci . . =	1,031
Number of swabs showing	++	growth of hæmolytic streptococci . . =	420
Number of swabs showing	+++	growth of hæmolytic streptococci . . =	137
Number of swabs showing	—	growth of hæmolytic streptococci . . =	303
			1,891

The total number of acute cases examined was 1891, of which 84 per cent. gave positive swabs and 16 per cent. negative swabs. Further it will be seen that in 78 per cent. of the swabs, more than 10 colonies were obtained from the inoculum.

Cases on Discharge.				*Throat.*	*Nose.*	*Per Cent.*
Number of cases showing	+++	growth hæm. strept.	: 83	57	26	6·6
Number of cases showing	++	growth hæm. strept.	: 233	193	40	18·6
Number of cases showing	+	growth hæm. strept.	: 194	171	23	15·3
Number of cases showing	—	growth hæm. strept.	: 753			59·5

Of 1263 cases examined on discharge, 40·5 per cent. gave a positive result and 59·5 per cent. were negative. In 25·2 per cent. of these the number of colonies of hæmolytic streptococci derived from the inoculum exceeded 10.

The serological examination of the various strains isolated has not yet been completed. In a preliminary investigation the frequency of the types corresponding to those of Griffith (J. Hyg., Vol. 28.) was ascertained. Only 43 or 36.4 per cent. of the first 393 strains examined were found to belong to any of Griffith's four types and the numbers in each group were as in the following table :

	Type I.	*Type II.*	*Type III.*	*Type IV.*	*Untyped.*	*Total.*
Edinburgh . .	43	23	57	20	250	393
	10·9%	5·9%	14·5%	5·1%	63·6%	100%

Thus the prevalence of certain types as recorded by Griffith did not pertain to this outbreak of scarlatina studied in Edinburgh. (*C. A. Green.*)

THE TOXINS OF THE HÆMOLYTIC STREPTOCOCCUS.

In 1924 the Dick test for the detection of susceptibility or immunity to scarlet fever was first described. This test consists in the intradermal injection of a minute dose of the products in fluid culture of *Streptococcus hæmolyticus* the causative organism of scarlet fever. The test has been widely applied and in general has given satisfactory results. Occasionally, however, anomalous results have been reported. Thus persons who according to the test appeared to be immune have contracted scarlet fever on exposure to infection. Moreover, following an attack of scarlet fever which is known to confer immunity against further attacks in the majority of cases, some individuals have continued to give positive reactions, indicating continued susceptibility. Such anomalous results would at first sight appear to detract from the value of the test. It has been shown that the hæmolytic streptococci isolated from cases of acute scarlet fever can be divided into different serological types ; and it seemed possible therefore, that the toxic products of one type might differ qualitatively from those of another. Thus a person tested with the toxin from a strain to which he has already developed immunity might react negatively, but on exposure to a type against which he has no immunity, might become infected and develop scarlet fever. Hitherto no such qualitative differences in toxins have been found. Most of the previous work on these toxins has been carried out with crude filtrates containing many impurities which may have obscured minute toxic differences. Further work has indicated that such crude filtrates contain more than one toxin. Of these toxins, one is heat-labile and the reaction to it alone is a true index of a person's immunity or otherwise to scarlet fever. Another toxic product present in such filtrates is a heat-stable endotoxin and the evidence available points to the fact that a positive reaction to this is an index of allergy to the hæmolytic streptococcus. Further, it would appear that a person may be immune to the heat-labile exotoxin, but still react to the stable endotoxin.

In collaboration with Dr Rankin of the City Hospital an investigation is being carried out into the toxic moieties of streptococcal filtrates. It has been found possible to isolate two toxic principles from culture filtrates of *Streptococcus hæmolyticus*. The heat-labile exotoxin is present in maximum amount in filtrates on the sixth day of growth, while the heat-stable endotoxin, present in minimal amounts even in 48 hours cultures, steadily increases in concentration with increasing age of culture.

In order to detect possible qualitative differences the toxigenic properties of thirty-six strains of *Streptococcus hæmolyticus* were investigated. These cultures were derived from twelve throat swabs of scarlet fever patients on admission to the City Fever Hospital. They were selected so that they consisted of four groups of three, the groups corresponding serologically with the four types of streptococci stated by F. Griffith to be the prevalent scarlatinal types.

By skin-testing it was found that : (1) the exotoxins produced by strains of all types were qualitatively alike ; (2) strains of any one type varied quantatively in their power to produce exotoxin, and strains differing in their serological type showed even more marked quantative differences in their toxin production ; (3) the endotoxins produced by strains of any one type were qualitatively alike ; (4) strains of different types produced endotoxins differing qualitatively ; (5) purified exotoxin was a more reliable reagent for use in the Dick test than crude culture filtrate of *Streptococcus hæmolyticus*.

The most interesting of the foregoing observations is that of the existence of qualitative differences in the endotoxins of scarlatinal hæmolytic streptococci ; this confirms to the accepted heterogeneity in the immunological characters of these organisms, while it contrasts with the homogeneity of the exotoxin specifically associated with scarlet fever. (*C. A. Green.*)

The following papers on bacteriological subjects related to public health have been published during the year from the University Bacteriology Department :

"The Hæmolytic Streptococcus as a factor in the causation of Acute Rheumatism." By H. J. Gibson, W. A. R. Thomson and D. Stewart. *Archives of Disease in Childhood*, 1933, vol. 8. p. 57 (also from the Department of Medicine).

"A study of the ætiology of Acute Rheumatism with special reference to the relationship of the Hæmolytic Streptococcus to the disease." By H. J. Gibson and W. A. R. Thomson, *Edinburgh Medical Journal*, 1933, vol. 40, p. 93 (also from the Department of Medicine).

"Dissociation in certain Mycobacteria with special reference to type stability." By May H. Christison, *Journal of Path. and Bact.*, 1933, vol. 36, p. 285.

"The Stability of the Mitis, Intermediate and Gravis Types of B. Diphtheriæ." By May H. Christison, *Journal of Path. and Bact.*, 1933, vol. 37, p. 243.

"Experimental observations on the toxic effects of Staphylococcal filtrates introduced enterally in laboratory animals." By Grizel R. Borthwick, *Brit. J. Exper. Path.*, 1933, vol. 14, p. 236.

"The ætiology of Hodgkin's Disease with special reference to B. tuberculosis avis." By C. E. van Rooyen, *Brit. Med. Jour.*, 1933, vol. 1, p. 50.

"A Biological Test in the diagnosis of Hodgkin's Disease." By C. E. van Rooyen, *Brit. Med. Jour.*, 1933, vol. 1, p. 644.

"Recent experimental work on the ætiology of Hodgkin's Disease." By C. E. van Rooyen, *Brit. Med. Jour.*, 1933, vol. 2, p. 562.

"A case illustrating the value of Gordon's Test in the diagnosis of Hodgkin's Disease." By R. F. Ogilvie and C. E. van Rooyen, *Lancet*, 1933, vol. 2, p. 641 (also from the Department of Pathology).

The Bacteriological Services have been carried out under the direction of Professor T. J. Mackie.

The *Professional Staff* of the University who took part in the services during 1933 were: Dr J. M. Alston, Dr H. J. Gibson, Dr A. Haddow, Dr M. H. Finkelstein, Dr H. J. R. Kirkpatrick and Dr C. P. Beattie, Lecturers; Dr C. E. van Rooyen, Dr C. A. Green, and Dr May H. Christison, Assistants.

During the year Dr J. M. Alston was appointed Pathologist in charge of a group Laboratory in the London County Council Hospital Service and Dr Finkesltein was appointed a Research Fellow at the Lister Institute, London. In June 1933 the status of the member of the staff specially appointed for the Bacteriological Services of the Local Authorities was raised from a Special Assistantship to a University lectureship. An additional assistant was also appointed for this work.

Voluntary assistance was given in special investigations by Dr H. A. Wright and Miss G. R. Borthwick.

MATERNITY AND CHILD WELFARE.

REPORT BY MATERNITY AND CHILD WELFARE MEDICAL OFFICER.

The following is a report of the work carried on under the Maternity and Child Welfare Scheme for the year 1933. A chart is shown opposite giving a general survey of the various activities. The usual statistical tables referred to under each heading will be found at the end of the report.

Ante-Natal Supervision (Table 1).—The ante-natal clinics are under the clinical charge of skilled obstetricians, all of whom are associated with one or other of the two maternity hospitals in the City. There are nine Centres at which these clinics are held, three of which have been started comparatively recently. The various areas of the City are now well catered for except the Gorgie and Stenhouse area where no ante-natal facilities are yet available at the local Centre. There is little doubt that expectant mothers are more and more appreciating the value of these clinics and their attendances are tending to become more regular and frequent and starting at an earlier period in pregnancy than formerly. The total number of sessions held this year was 913, with a total attendance of 24,441, which is an increase of 421 attendances compared with the previous year, and 9,625 compared with five years ago. Most of these ante-natal cases are seen by the Health Visitors in the course of their routine visiting of the homes. Apart from these, however, 3,437 additional visits are noted as having been made for special reasons. It is difficult to give exact figures showing the proportion of women who have had adequate supervision during the ante-natal period, but if, for example, one compares the number of new cases attending these clinics in one year with the total number of "corrected" births for the same year, one finds that the increase in the percentage number of cases having supervision is rising steadily. It was 20 per cent. in 1921, 49 per cent. five years ago, and 75 per cent. in 1933.

Post-natal Supervision (Table 2).—The development of systematic post-natal supervision is of somewhat recent origin and certainly is proving of great value in the preservation of health. Women who have been recently confined are beginning to see the benefit of submitting themselves to a health examination, the object of which is not only to obviate possible risks at a subsequent confinement, but also to prevent chronic ill-health in later life, much of which can be traced to the effects of childbirth. In all, 2,593 attendances were registered at the post-natal clinics during the year.

Midwives Act (Table 3).—In Edinburgh there are comparatively few practising midwives, there being only 19 on the local roll—one more than in the previous year. The actual number of cases attended by them was 311, or 3·92 per cent. out of a total of 7,955 notified births. This figure is practically the same as for 1932, when it was 4·0 per cent. Medical practitioners were called in by midwives in 32 cases of emergency, compared with 40 in 1932.

Maternity Homes Act, 1928.—The number of these Homes registered under the local authority varies very slightly from year to year. In 1932 there were 32 on the list of Homes being supervised. During the year under review 2 new Homes

CITY OF EDINBURGH
MATERNITY and CHILD WELFARE SCHEME

CHIEF ADMINISTRATIVE OFFICE — PUBLIC HEALTH CHAMBERS.

STAFF

CHIEF CLINICAL OFFICER. ▪ MEDICAL ASSISTANTS. ▪ HEALTH VISITORS. ▪ OFFICE SUPERVISOR.

CHIEF CONSULTATIVE CENTRE FOR ANTE-NATAL AND MATERNITY CASES — ROYAL MATERNITY HOSPITAL.
CHIEF CONSULTATIVE CENTRE FOR SICK CHILDREN — ROYAL HOSPITAL FOR SICK CHILDREN.
REGISTRATION and SUPERVISION of MIDWIVES. REGISTRATION and SUPERVISION of MATERNITY HOMES.

ANTE-NATAL SUPERVISION.

CLINICS. HOME VISITS. MATERNITY HOSPITAL.

CONFINEMENT.

AT HOME.

1. FAMILY DOCTOR.
2. REGISTERED MIDWIFE (Must call in Doctor in emergency: Fee paid by City).
3. PUPIL NURSES.
4. MEDICAL STUDENTS.

IN MATERNITY HOSPITALS OR NURSING HOMES.

1. PRIVATE WARD
2. PUBLIC WARD

NOTIFICATION OF BIRTH

NOTIFICATION VISIT (at 10th day)

HOME (Follow-up Visits)

1. FOR STILL BIRTHS.
2. FOR OPHTHALMIA NEONATORUM (On Notification)
3. FOR GENERAL SUPERVISION, &c.

(a) — by Official Health Visitor
(b) — by Voluntary Health Worker

CLINICS.

1 ANTE-NATAL.
2 POST-NATAL.
3 PREVENTIVE OR DIETETIC.
4 CURATIVE.
5 ULTRA-VIOLET RAY THERAPY.
6 PROTECTIVE INOCULATIONS & VACCINATIONS.

In attendance at Clinics — (a) Doctor (b) Official Health Visitor (c) Voluntary Health Worker.

SPECIAL MEDICAL SUPERVISION (Extern or Residential)

ROYAL MATERNITY HOSPITAL.
ROYAL HOSPITAL FOR SICK CHILDREN.
GENERAL DISPENSARIES.
CITY FEVER HOSPITAL.
CITY TUBERCULOSIS DEPARTMENT —
(Extern) ROYAL VICTORIA HOSPITAL
(Extern) CITY HOSPITAL
CITY VENEREAL DISEASES DEPARTMENT —
(Extern) ROYAL INFIRMARY
(Extern) EDINBURGH HOSPITAL
(Extern) BRUNTSFIELD HOSPITAL
ROYAL INFIRMARY HOSPITAL
DENTAL HOSPITAL
HOME FOR CRIPPLES.

RESIDENTIAL HOMES and INSTITUTIONS.

HOMES FOR EXPECTANT & NURSING MOTHERS.
HOLIDAY HOMES FOR MOTHERS & TODDLERS
HOMES FOR BABIES.
HOLIDAY HOMES for CHILDREN
HOMES FOR MALNUTRITION BABIES.
NURSERY SCHOOL FOR DEAF & DUMB.
ROYAL BLIND ASYLUM.

DAY CARE OF CHILDREN.

DAY NURSERIES.
PLAY CENTRES.
CHILD GARDENS.

ASSISTANCE with

MEDICINES.
MILK.
DINNERS
CLOTHING.
COTS.
SPECTACLES.
FIRE GUARDS.

EDUCATIONAL FACILITIES.

MOTHERCRAFT CLASSES.
HEALTH VISITOR TRAINEES.
DOMESTIC NURSES.
MEDICAL STUDENTS
D.P.H. CANDIDATES.
POST GRADUATES.

CLOSE CO-OPERATION with

COUNCIL of SOCIAL SERVICE.
QUEENS JUBILEE NURSING ASSOCIATION.
SOCIETY for PREVENTION of CRUELTY TO CHILDREN
CRIPPLE AID SOCIETY.
PUBLIC ASSISTANCE DEPT.
MENTAL AFTER-CARE COMMITTEE.
SEWING WORK PARTIES.
MOTHER and INFANT CARE COMMITTEE.
(ADOPTION of BABIES)

At the age of 5 years the supervision of the child comes under the School Medical Service.

If the child leaves the City before school age the name is passed on to the M.O.H. for the district to which the child has been removed.

were added to the list and 2 were given up. Of the 32 Homes still under supervision, 2 Hospitals and 7 Homes are entirely devoted to the nursing of midwifery cases.

Puerperal Fever and Pyrexia (Tables 4 to 9).—During the year there were notified 86 cases of puerperal fever and 69 cases of puerperal pyrexia, compared with 100 and 82 respectively for the previous year. On later investigation it was found that of the 86 notified cases of puerperal fever the diagnosis was confirmed in only 79, also that of the 69 cases of puerperal pyrexia 14 developed into puerperal fever, making in all a total of 93 cases of confirmed puerperal fever. The deaths from puerperal fever numbered 8, compared with 17 in 1932. One of these deaths occurred in the group of 14 cases originally notified as puerperal pyrexia—a case mortality of 7·1 per cent. The case mortality of the remainder was 8·9 per cent. The age periods at which the patients contracted puerperal fever, as well as the age periods at which the eight deaths occurred, are shown on tables 8 and 9 on page 65.

Maternal Deaths (Tables 10 to 15).—The total number of maternal deaths occurring in the City was 79, an increase of 8 compared with the previous year. On analysis, however, it was found that of these 79 deaths, 31 were of women who had come to the City for their confinement and their deaths were, therefore, transferred to the district of permanent residence. Thus after adjustment 48 deaths of Edinburgh citizens remain to be noted compared with 47 in 1932, 51 in 1931 and 59 in 1930. The maternal mortality rate for the year was 7·02 per 1,000 births, compared with 6·7 for last year. Puerperal sepsis accounted for 11 deaths or 1·6 per 1,000 births, compared with 14 deaths or 2·0 per 1,000 births last year. There were 13 deaths or 1·9 per 1,000 births from toxæmias of pregnancy, compared with 7 or 1·0 per 1,000 births in the previous year ; 2 deaths or 0·29 per 1,000 births as against 4 deaths or 0·57 per 1,000 births from hæmorrhage ; 3 deaths or 0·43 per 1,000 births, compared with 2 or 0·20 per 1,000 births from embolism, and 19 or 2·8 per 1,000 births from other conditions complicating or associated with childbirth, compared with 20 or 2·8 per 1,000 births in the previous year. In this last group were included 4 deaths from pulmonary conditions and 5 from organic heart disease.

Births (Tables 16 to 20).—The total number of births registered during the year was 7,518, compared with 7,617 for the year 1932. The births, after necessary transfers had been made, numbered 6,835, compared with 6,960 in 1932. Of these 6,835 births, 3,509 were males and 3,326 females. The corrected birth rate for the City was 15·1, compared with 15·5 in 1932 and 17·1 five years ago.

The total births notified were 7,955, compared with 8,067 for last year. Of the 7,955 notified births 526 or 6·6 per cent. were stated to be premature, compared with 503 or 6·2 per cent. the previous year, and 516 or 6·2 per cent. five years ago. There were 418 or 5·2 per cent. of the total births notified as still born, compared with 371 or 4·6 per cent. in 1932, and 357 or 4·3 per cent. five years ago.

The Illegitimate Births numbered 443 or 6·5 per cent. of the total corrected births, compared with 466 or 6·7 per cent. in the previous year, and 476 or 6·4 per cent. five years ago.

Ophthalmia Neonatorum (Table 21).—During the year 35 cases of this disease were notified, compared with 30 last year. Three of these cases died before a cure could be pronounced, but in the remaining 32 cases, the eyes were all cleared. Every encouragement is given for the hospitalisation of both mother and infant in all these cases so that both can receive adequate treatment, which is not so easy or certain when treatment has to be carried out in the home.

Deaths (Tables 22 to 25).—The deaths of infants under one year registered during the year numbered 453, which is 54 less than in 1932 and 100 less than five years ago. The mortality rate was equivalent to 66 deaths per 1,000 births, and this figure compares favourably with a rate of 73 for the previous year and 75 five years ago. The total number of deaths up to five years was 657; of these, 167 or 25·4 per cent. took place during the first week of life, 217 or 32·4 per cent. during the first four weeks, 453 or 68·9 per cent. during the first year and 204 or 31·0 per cent. between one and five years of age.

Deaths of Illegitimate Children (Table 26).—Of the 453 deaths under one, which occurred during the year under review, 410 infants were legitimate, showing an infant mortality rate of 64·2 per 1,000 legitimate births, and 43 were illegitimate, giving an infant mortality rate of 97·1 per 1,000 illegitimate births. Of the total 657 deaths under five years of age, 600 were legitimate and 57 were illegitimate. Of the 600 legitimate children who died during the year, 410 or 68·3 per cent. were under one year and 190 or 31·6 per cent. were between one and five years of age. Similarly, of the 57 illegitimate deaths, 43 or 75·4 per cent. were under one year and 14 or 24·5 per cent. were between one and five years of age.

Neonatal Mortality (Tables 27 and 28).—The number of deaths in the first four weeks of life was 217, which is equivalent to a rate of 31·7 per 1,000 births, and this differs little from the slightly higher rate of 32·0 in 1932. Table 27 shows in detail the ages in days and weeks of these neonatal deaths. It will be noted that the greatest incidence occurs within the first 24 hours of life. The rate for this first day has remained more or less stationary for the past ten years, apart from a slight tendency to rise during the last triennial period. The table shows a considerable drop in rate on subsequent days up to the end of the first week. After this, for the second, third and fourth weeks there is apparent a gradual and progressive reduction in the rate. Table 28 shows an analysis of the four chief causes of neonatal deaths—namely, congenital malformations, injuries at birth, prematurity, and atrophy, debility, and marasmus, none of which shows any appreciable reduction during the last five years. The explanation may be that we are here dealing with an irreducible minimum of deaths during the first four weeks of life. On the other hand the results of investigations and intensive propaganda at later age periods would rather lead one to think and to hope that further research, and more propaganda among women on behalf of early, constant, and regular ante-natal supervision and skilled attention for every woman at the time of her confinement, would tend to bring about a greater saving of lives in this early period.

Deaths from Tuberculosis.—Table 29 shows the death rate for the past ten years from this disease in the first five years of life. It will be seen that both tuberculous meningitis and abdominal tuberculosis are decreasing in incidence quite definitely

Unfortunately, the incidence of other forms of the disease has remained much the same except during the year just closed, which shows a drop to 0·15, compared with 0·53 for 1932. There is no doubt that if the infants in tuberculous households in the City could be kept isolated during their earliest years, as is done on the continent under the Grancher system, tuberculosis in children would show an even greater reduction in incidence than at present.

Visits in the Homes.—Each Health Visitor has allotted to her a district of the City where she visits mothers and babies and keeps them under supervision. Naturally every child born in the City is not visited, but only those who desire it or who are known to the Medical Officer and Health Visitor to require it. The new housing areas in the suburbs have added considerably to the work of the staff. Quite a number of families in the old areas still remain and have to be catered for as well as the new ones, so that the work of visiting, being more spread out than formerly, takes up more time. Additional visits are made under the guidance of the Health Visitors by nurses in training for the Health Visitor's Diploma. During the year 5,633 infants under one year received 24,402 visits, also 47,645 visits were paid to children between one and five years of age, 842 of whom were seen for the first time at this age period. There were 3,437 visits made to expectant mothers, while 1,519 children received fortnightly visits from members of the Voluntary Health Workers' Association, who co-operate by reporting upon conditions in the home or household which in their opinion may require the attention of the official worker. Members of this Voluntary Association are closely associated and keenly interested in the Edinburgh Welfare Housing Trust promoted mainly through the initiative of Bailie Mrs Somerville—an indefatigable worker on behalf of mother and child life in the City. The purpose and aim of the Trust is to provide houses in which infants and young children can be healthily reared. The houses are let at a reduced rent and contain three bedrooms, bathroom and living room. During the year, ten new houses were built and occupied by ten families removed from overcrowded dwellings, five coming from "single ends," the total number of children in these families being fifty-two. A trained lady worker collects the rents and is in constant touch with the tenants to help them in any way and to see that they take good care of their houses. The Trust is financed by money, either gifted or lent at a low rate of interest by interested people.

Clinics.—In addition to the ante-natal and post-natal clinics already referred to, clinics for infants and children up to five years of age are held at 13 Centres situated in various parts of the City, one for the new Niddrie area being opened in the month of June.

Preventive Clinics (Table 30).—At the Preventive Clinics, the health of normal children is supervised and where there is no family doctor or dispensary available, minor ailments are treated as well. During the year, 2,669 new cases attended the clinics and the total attendances of all new and old cases numbered 32,020.

Curative Clinics (Table 31) are held at those centres which are at a distance from hospitals or dispensaries. These were attended by 2,869 new cases, the total attendances of both new and old cases being 17,539.

Ultra Violet Ray Therapy (Table 32) is available at two of the City Child Welfare Centres—viz.: Leith and Pleasance. Other centres such as Gorgie, Stockbridge, Portobello, Prestonfield and Niddrie would also benefit greatly by the provision of similiar facilities. It is almost impossible to count upon mothers from such a distance bringing children regularly, often for long periods, to the existing centres for this treatment. During the year, 193 children received treatment which involved 2,306 exposures to the mercury vapour lamp and 1,317 exposures to the carbon arc lamp.

Rheumatic Clinic (Table 33).—This 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, both of whom are Visiting Physicians to the Hospital. Fifty-two clinics were held during the year, when 65 new cases and 657 old cases were examined. Of the 65 new cases 42 were definitely diagnosed as of a rheumatic nature and were kept under special observation and 23 as due to other non-rheumatic conditions. The total number of notifications during the year was 72, as compared with 53 in 1932.

Mothercraft Classes.—These consist of simple talks on maternal and infant hygiene given to mothers attending the Welfare Centres. A definite programme of seven to eight talks is arranged so that the mothers at each centre receive the same teaching, usually from the clinic doctor or health visitor. At the end of the course a simple examination is held on the subjects dealt with, and the mother who takes first place is awarded the Hutchison Silver Shield for the Centre to which she belongs. She has her name engraved upon it and it is retained for a year at the Centre. In addition, a prize is given for the best result at each individual centre, and other prizes are given for the making of simple garments for children. Two prizes are reserved for the fathers, who are asked to make—(1) something useful for the home or (2) a plaything for a child. Fifty-one mothers sent in work and 7 fathers took part in the men's section. The Shield was gifted in 1924 by the late Lord Provost Sir Thomas Hutchison, Bart. Since the Shield was first competed for, the attendances have risen from 35 in 1924 to 266 in 1933. In 1924, 13 only took part in the examination, whereas last year as many as 131 did so. The winner for 1933 was Mrs John Anderson, who attends Torphichen Street Centre. The Shield has been held only once before by this Centre. The summer gathering of mothers and babies was held in June at Spylaw Park, Colinton, when the Lady Provost presented the Shield and other prizes to the various winners. The staff would like to take this opportunity of thanking the Lady Provost for gracing the occasion with her presence and of assuring her how greatly her kindly interest in the work of the Department was appreciated by the mothers as well as by the officials and their friends.

Special Demonstrations in Cookery.—The aim of this teaching is to show mothers how on a meagre weekly budget, varied and nutritious meals may be produced with an ordinary room grate as the only means of cooking. Miss Gilmour, who undertook this work so admirably, died in the early part of the year, as also did her sister, a month or two later. Owing to the loss of these two devoted women, this very important piece of child welfare work has had to be temporarily put into abeyance. It will be difficult for any successor just exactly to fill Miss Gilmour's place. It is pleasing to remember and here to put on record, the excellence of her work and the enthusiasm

with which she always carried it out. Nothing was too much trouble to Miss Gilmour if it meant teaching the mothers, by all of whom she was so much beloved. Many and insistent were the requests for her services at the various Welfare Centres and Toddler Playgrounds.

Record of Vaccinations (Table 34).—The number of children vaccinated in infancy tends to decrease from year to year, whereas the number of cases exempted by statutory declaration of conscientious objection continues to rise. In the case of the latter the number was 1,070 in 1914, while in 1932 it was 2,114—almost double. The table shown also discloses the interesting statistical fact that the number certified on the grounds of constitutional insusceptibility appears to be on the increase—from 66 in 1914 to 144 in 1932.

Milk and Dinners (Table 35).—Where health conditions require it, the distribution of milk and dinners to expectant and nursing mothers has proved of value. No one is allowed to carry the dinners home unless a medical certificate states that this is necessary by reason of physical inability to attend at the premises.

Day Nurseries (Table 36).—These institutions, of which there are at present four carried on by the local authority, are primarily for the day care of children whose mothers have to go out to earn their living. A small charge is made in each case—sevenpence per day for infants up to eighteen months and fivepence per day for toddlers. For the half-day, the figures are respectively fivepence and fourpence. For the past few years, three of the Day Nurseries have also been successfully used for the reception, during both day and night, of what may be called "Convenience Children." By this term is meant any healthy children whose mothers are in hospital and who have no means of having them looked after. A small weekly payment in accordance with the parents' ability to pay is asked for and received while these children are in residence.

Toddler Playgrounds (Table 37).—There are sixteen of these playgrounds now in existence. They are all subsidised by the local authority and managed by a Committee of the Voluntary Health Workers' Association in whose Annual Report further details may be read. The object is to care for the toddlers for a couple of hours every morning during school term. The playgrounds consist of an open space in the vicinity of a hall or room where shelter can be had in wet weather. A superintendent is in charge, assisted by voluntary workers. Experience has shown that great improvement in health can be achieved by this simple and inexpensive child welfare activity. Free for the time being from having to keep an eye on the toddler, the mother usually takes the opportunity of doing her housework or shopping. The actual attendance throughout the year at these playgrounds amounted to 516 out of a roll of 726. The small cost of running these playgrounds is well repaid in health results to the toddler.

Child Gardens.—There are six of these voluntary institutions in the City all of which are subsidised by both the Education and Public Health Committees. They are all situated in densely populated areas and do valuable work not only by supervising and guiding the early mental development of the pre-school children, but also by teaching them good health habits.

Homes for Mothers and Infants.—A number of such Homes in the City work in close harmony with the Child Welfare Department, and receive subsidies from the Public Health Committee, viz. :—

(1) *The Edinburgh Home for Mothers and Babies at 17 Claremont Park, Leith,* which receives £120 per annum from the local authority. This Home had in residence on the 1st January, 1933, 34 mothers and 27 infants. In addition, 25 mothers and 24 infants were admitted during the year. The average length of stay in the Home for the mothers was 18 weeks, and for the infants 15 weeks.

(2) *The Salvation Army Home for Mothers and Infants at Bonnington Bank House* receives a subsidy of £150 per annum. It had in residence on 1st January, 1933, 19 mothers (including expectant mothers) and 11 babies. There were admitted during the year 27 mothers and 27 babies and discharged 28 mothers and 25 babies, leaving still resident in the Home at the end of the year 18 mothers and 13 babies.

(3) *Hawthornbrae Convalescent Home, Duddingston.*—No annual subsidy is granted to this Home, but each mother and child sent is paid for at an agreed cost. During the year 23 mothers, 21 infants and one toddler were sent for a fortnight to this Home.

(4) *Edinburgh Home for Babies.*—This Home, which was removed in the month of November from 18 Polwarth Terrace to 30 Colinton Road, can now accommodate 20 instead of 14 babies, as formerly. The Corporation give an annual grant of £70. Children can be kept in the Home till they are 2 years of age. During the year 16 babies were admitted. The Annexe at 3 Forbes Road, under Miss Waldie's care, has accommodation for six babies, and that number was admitted during the year.

(5) *Humbie Children's Village.*—The Department was responsible for sending 198 children between 3 and 5 years of age to this Home. A cottage is specially set aside for the reception of these younger children, who remain for a period of three to four weeks at a time. Each child is paid for by the Corporation.

Apart from the above Homes there are others which do most valuable work, but which do not receive any monetary grants from the Corporation—thus during the year several mothers with infants and toddlers spent a holiday at *Leadburn Home for Tired Mothers. The Committee of Providence House, Kinghorn,* also admits similar cases paid for by the mothers themselves or through voluntary effort.

The Convalescent Home at Fushiebridge, carried on by the Misses Romanes, continues to be of very great service. A very competent Matron is in charge of the Home, and those who are recommended for a short holiday there, invariably come back full of praise and thankfulness for the way in which they have been cared for. Approximately 14 mothers, 10 babies, 5 toddlers and four girls were received during the year.

In addition, the Home proved itself particularly useful and suitable for the reception and care of rheumatic children in the late convalescent period of the disease. Fourteen such rheumatic children were sent during the year with markedly beneficial results to their health.

Victoria Park Home for debilitated infants and children continues to fill a necessary part of the Child Welfare Organisation. It is always well filled, and more applications for admission are received than can be dealt with. During the year 139 cases were looked after in the Home and the average daily occupation was 21·3. The children are kept out of doors as much as possible, except when the weather is unsuitable. The home atmosphere is encouraged for both children and staff and anything in the nature of Institutional life is discouraged. No doubt this is one of the reasons why the children improve so much during their residence in the Home. Probationers are also trained as domestic nurses and before leaving at the end of their 18 months' training, are encouraged to obtain the Certificate of the National Day Nurseries' Association. For the first six months they are taught to take part in all the housework, and for the next twelve months how to look after babies.

No official Maternity and Child Welfare Department can successfully carry on its work without the closest co-operation with all voluntary agencies doing work on behalf of mothers and babies. In Edinburgh we are fortunate in having this co-operation in a very real sense.

I should like to take this opportunity of expressing to all workers—official and voluntary—my appreciation and gratitude for the interest they have taken in the work of the Department and the great help they have been to me in carrying out my duties.

Table 1.—ANTE-NATAL CLINICS.

Centre.	Number of Clinics held.	Attendances.		
		New Cases.	Old Cases.	Total.
Cowgate	99	450	754	1,204
Torphichen Street	52	126	515	641
Marshall Street	41	51	115	166
Royal Maternity Hospital	364	2,486	11,080	135,66
Leith	48	300	837	1,137
Elsie Inglis Memorial Hospital	153	1,304	4,897	6,201
Prestonfield	52	204	551	755
Portobello	52	80	234	314
Stockbridge	52	103	354	457
Totals	913	5,104	19,337	24,441
Figures for 1932	918	4,898	19,122	24,020

Table 2.—POST-NATAL CLINICS.

Centre.	No. of Clinics held.	Attendances.
Royal Maternity Hospital	52	1,117
Elsie Inglis Memorial Hospital	102	1,149
Seen at other Centres	...	327
Totals	154	2,593

Table 3.—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 practise in the district	19
2. (*a*) Total number of Births	7,518
(*b*) Total number of Deaths of New-born Children (within 10 days)	224
(*c*) Actual number of Births attended by Midwives	311
(*d*) Deaths of New-born Children occurring in the practice of Midwives	7
(*e*) Number of Births not attended by a Doctor or Midwife	2
3. (*a*) Total number of cases of Ophthamlia Neonatorum	35
(*b*) Actual number of Ophthalmia Neonatorum cases occurring in the practice of Midwives	1
(*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	93
(*b*) Total number of Deaths from Puerperal Sepsis	*13
(*c*) Actual number of cases of Sepsis in practice of Midwives	0
(*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 cases of Puerperal Pyrexia	55
(*b*) Total number of Deaths from Puerperal Pyrexia	1
(*c*) Actual number of cases of Pyrexia in practice of Midwives	0
(*d*) Actual number of Deaths from Puerperal Pyrexia in practice of Midwives	0
(*e*) Actual number of cases occurring where confinement not attended by a Doctor or Midwife	0
6. (*a*) Total number of Still-births	418
(*b*) Actual number of cases of Still-births occurring in the practice of Midwives	8
7. Cases of Emergency	32

* Includes 2 deaths transferred to other districts.

The total cases of emergency in which medical practitioners were called in, under Section 22 of the Act, during 1933 are noted in the following classified list, and number 32 as compared with 49 in 1932 :—

Cases of Emergency.

Delay in Labour	9
Premature Birth	2
Still-birth	8
Macerated Fœtus	2
Placenta Prævia	2
Perineal Tear	3
Illness of Child	3
Incomplete Abortion	1
Prolapse of Cord	1
Triplets complicating Labour	1
	32

Table 4.—PUERPERAL PYREXIA.

Total number of cases of puerperal pyrexia notified		69
Total number subsequently developing into puerperal fever		14
Total number of deaths of cases notified as puerperal pyrexia—		
Puerperal septicæmia	1	
Pulmonary Tuberculosis	1	
		2

Table 5.—PUERPERAL FEVER.

Total number of cases of puerperal fever notified		86
Total number of cases notified but not confirmed—		
Uretero-Pyelitis	1	
Urinary Infection and Hyperthyroidism	1	
Gonorrhœal Cervicitis	1	
Mastitis	1	
Phlebitis	1	
Pulmonary Tuberculosis	1	
Sciatica	1	
		7
		79

TABLE 6.—RÉSUME OF CONFIRMED CASES OF PUERPERAL FEVER.

Notified as puerperal fever	79
Notified as puerperal pyrexia	14
TOTAL	93

TABLE 7.—DEATHS FROM CONFIRMED CASES OF PUERPERAL FEVER.

Number notified as puerperal fever	7
Number notified as puerperal pyrexia	1
TOTAL	8

TABLE 8.—AGES of PATIENTS suffering from PUERPERAL FEVER.

15 years and under 20 years	6
20 years and under 25 years	27
25 years and under 30 years	29
30 years and under 35 years	18
35 years and under 40 years	9
40 years and over	4
TOTAL	93

TABLE 9.—AGES at DEATH of PATIENTS suffering from Confirmed PUERPERAL FEVER.

15 years and under 20 years	1
20 years and under 25 years	2
25 years and under 30 years	2
30 years and under 35 years	2
35 years and under 40 years	1
40 years and over	0
TOTAL	8

TABLE 10.

MATERNAL DEATHS, 1929-1933.	1929	1930	1931	1932	1933
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Cases attended by—					
Private Doctors and died in their own homes	10	17	16	13	10
Private Doctors and removed to Institutions	35	45	49	32	23
Midwives and removed to Institutions	...	2	...	...	...
Dispensaries and Pupil Nurses and removed to Institutions	8	12	4	11	10
Dispensaries and Pupil Nurses at home	6	2	...	2	...
Attended in Institutions	41	22	31	42	55
No Medical care	...	...	...	...	2
Totals	100	100	100	100	100

Table 11.—MATERNAL DEATHS.

Ages at Death :—

Under 20 years	3	6·3	per cent. of the total.
20 years and under 25 years	4	8·3	,, ,, ,,
25 years and under 30 years	14	29·1	,, ,, ,,
30 years and under 35 years	7	14·6	,, ,, ,,
35 years and under 40 years	13	27·1	,, ,, ,,
40 years and under 45 years	5	10·4	,, ,, ,,
45 years and under 50 years	2	4·2	,, ,, ,,
Total	48	100·0	

Table 12.

CAUSES OF DEATH :—

Septicæmia.		
Puerperal sepsis		11
Toxæmia.		
Pregnancy toxæmia	2	
Eclampsia	7	
Uræmia	3	
Acute Liver Atrophy	1	
	—	13
Hæmorrhage.		
Postpartum Hæmorrhage	1	
Placenta Prævia	1	
	–	2
Embolism.		
Number of Deaths		3

Conditions complicating or associated with Childbirth.

Rupture of Uterus	1
Ectopic Gestation	1
Pneumonia	3
Pulmonary Tuberculosis	1
Organic Heart Disease	5
Cerebral Hæmorrhage	1
Œdema	1
Shock	2
Intestinal Obstruction	2
Exophthalmic Goitre	1
Toxic Chorea	1
Total	48

Table 13.

Maternal Deaths 1933.	Septicæmia.	Toxæmia.	Hæmorrhage.	Embolism.	Other conditions complicating or associated with Child-birth.	Totals.
Cases attended by—						
Private Doctors and died at home	2	1	0	1	1	5
Private Doctors and removed to Institutions	4	2	0	0	5	11
Midwives and removed to Institutions	0	0	0	0	0	0
Dispensaries and Pupil Nurses and removed to Institutions	1	0	0	0	4	5
Dispensaries and Pupil Nurses at home	0	0	0	0	0	0
In Institutions	4	10	2	2	8	26
No Medical Care	0	0	0	0	1	1
Totals	11	13	2	3	19	48

Table 14.—MATERNAL DEATHS, 1924-1933.

Totals.

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Septicæmia . . .	21	13	13	17	20	19	13	16	14	11
Toxæmia . . .	6	3	8	10	10	12	19	10	7	13
Hæmorrhage . . .	8	7	6	9	7	9	4	5	4	2
Embolism . . .	3	4	5	5	4	2	1	4	2	3
Other Conditions . .	14	16	10	12	17	9	22	16	20	19
	52	43	42	53	58	51	59	51	47	48

Table 15.—RATE per 1000 BIRTHS.

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Septicæmia . . .	2·5	1·7	1·6	2·2	2·7	2·6	1·8	2·2	2·0	1·6
Toxæmia . . .	·7	·4	1·0	1·3	1·3	1·6	2·6	1·4	1·0	1·9
Hæmorrhage . . .	1·0	·9	·8	1·2	·9	1·2	·5	·7	·6	·3
Embolism . . .	·4	·5	·6	·7	·5	·3	·1	·6	·3	·4
Other Conditions . .	1·7	2·0	1·3	1·6	2·3	1·2	3·0	2·2	2·1	2·8

Table 16.—Particulars regarding BIRTHS after necessary corrections have been made for transfers.

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st	1,702	1,604	98	5·8
2nd	1,815	1,689	126	6·9
3rd	1,672	1,566	106	6·3
4th	1,646	1,533	113	6·9
Totals . .	6,835	6,392	443	6·5

Table 17.—BIRTHS allocated according to the three areas of the extended City.

Area.	Births.	Rate per 1000 of Population.
Edinburgh . . .	4,698	14·5
Leith	1,350	16·1
Suburban	618	20·2
Institutions	124	...
Military Quarters . . .	45	...
Whole City .	6,835	15·1

TABLE 18.—Corrected BIRTH-RATES for the eight large towns in Scotland and for the whole of Scotland for 1933.

Town.	Per 1000 of Population.	Town.	Per 1000 of Population.
Glasgow	19·2	Paisley	17·5
Edinburgh	15·1	Greenock	20·6
Dundee	17·5	Motherwell and Wishaw	20·1
Aberdeen	17·7	Clydebank	17·7

SCOTLAND . . . . . 17·6

TABLE 19.—NOTIFICATION OF BIRTHS—Analysis of 7,955 Births notified during the year.

I.	Births attended by Private Doctors		1,744
II.	Births attended by Private Doctors with a District Nurse—		
	(1) Queen's Nurses	933	
	(2) Buccleuch Place Nurses	114	
		—	1,047
III.	Births attended by Registered Midwives		311
IV.	Births attended by Students and Pupil Nurses in their own homes—		
	(1) Royal Maternity Hospital	945	
	(2) Elsie Inglis Memorial Hospital	377	
	(3) Cowgate Dispensary	295	
	(4) Deaconess Hospital	91	
		—	1,708
V.	Births attended in Maternity Hospitals and Training Centres—		
	(1) Royal Maternity Hospital	2,009	
	(2) Elsie Memorial Hospital	991	
	(3) Deaconess Hospital	3	
	(4) Edinburgh Lying-in Institution	23	
	(5) Western General Hospital	118	
		—	3,144
VI.	Births unattended		1
	(in addition there was 1 birth, which was not notified).		
			7,955

TABLE 20.—Analysis of comparable figures in percentages of the BIRTHS for the past five years.

	1929	1930	1931	1932	1933
Births attended by—	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
Private Doctors Private Doctors with a District Nurse	49	40	36	35	35
Registered Midwives	5	5	5	4	4
Students and Pupil Nurses in Patient's Home	18	21	21	21	21
In Maternity Hospitals and Training Centres	28	34	38	40	40
	100	100	100	100	100

TABLE 21.—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	0	3	3	1	3	2	5	0	5	5	7	1	35

The Confinement was attended by :—

A Doctor and Nurse	6 cases.
Nurses from Institutions	7 cases.
Dispensaries	4 cases.
In Institutions	17 cases.
Midwives	1 case.—Total, 35 cases.

Treatment was given :—

At Home	13 cases.
At Home and Welfare Centres	7 cases.
In Hospital	15 cases.—Total, 35 cases.

Hospital treatment was given :—

In Northern General Hospital	11 cases.
In Elsie Inglis Hospital	4 cases.—Total, 15 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 22.—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	295	63
Leith	111	82
Suburban	41	66
Institutions	4	...
Military Quarters	2	...
Whole City	453	66
Figures for 1932	507	73

TABLE 23.—Edinburgh—INFANTILE MORTALITY (deaths under ONE YEAR per 1000 Births).

Year.	Infantile Mortality.	Year.	Infantile Mortality.	Year.	Infantile Mortality.	Year.	Infantile Mortality.
1880	143	1895	152	1910	103	1925	96
1881	128	1896	122	1911	115	1926	80
1882	121	1897	164	1912	110	1927	80
1883	128	1898	*141	1913	101	1928	75
1884	135	1899	147	1914	110	1929	80
1885	120	1900	132	1915	132	1930	82
1886	136	1901	143	1916	100	1931	69
1887	137	1902	119	1917	‡123	1932	73
1888	128	1903	117	1918	94	1933	66
1889	133	1904	125	1919	§117	...	...
1890	144	1905	124	1920	89	...	...
1891	138	1906	112	1921	96	...	...
1892	135	1907	121	1922	91	...	...
1893	148	1908	†114	1923	82	...	...
1894	125	1909	113	1924	89	...	...

* Sanitary Dept. formed, 1898. † Voluntary Visiting in homes. ‡ Child Welfare Dept. formed May, 1917.
§ Reflection world influenza epidemic, 1918-1919.

TABLE 24.—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	314	14·1	21	6	2	1	1	31	67
Canongate	361	16·6	25	11	1	2	3	42	69
Newington	234	10·9	21	2	3	2	...	28	90
Morningside	135	6·2	8	...	...	...	...	8	59
Merchiston	175	8·6	10	...	1	...	...	11	57
Gorgie	549	20·9	31	6	4	8	1	50	56
Haymarket	158	8·9	7	...	1	...	...	8	44
St. Bernard's	243	13·5	2	1	1	1	...	5	8
Broughton	237	15·2	13	4	2	2	...	21	55
St. Stephen's	246	14·0	28	3	...	...	1	32	114
St. Andrew's	164	14·5	10	4	5	1	1	21	61
St. Giles	419	20·2	38	7	4	1	1	51	91
Dalry	371	17·4	19	6	2	1	...	28	51
George Square	286	13·5	14	7	2	1	2	26	49
St. Leonard's	340	16·4	20	5	4	2	1	32	59
Portobello	466	17·5	28	3	1	1	3	36	60
South Leith	457	15·3	34	5	4	2	1	46	74
North Leith	395	19·4	35	7	2	3	2	49	89
West Leith	271	14·0	25	2	3	1	2	33	92
Central Leith	227	15·8	17	6	1	...	2	26	75
Liberton	348	31·8	23	6	3	1	2	35	66
Colinton	96	13·5	7	...	...	...	1	8	73
Corstorphine and Cramond	174	13·8	11	1	1	1	...	14	63
Institutions	124	...	4	6	1	1	1	13	...
Military Quarters	45	...	2	...	...	1	...	3	...
Totals	6,835	15·1	453	98	48	33	25	657	66
Edinburgh Area	4,698	14·5	295	65	33	23	14	430	63
Leith Area	1,350	16·1	111	20	10	6	7	154	82
Suburban Area	618	20·2	41	7	4	2	3	57	66
Institutions	124	...	4	6	1	1	1	13	...
Military Quarters	45	...	2	...	...	1	...	3	...

EDINBURGH INFANTILE MORTALITY
1880-1933

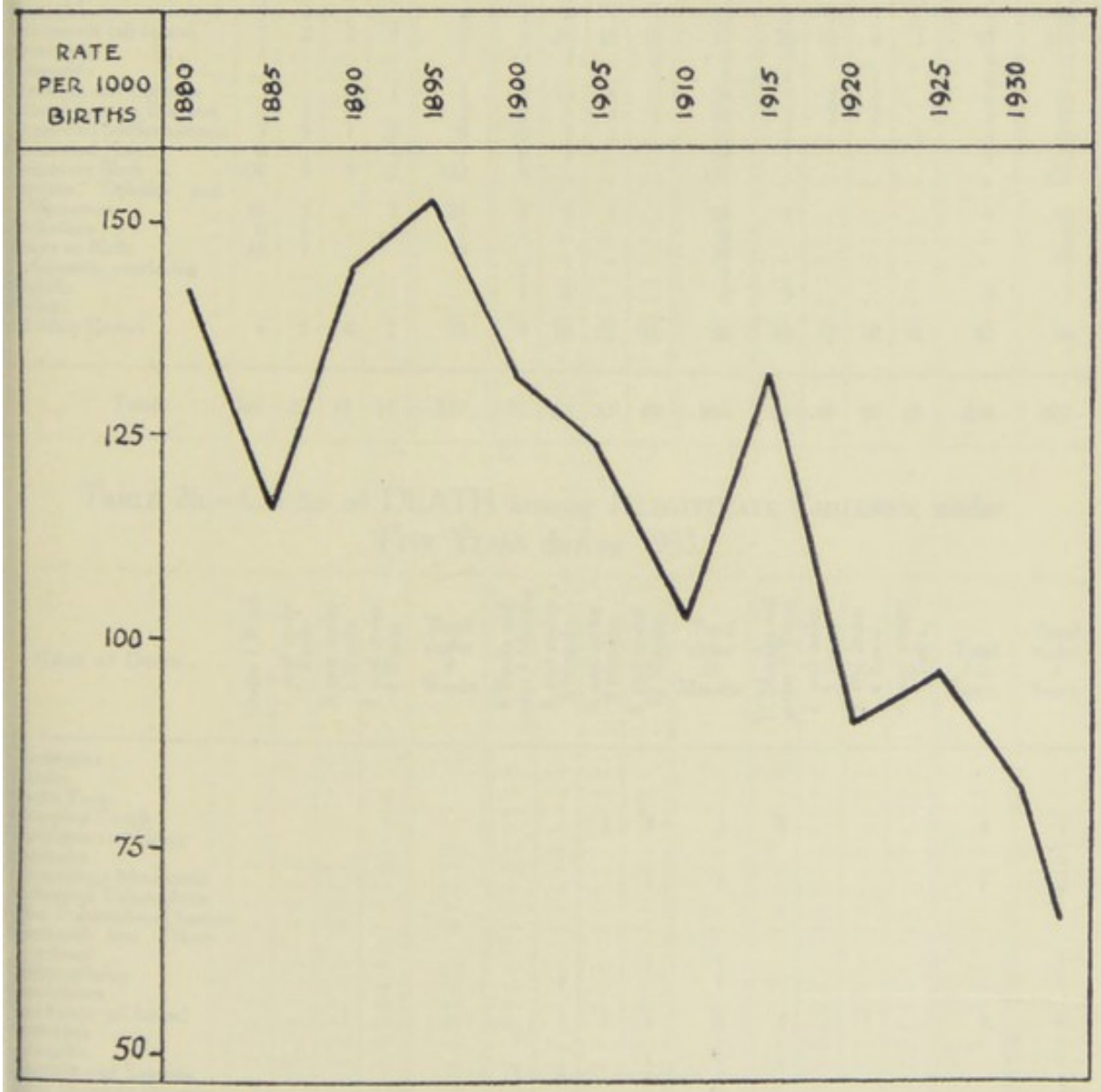


TABLE 25.—CAUSES of DEATH among CHILDREN under FIVE YEARS during 1933.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	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.
Chickenpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	2
Scarlet Fever	...	...	...	...	...	...	...	...	1	1	...	2	2	1	5	6
Whooping Cough	...	...	...	...	...	2	8	6	10	26	22	8	5	3	38	64
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	1	1	2	3	7	7
Erysipelas	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	2
Tuberculous Meningitis	...	...	...	...	...	...	1	3	1	5	6	5	3	3	17	22
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	1	1	...	...	2	2
Other Tuberculous Disease	...	...	...	...	...	...	...	2	...	2	1	1	...	1	3	5
Meningitis (not Tuberculous)	...	...	...	...	...	2	1	4	2	9	2	...	...	1	3	12
Hydrocephalus	...	...	1	...	1	...	1	...	...	2	...	...	...	1	1	3
Convulsions	3	1	...	...	4	2	4	1	1	12	1	1	...	...	2	14
Pneumonia (all forms)	3	2	2	1	8	9	10	12	18	57	38	12	6	1	57	114
Bronchitis	1	...	...	...	1	3	2	...	2	8	3	1	...	...	4	12
Laryngitis	...	...	...	...	...	...	...	...	1	1	1	...	1	...	2	3
Diarrhœa and Enteritis	...	...	...	1	1	7	13	6	2	29	2	2	2	...	6	35
Other Digestive Diseases	1	1	...	...	2	2	1	4	1	10	3	2	2	...	7	17
Congenital Malformations	3	3	1	2	9	10	2	1	...	22	2	...	...	1	3	25
Congenital Heart	6	...	...	1	7	6	1	...	...	14	1	...	...	...	1	15
Premature Birth	106	5	9	2	122	9	...	...	...	131	...	...	...	...	...	131
Atrophy, Debility and Marasmus	16	3	...	2	21	7	5	1	...	34	1	...	...	...	1	35
Atelectasis	6	1	...	...	7	1	...	...	...	8	...	...	...	...	...	8
Injury at Birth	18	1	...	...	19	...	...	...	...	19	...	...	...	...	...	19
Suffocation, overlaying	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1
Syphilis	...	...	...	...	...	1	1	...	...	2	3	...	...	...	3	5
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	4	5	4	2	15	9	10	12	10	56	10	12	10	10	42	98
Totals	167	22	17	11	217	72	62	53	49	453	98	48	33	25	204	657

TABLE 26.—CAUSES of DEATH among ILLEGITIMATE CHILDREN under FIVE YEARS during 1933.

CAUSE OF DEATH.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	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
Chickenpox						...	...	...	...	...	...	...	...	...	...	...
Measles						...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever						...	...	...	...	...	...	...	...	...	...	...
Whooping Cough						...	...	1	2	3	3	...	1	...	4	7
Diphtheria and Croup					...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	1	1	1	...	...	...	1	2
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1
Hydrocephalus	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1
Convulsions	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	...	...	...	...	...	...	1	1	1	3	2	...	1	...	3	6
Bronchitis	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1
Laryngitis	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	1
Diarrhœa and Enteritis	...	...	...	...	...	1	2	...	1	4	...	...	...	...	...	4
Other Digestive Diseases	1	...	...	...	1	1	...	...	...	2	...	...	...	...	...	2
Congenital Malformations	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	1
Congenital Heart	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Premature Birth	6	...	3	...	9	1	...	...	...	10	...	...	...	...	...	10
Atrophy, Debility and Marasmus	1	...	...	...	1	3	1	...	...	5	1	...	...	...	1	6
Atelectasis	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	1
Injury at Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlaying	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	2
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other Causes	1	1	1	...	3	1	1	3	1	9	...	2	...	...	2	11
Totals	10	1	4	...	15	9	6	5	8	43	10	2	2	...	14	57

TABLE 27.—Table showing detailed Analysis of the NEONATAL MORTALITY RATES in Triennial Periods (RATE PER 1000 BIRTHS).

TRIENNIAL PERIOD.	BIRTHS.		INFANTILE MORTALITY.		NEONATAL MORTALITY.										
	No.	Rate.	Deaths.	Rate.	1 Day.	2 Days.	3 Days.	4 Days.	5 Days.	6 Days.	Total under 1 Week.	1 and under 2 Weeks.	2 and under 3 Weeks.	3 and under 4 Weeks.	Total under 4 Weeks.
1911-1913 .	19,096	20·0	2,083	109	321=16·8	81=4·2	54=2·8	28=1·5	23=1·2	26=1·4	533=27·9	84=4·4	110=5·8	87=4·6	814=42·6
1922-1924 .	25,838	20·3	2,261	88	368=14·2	83=3·2	56=2·2	38=1·5	20= ·8	15= ·6	580=22·4	118=4·6	131=5·1	79=3·1	908=35·1
1925-1927 .	23,390	18·2	1,989	85	341=14·6	72=3·1	42=1·8	24=1·0	19= ·8	19= ·8	517=22·1	96=4·1	92=3·9	47=2·0	752=32·1
1928-1930 .	2,2031	16·9	1,730	79	323=14·7	83=3·8	47=2·1	30=1·4	25=1·1	12= ·5	520=23·6	77=3·5	76=3·4	42=1·9	715=32·5
1931-1933 .	20,959	15·6	1,452	69	352=16·8	67=3·2	50=2·4	20=1·0	13= ·6	17= ·8	519=24·8	63=3·0	42=2·0	49=2·3	673=32·1

TABLE 28.—NEONATAL DEATH-RATE. In the following Table the Deaths occurring during the Neonatal period have been tabulated to show various important causes of Death.

Four Chief Causes of Death occurring in the Neonatal Period.
(Rate per 1000 Births).

	1929.	1930.	1931.	1932.	1933.
Congenital Malformations	3·3	3·1	1·5	1·4	2·3
Injuries at Birth	2·7	3·1	3·2	3·9	2·8
Prematurity	17·1	17·1	15·2	17·9	17·8
Atrophy, Debility and Marasmus	3·4	4·1	3·5	1·3	3·1

TABLE 29.—TUBERCULOSIS.

Death-Rate per 1,000 Living under Five Years of Age.

Year.	Tuberculous Meningitis.	Abdominal Tuberculosis.	Other Forms of Tuberculosis (Mainly Surgical Tuberculosis).
1924	1·27	0·48	0·30
1925	1·16	0·61	0·67
1926	0·91	0·33	0·30
1927	0·91	0·27	0·24
1928	0·75	0·21	0·15
1929	0·67	0·18	0·36
1930	0·46	0·22	0·43
1931	0·67	0·12	0·39
1932	0·64	0·03	0·53
1933	0·65	0·06	0·15

TABLE 30.—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.
Dorgie	91	249	95	344	2,088	1,763	3,851
Dorphichen Street	99	277	42	319	3,154	1,552	4,706
High Street	102	135	31	166	2,209	1,703	3,912
Pleasance	120	246	62	308	3,157	2,158	5,315
Windsor Street	98	310	89	399	2,737	1,169	3,906
Stockbridge	104	243	109	352	2,583	1,273	3,856
Marshall Street	47	92	88	180	1,120	623	1,743
Elsie Inglis Memorial Hospital	52	147	104	251	1,064	731	1,795
Prestonfield	52	102	51	153	1,099	820	1,919
Craiglockhart	28	92	105	197	607	410	1,017
TOTALS	793	1,893	776	2,669	19,818	12,202	32,020
Figures for 1932	834	1,914	739	2,653	19,611	12,775	32,386

* These Dispensaries receive a grant from the Corporation.

Table 31.—CURATIVE CLINICS.

Centre.	Number of Clinics held.	Attendances.		
		Old Cases.	New Cases.	Total.
*Cowgate	97	2,247	280	2,527
Gorgie	51	349	219	568
*Torphichen Street	51	696	306	1,002
High Street	43	1,363	50	1,413
*Marshall Street	47	565	142	707
Portobello	100	2,781	207	2,988
Leith	147	4,494	950	5,444
*Elsie Inglis Memorial Hospital	97	1,223	626	1,849
Windsor Street	49	952	89	1,041
Totals	682	14,670	2,869	17,539
Figures for 1932	649	13,089	2,869	15,958

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

Table 32.—ULTRA VIOLET RAY CLINICS.

Centre.	Number of Cases.	Number of Exposures given.	
		M.V. Lamp.	C.A. Lamp.
Leith	82	1,118	...
Pleasance	111	1,188	1,317
Totals	193	2,306	1,317

Table 33.—RHEUMATIC CLINIC.

Analysis of 65 New Cases seen at Rheumatic Clinic.

Rheumatic.

Prodromal only	10
Arthritis	2
Chorea only	9
Carditis only	15
Carditis and Chorea	6
	42

Other Conditions.

Nervous instability	4
Habit spasm	1
Bronchitis	1
Intrathoracic tuberculosis	1
Congenital heart	1
General malnutrition	7
Intestinal indigestion	1
Albuminuria	1
Rheumatoid arthritis	1
Cervical adenitis (tonsilitis)	2
Birth injury	23
Mental backwardness	1
Rickety deformities	2

Table 34.—EDINBURGH. RECORD OF VACCINATIONS.

Year	Successfully Vaccinated.	On the ground of Constitutional Insusceptibility.	Died before Vaccination.	Statutory Declarations of Conscientious Objection.	Medical Certificate of Postponement.	Unaccounted for through removal from District before Vaccination or otherwise.	Total Births for Year.
1914	4,478	66	616	1,070	140	342	6,712
1928	5,230	132	486	1,741	143	244	7,976
1932	4,598	144	448	2,114	116	200	7,620

Table 35.—MILK AND DINNERS.

The distribution of **Milk and Dinners** during the year was as follows :—

Milk—Assisted	79,637 pints
Free	101 ,,
Dinners—Assisted	16,618
Free	...

Table 36.—DAY NURSERIES.

Day Nursery.	Attendances—Infants.	Attendances—Children.	Total. Attendances.
Henderson Row	1,174	3,228	4,402
Dumbiedykes Road	1,624	4,831	6,455
Viewforth Terrace	851	4,365	5,216
South Fort Street, Leith	1,378	5,368	6,746
Totals	5,027	17,792	22,819
Figures for 1932	4,482	17,929	22,411

Table 37.—TODDLER PLAYGROUNDS.

Centre.	Number on roll.	Daily attendances.	Centre.	Number on roll.	Daily attendances.
Barony Place	52	40	Portobello	42	32
Cameron House	36	30	Stockbridge	46	32
Chessel's Court	32	25	Tollcross	67	28
Cowan's Close	30	24	Tron Square	48	28
Cowgate	36	20	Leith—Junction Street	45	36
Fountainbridge	40	26	Keddie Park	85	72
High School Yards	32	24	Links Place	40	28
High Street	45	30			
Pleasance	50	42	Totals	726	516

VENEREAL DISEASES.

REPORT BY CLINICAL MEDICAL OFFICER.

The largest part of the work deals with out-patients and the principal clinics are conducted in the Royal Infirmary. In-patient accommodation is provided also for both sexes in the Royal Infirmary (36 beds), in one of the Municipal Hospitals (24 beds and cots), in Bruntsfield Hospital and Elsie Inglis Memorial Hospital (14 beds and cots), and in the Royal Maternity Hospital (14 beds and cots).

New Patients.—At the end of 1932, 3,779 patients were still under treatment and 4,365 new patients reported for examination at the various centres during 1933. The larger number of these, 2,680 were dealt with in the Out-patient Clinics at the Royal Infirmary. The number of patients under treatment during the year in all centres totalled 8,144. These patients were drawn not only from Edinburgh but from the wide area which the scheme covers in the East and South-East of Scotland. Edinburgh and the three Lothians provide the largest number of cases.

Of the 2,775 new patients found to be suffering from venereal infection, the percentages were as follows :—

Syphilis	762	...	27·6 per cent.
Gonorrhœa	1303	...	46·9 ,,
Chancroid	58	...	2·1 ,,
Non-Specific Venereal Disease	652	...	23·4 ,,

In addition, 1,590 other patients were examined and found to have disease of the genital organs or other structures which were not directly due to venereal disease ; all these patients were subjected to repeated clinical examinations, and bacteriological tests were carried out to eliminate the possibility of any venereal infection. Many of them had suffered from venereal disease previously and reported with a view to being tested for cure.

In-Patients.—There was an increase in the number of patients who required admission to hospital. This was accounted for by the severity of the disease and the complications present when the patients presented themselves for treatment. Of the total of 1,079 patients treated in hospital as in-patients, 281 were mothers admitted to the various Maternity Hospitals for confinement. The admissions to the various institutions were as follows :—

	Men.	Women and Children.	Total.
Royal Infirmary	246	129	375
Municipal Hospital	...	143	143
Bruntsfield Hospital	...	58	58
Elsie Inglis Memorial Hospital	...	*264	264
Royal Maternity Hospital	...	*239	239
	246	833	1,079

* Included in these figures are the number of children born to mothers under treatment.

NUMBER OF BIRTHS.

Elsie Inglis Memorial Hospital	118
The Royal Maternity Hospital	104

Out-Patient Attendances.—There has been a steady improvement in the attendances of out-patients compared to previous years. For medical examination, intermediate treatment, dressings, etc., the total out-patients attendances numbered 150,988 ; 111,235 were made by male patients and 39,753 by women and children. The detailed attendances at the various out-patient centres are as follows :—

Royal Infirmary, Male Department	91,211
Royal Infirmary, Female Department	19,314
Municipal Clinics	3,282
Bruntsfield Hospital and Dispensaries	13,980
Royal Maternity Hospital	3,177
Seamen's Dispensary, Leith	20,024

At the Royal Infirmary Clinics, the average attendances for men have been 291 per day, and for women and children 62 per day.

The increased attendance rate taken in conjunction with the slight decrease in the number of new patients is very satisfactory. It has enabled the staff to give continuity of treatment to a larger number of patients until cure was attained with some degree of certainty.

Syphilis.—An analysis of the cases shows that 27·6 per cent. suffered from syphilis. In the Royal Infirmary clinics 15 per cent. suffered from congenital syphilis ; in the whole scheme the total cases of congenital syphilis was 184, or 24 per cent. of the syphilitic patients. This figure has increased during the past two or three years but is not due to an increase in the amount of congenital syphilis. It is rather the result of following-up the children of parents who are known to suffer from acquired syphilis. In this way many cases of congenital disease are discovered before their health has been impaired, and they are treated successfully. In this connection also, many children, in whom no evidence of inherited disease is discovered, are examined and kept under observation for a time.

This follow-up work and the increased amount of ante-natal treatment which is being administered to a larger proportion of infected pregnant women will undoubtedly decrease the morbidity due to this condition in the years to come and will lead to a progressive decrease in the number of cases of inherited syphilis in the community.

It is well known that syphilis pre-disposes to some extent to premature births, dead-born and diseased children. In the Annual Report for 1931, figures were given which showed a very high mortality and morbidity rate in children born of syphilitic parents amounting to over 60 per cent. within the first five years of life. We have recently analysed the results of the treatment of a series of mothers suffering from syphilis who attended the Royal Maternity Hospital and who were treated adequately up to their confinement.

This analysis shows that if ante-natal treatment and care is commenced sufficiently early, a guarantee of improved health in the mother and of a healthy child can be given in practically 90 per cent. of the cases. The earlier this treatment is commenced during pregnancy the better is the result, and in cases treated before the sixth month of pregnancy a very favourable outlook indeed can be given both mother and child.

Gonorrhœa.—This infection still accounts for the greater number of the patients and has not shown any appreciable decrease for some years. The failure to lessen the incidence of gonorrhœa is one of our major problems. Until research can evolve for us a more rapid method of sterilising the patients of their infection, and until we have power to follow-up and control the carriers or sources of infection in the population, it will be difficult to lessen the incidence of this disease. As a disease it is still not treated seriously enough either by the infected person or by many doctors. After the initial symptoms are relieved there is little pain, although the infected person remains a source of danger to himself and to others. There is the additional fact that many patients are self-treated or are treated by physicians who do not insist on rigid tests of cure. We are satisfied also that the percentage of cases (46·9 per cent.) is not an accurate estimate of the prevalence of this condition in the population as it is well known that this infection is three or four times as prevalent as syphilis.

Chancroid.—These cases do not bulk largely in the figures. They are much more common in the male than in the female, and arise especially in dock workers and in foreign seamen.

Non-Specific Venereal Infection.—This large group includes cases of balanitis, urethritis and similar conditions in which there has been an admitted risk of infection followed by symptoms of disease which simulate either syphilis, gonorrhœa or chancroid. Most of them prove amenable to treatment and, being localised, are not followed by the severe complications such as occur in systemic syphilis or in gonorrhœa.

There is a slight decrease in the total number of patients, the largest fall being noted in the number of cases of syphilis ; this occurred chiefly in the earlier part of the year, while the figures for the last four months of the year are almost level with those of the previous year and show no appreciable decrease.

Ophthalmia Neonatorum.—The Public Health (Infectious Diseases) Regulations of 1932 include under this term any discharge from the eyes of a child within 21 days after birth. The number of cases notified to the Edinburgh Local Authority during the year was 35 ; 15 of these cases were treated in hospital, and on bacteriological tests an appreciable number of these did not show evidence of gonococci but showed other organisms as the cause of the purulent conjunctivitis.

From areas outside Edinburgh, 30 cases of suspected ophthalmia were treated in hospital, and in these cases also the larger number did not show evidence of true gonorrhœal ophthalmia.

For several years the Edinburgh Public Health Authority has provided beds for all cases of ophthalmia by arrangement with all the Public Health Authorities on the Borders and Lothians.

In the 45 cases which were hospitalised in the beds so provided there was no loss of vision in the eyes except in one child. This patient was taken from the Eye Department of the Royal Infirmary. When admitted to the Royal Infirmary from Fife there

was complete loss of vision in one eye and partial loss of vision in the other eye. The purulent inflammation of the eye began 10 days after birth, and we have no doubt that if the appropriate treatment had been administered then and not deferred until 12 days later, vision might have been saved in both eyes.

True ophthalmia with resultant blindness is undoubtedly on the decrease. We are of opinion, however, that instillation of the eyes at birth with an appropriate antiseptic, which is compulsory in the case of midwives, should be made compulsory in the case of doctors. In countries like Denmark where this is enforced and where much more care is taken in teaching midwives and medical students on this subject than is done in this country, the incidence of ophthalmia has been reduced to negligible proportions. It is important also to stress on medical practitioners the fact that these cases cannot be given the continuity of treatment which they require in the average working-class home if complete preservation of vision is to be guaranteed. In the interests of the child and mother also, hospital treatment is indicated as it enables a more complete investigation to be carried out as to the source of the purulent discharge from the eyes.

The Department of Health Circular issued during 1932 and its recommendations regarding this, if carried out, will undoubtedly lead to a reduction in the incidence of this condition.

Vulvo-vaginitis.—This condition also can be dealt with much better in hospitals than at home. Segregation of the young girl who is suffering from this condition is most important as the condition is highly contagious to other female children, and we still recommend all Children's Hospitals and Child Welfare Departments to keep a careful watch for this condition in any patient whom they admit to their care. In the Children's Department of one of the hospitals of the City, six cases eventuated as the result of one contagious case being admitted to the Children's Wards of the hospital. This patient was a carrier and the infection was traced to a sister at home who was apparently well, but who was suffering from a subacute infective condition. Twenty-six patients were treated in hospital during the year.

Laboratory Work.—A large amount of laboratory work is entailed in any Venereal Diseases Scheme, both for diagnostic purposes and in making certain that patients are cured of their infection. During the year 48,866 specimens were examined, 41,108 being from the Venereal Diseases Departments in the City, 5,211 from the other wards of the Royal Infirmary, and 2,547 from other institutions and general practitioners in the City.

This work is carried out by Dr. Logan and his staff in the Bacteriological Department of the Royal Infirmary. The close association of the clinical and laboratory work is a valuable asset to the scheme, and we desire to pay a tribute to the efficient manner in which this part of the work has been carried out. In addition to the routine work the clinical staff have also been enabled to carry out Research work on new tests such as the Kline Slide Precipitation Test for Syphilis. We are also indebted to Professor Mackie, of the University Bacteriological Department, for carrying out control tests in many cases by the Sachs Georgi reaction and other Flocculation tests.

Treatment.—The methods of treatment which have been adopted in previous years have been continued. Many new preparations have been tried out and while some of them promise to give more favourable results, no striking new discovery has eventuated. The Arsenobenzols, Bismuth and Mercury are still the most effective remedies in syphilis. In neuro-syphilis, intravenous injections of Tryparsamide and Malaria Therapy have enabled us to deal with these later manifestations of syphilis more effectively than previously. In ophthalmia neonatorum we are satisfied with the efficiency of the Flavine compounds, and in our experience they entail less risk of irritation to the eyes than does Silver Nitrate.

In the in-patient work in the Royal Infirmary and the other hospitals, the patients have benefited greatly in the treatment of intercurrent conditions by the co-operation and advice of the other members of the staff of the Royal Infirmary and of the Municipal Hospitals.

Results of Treatment.—It is interesting to note that for the past five years there has been no recurrence of either syphilis or gonorrhœa in patients who are discharged as cured and no case of neuro-recurrence in patients adequately treated by Salvarsan and Bismuth.

This is due in some measure to our aiming at certainty rather than rapidity of cure and to the long period of observation to which patients are subjected after their apparent cure.

As a result of treatment 3,256 patients were discharged as completely cured. At the end of the year 3,718 patients were still under treatment ; 660 were transferred to other centres during the year.

Percentage Continuing at Treatment Until Considered Cured.—The long period of observation referred to above is an absolute essential and the clientele of every Venereal Diseases Clinic requires to be educated to the fact that the disappearance of the symptoms and signs of the disease does not mean the cure of the disease. This is true of both syphilis and gonorrhœa.

The number of patients who defaulted from treatment during the year 1933 was 514, that is 17·7 per cent. of the patients. This result is favourable compared with that obtained in many other centres, but in spite of this fact the number of such cases who are still infective and are likely to spread disease through the population is still too large for any local authority to be satisfied with it.

Follow-up Work.—In our efforts to lessen the number of defaulters we have used every possible administrative measure which is allowed under the existing law.

We have undoubtedly been more successful in following-up female defaulters. As far as possible every case is notified within two or three weeks to the nurse attached to the administrative staff. This is followed by a visit to the patient's home, and during 1933, 1,619 such visits were made by the nurse ; as a result of these visits over 70 per cent. of the cases of women and children who defaulted returned for treatment.

In addition to following-up such patients this nurse is able to assist the work of the scheme in many other directions, by arranging hours of attendance suitable to the patients, by providing clothing for many of the poorer patients, and by bringing to the aid of the scheme the activities of other bodies such as the Society for the Prevention of Cruelty to Children, the various Social Services throughout the City, the Public Assistance Department and the Almoners of the Royal Infirmary. From all these bodies alike the nurse attached to our scheme has had the most helpful co-operation and assistance.

As we have noted in a previous report, it seems difficult to establish a similar system for following-up male defaulters ; something of this type, however, might be instituted if and when the municipal hospitals institute an almoner service.

Even with this we are still of the opinion that the Medical Officer of Health should be empowered with greater administrative control over known cases of infection.

In previous reports we have drawn attention to the difficulties of dealing with the young girls who become infected and, as a result of this, lose their employment and are homeless. Without desiring to cast any reflection on the existing social agencies in the City, we have still to deprecate the absence of suitable hostel accommodation in which these young girls can stay and be supervised while still continuing to attend the clinics for out-patient treatment. Such institutions should be able to provide a suitable occupation for the girls. They would prevent a large amount of infective material from continuing to spread disease, and would be of both social and economic value to the community and of the greatest possible assistance to the Venereal Diseases Scheme. No such facilities exist in Edinburgh, but institutions on these lines are successfully run in London and other large cities in the South.

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 321 ; these patients and those still attending for treatment from the previous year, made 20,024 visits for treatment during the year.

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.

EDINBURGH CORPORATION VENEREAL DISEASES SCHEME.

ROYAL INFIRMARY CLINIC.

REPORT FOR THE YEAR ENDING 31st DECEMBER, 1933.

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 . .	114	39	22	8	14	3	2	...
February . .	98	40	22	7	8	10	...	...
March . .	120	34	28	7	18	1	...	...
April . . .	103	36	19	11	10	8	7	...
May . . .	120	40	28	13	23	6	2	...
June . . .	129	40	18	9	20	9	3	1
July . . .	115	52	29	10	18	6	4	...
August . .	152	37	17	15	14	7	5	...
September . .	139	50	23	7	13	5	9	...
October . .	155	46	27	11	19	9	3	...
November . .	115	53	24	14	10	10	1	...
December . .	115	45	18	7	18	2	1	...
Totals . .	1,475	512=1,987	275	119=394	185	76=261	37	1=38

EDINBURGH	1,987
Other Areas in Scheme	394
Other Areas outside Scheme	261
Areas outside Scotland	38
Grand Total . . .	2,680

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 .	19	47	4	16	28	9	6	8	16
February .	7	32	4	19	36	15	5	4	16
March .	14	42	8	24	32	6	6	8	14
April .	23	40	2	14	24	15	5	5	11
May .	14	56	1	17	32	12	11	5	12
June .	16	61	3	23	26	8	12	8	12
July .	15	52	...	12	36	9	17	11	15
August .	14	60	3	34	41	7	12	5	13
September	19	55	4	18	43	18	8	8	16
October .	25	76	4	20	30	13	13	12	8
November .	19	48	1	20	27	16	11	10	16
December .	19	45	...	21	30	11	10	7	17
Totals	204	614	34	238	385	139	116	91	166

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	7	7	2	1	5	3	2	...	3
February	4	8	...	3	7	3	1	2	1
March	11	6	...	6	5	5	...	...	2
April	4	5	...	3	7	2	1	...	8
May	5	9	1	6	7	2	4	4	3
June	...	11	1	3	3	...	3	1	5
July	3	12	...	5	9	2	1	5	2
August	2	8	...	2	5	4	1	1	9
September	5	12	...	3	3	2	1	3	1
October	6	11	2	4	4	4	2	...	5
November	6	9	1	5	3	3	1	2	8
December	3	7	...	6	2	...	2	2	3
Totals	56	105	7	47	60	30	19	20	50

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	3	4	...	1	6	1	...	1	1
February	1	4	...	1	2	5	3	1	1
March	9	2	...	3	4	...	...	...	1
April	2	3	...	4	1	2	2	2	2
May	8	4	1	2	8	1	1	2	2
June	7	4	2	2	5	3	1	3	2
July	3	7	...	4	4	2	2	...	2
August	3	3	...	3	5	4	1	...	2
September	1	7	...	3	2	1	1	2	1
October	7	5	...	2	5	3	1	1	4
November	...	2	1	1	6	4	1	...	5
December	4	3	...	8	3	...	...	...	2
Totals	48	48	4	34	51	26	13	12	25

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	...	...	...	...	...	...	...	...	...
March	...	...	...	...	...	...	...	...	...
April	2	1	...	3	1	...	...	...	...
May	...	2	...	...	...	...	...	...	...
June	...	2	...	1	...	...	...	1	...
July	...	1	1	...	2	...	...	...	...
August	2	2	...	...	1	...	...	...	...
September	...	5	...	...	4	...	...	...	...
October	1	1	1	...	...	...	...	...	...
November	...	...	...	1	...	...	...	...	...
December	...	1	...	...	...	...	...	...	...
Totals	6	15	2	5	9	...	...	1	...
Grand Totals	314	782	47	324	505	195	148	124	241

1972 708

2,680

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.	...	...	...	...	...	4	1	...	9
1–4 yrs. .	...	...	...	1	1	5	...	1	24
5–14 yrs. .	9	...	...	1	8	11	5	4	57
15–24 yrs. .	42	211	9	98	109	45	73	57	46
25 yrs. up .	263	571	38	224	387	130	69	62	105
Totals	314	782	47	324	505	195	148	124	241

Admissions to Hospital :—

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
Edinburgh	41	51	3	27	4	46	22	6	2
Other Areas in Scheme	20	31	1	14	...	11	12	...	...
Area outside Scheme .	16	20	...	13	1	20	5	4	1
Areas outside Scotland	...	2	1	1	...	...	...	...	...
Total .	77	104	5	55	5	77	39	10	3
			246				129		

Discharges from Hospital :—

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.
Edinburgh .	37	52	3	25	3	44	23	11	1
Other Areas in Scheme	17	39	1	13	...	9	7	3	2
Areas outside Scheme .	18	19	...	9	1	18	6	5	1
Areas outside Scotland	...	2	1	1	...	1	...	...	...
Totals	72	112	5	48	4	72	36	19	4
			241				131		

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given :—

	Neokharsivan.	Sulfarsenol.	Bismuth.	Other Drugs.	Total.
January . .	454	192	1,477	516	2,639
February . .	466	226	1,566	589	2,847
March . . .	493	311	1,777	648	3,229
April . . .	419	275	1,529	609	2,832
May . . .	526	302	1,449	718	2,995
June . . .	488	298	1,377	679	2,842
July . . .	422	355	1,383	755	2,915
August . . .	403	292	1,452	897	3,044
September . .	427	234	1,469	801	2,931
October . .	544	250	1,452	818	3,064
November . .	561	301	1,380	765	3,007
December . .	468	297	1,326	872	2,963
Totals .	5,671	3,333	17,637	8,667	35,308

PATHOLOGICAL WORK.

Number of Specimens examined :—

	Wass.	C.S.F.	G.C.F.T.	D.Gs.	Smears.	Others.	Total.
January . .	946	48	272	46	1,004	116	2,432
February . .	929	42	318	36	913	87	2,325
March . . .	919	52	340	40	850	85	2,286
April . . .	864	39	310	40	872	71	2,196
May . . .	1,053	40	337	46	806	76	2,358
June . . .	1,066	45	319	28	837	52	2,347
July . . .	787	35	263	20	835	59	1,999
August . . .	895	19	341	30	764	30	2,079
September . .	931	36	343	56	892	53	2,311
October . .	1,081	34	372	64	1,055	69	2,675
November . .	1,060	46	386	54	888	139	2,573
December . .	922	34	339	32	869	245	2,441
Totals . .	11,453	470	3,940	492	10,585	1,082	28,022

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

	Males.	Females.	Total.
January	6,931	1,494	8,425
February	6,189	1,498	7,687
March	6,369	1,683	8,052
April	6,332	1,605	7,937
May	7,472	1,643	9,115
June	7,813	1,612	9,425
July	7,600	1,581	9,181
August	8,138	1,627	9,765
September	8,467	1,539	10,006
October	9,461	1,835	11,296
November	8,705	1,775	10,480
December	7,734	1,422	9,156
Totals . .	91,211	19,314	110,525

OTHER TREATMENT CENTRES IN EDINBURGH.

1. Subsidiary Centres for Royal Infirmary.

Number of New Cases	243

Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.	
79	71	9	84	= 243

Number of Patients treated in Hospital	143
Total Attendances of Out-patients	3,282
Pathological Work—Number of specimens examined	1,682
Special Treatment administered—Number of Injections given	3,802

2. Hospital for Women and Children and Subsidiary Centres.

Number of New Cases	665

Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.	
69	74	161	361	=665

Number of Patients treated in Hospital	322
Total Attendances of Out-patients	13,980
Pathological Work—Number of specimens examined	6,942
Special Treatment administered—Number of Injections given	2,130

3. Royal Maternity Hospital.

Number of New Cases	456

Syphilis.	Gonorrhœa.	N.S.D.	No. V.D.	
58	87	...	311	=456

Number of Patients treated in Hospital	239
Total Attendances of Out-patients	3,177
Pathological Work—Number of Specimens examined	2,666
Special Treatment administered—Number of Injections given	533

4. Seamen's Dispensary, Leith.

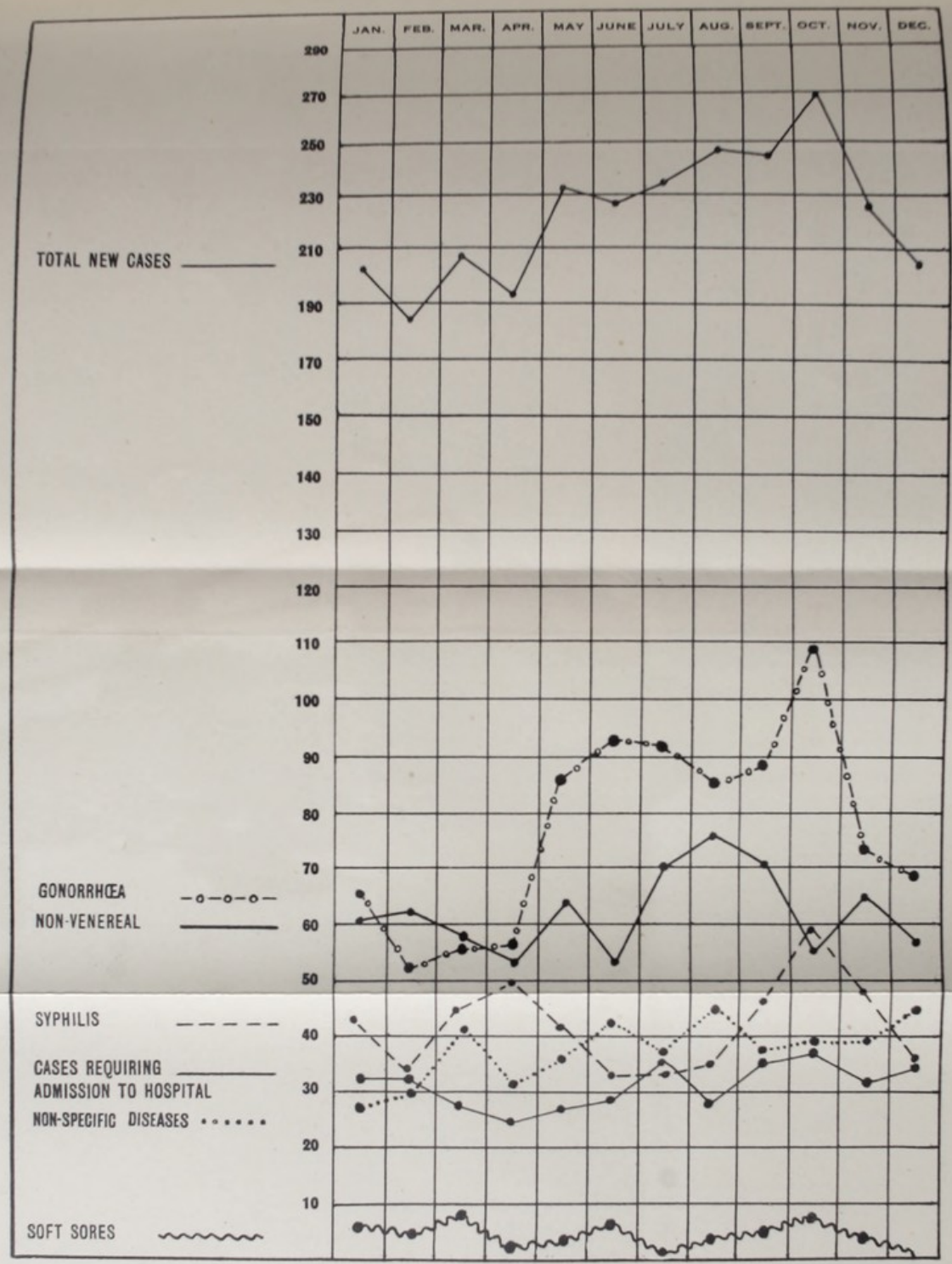
Number of New Cases	321

Syphilis.	Gonorrhœa.	Soft Sore.	N.S.D.	No. V.D.	
47	141	11	34	88	=321

Total Attendances of Out-patients	20,024
Pathological Work—Number of Specimens examined	1,796
Special Treatment administered—Number of Injections given	1,307

COMPARATIVE INCIDENCE OF TYPES OF VENEREAL DISEASE

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



MUNICIPAL GENERAL HOSPITALS.

REPORT BY MEDICAL SUPERINTENDENT OF HOSPITALS.

The year has been one of quiet progress. A comparison with last year's statistics in the surgical and maternity departments of the Western General Hospital will give an indication of the steady increase. In 1932 there were only 87 operations performed at the Western General Hospital. In 1933 this figure rose to 517. With regard to the maternity department, in 1932, 89 patients were treated in this Department, while in 1933 there were 181.

The teaching of undergraduates and graduates at the hospital has been a great stimulus to all the staff and has reacted favourably on the treatment of the patients. It may be argued that teaching tends to diminish the privacy of the individual patients, but this is not so and even if it were so, teaching causes a detailed research to be made into each patient's case, particularly in regard to the medical or surgical care and treatment.

Beds in the paying wards have been greatly in demand and the attention given much appreciated.

During the year an outstanding development has occurred in the provision of resident accommodation for medical students from the University. A hostel has been provided for twelve students who live in the Western General Hospital and carry out part of their medical training in the hospital. Such a scheme for undergraduates of the University to be resident in a hospital is new to Edinburgh. The advantage to the students is very great, and the scheme is proving most successful.

At the Western General Hospital, new heating boilers have been installed. A laboratory and cloakroom have also been provided for the students.

WESTERN GENERAL HOSPITAL.

STATISTICS FOR THE YEAR 1ST JANUARY TO 31ST DECEMBER, 1933.

		Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Adults	Males	78	516	429	94	71
	Females	57	620	528	87	62
Children	Males	58	429	399	24	64
	Females	53	372	348	20	57
Totals		246	1,937	1,704	225	254

Number of Cases treated . . . . 2,183.

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

Cured	1,109	Not Improved	254
Improved	341	Died	225
Remaining under treatment	254		

Causes of Death.

		Adults.	*Children.*
1.	Infectious and Parasitic Diseases	13	6
2.	Cancer and Other Tumours	47	...
3.	Rheumatism, Diseases of Nutrition and other General Diseases	13	...
4.	Diseases of the Blood and Blood-forming Organs	4	...
5.	Diseases of Nervous System and Sense Organs	15	4
6.	Diseases of Circulatory System	19	2
7.	Diseases of Respiratory System	14	13
8.	Diseases of Digestive System	8	4
9.	Non-Venereal Diseases of Genito-Urinary System	23	1
10.	Diseases of Skin and Cellular Tissue	11	...
11.	Diseases of Bones and Organs of Locomotion	8	...
12.	Congenital Malformations	...	3
13.	Diseases of Early Infancy	...	11
14.	Senility	5	...
15.	Primary Cardiac Failure and Surgical Trauma	1	...
		181	44

Total Beds	300
Average number of Occupied Beds	219
Average length of stay, in days, per patient	49
Highest daily number of patients	287 on 13.2.33
Lowest ,, ,, ,,	203 on 12.6.33

SPECIAL DEPARTMENTS.

Surgery.

During the year 517 operations were performed; 440 of these were major operations and 77 minor operations. A general anæsthetic was administered in 341 operations, 37 operations were carried out with a spinal anæsthetic, and 79 operations were performed under local anæsthesia. Certain minor operations, such as application of plaster, and passage of bougies were carried out without any anæsthetic. Morphine, a hypnotic, was used in some of these minor operations.

Classification of Operations.

Operation on brain, spinal cord, and peripheral nerves	6
,, lymph glands	18
,, upper air and food passages	8
,, breast and thorax	50
,, abdomen	198
,, genito-urinary organs	65
,, bones and joints (including amputation)	95
Various unclassified operations	77
	517

Classification of Cases.

Diseases of brain, spinal cord and peripheral nerves	12
,, lymph glands	18
,, blood vessels (including Gangrene)	17
,, tongue and jaws	8
,, upper air and food passages	7
,, breast	7
,, thorax	20
,, abdominal organs	166
,, urinary and genital organs	52
,, female pelvic organs	8
,, bones and joints	93
Various unclassified diseases	132
	540

Ear, Nose and Throat Department.

This new department was started during the year, and 30 operations were performed.

Eye Department.

This is another recent development, and during the year three patients were operated on for eye conditions, and 24 patients were examined.

Dental Department.

Patients treated, 114. These include 24 children and 90 adults. 110 treatments required a general anæsthetic.

Maternity Department.

Number of cases treated	181
,, ,, admitted	179
,, ,, discharged	166
,, ,, delivered (106 normal, 11 abnormal and 13 abortions)	130
,, post-partum puerperal admissions	9
,, deaths—Mothers 1, Infants 5	6

The one mother's death refers to a patient who was five months pregnant and who died of eclampsia a few hours after admission to hospital.

There have been 6 cases transferred to the City Hospital during the year—3 of puerperal sepsis and 3 of puerperal pyrexia.

Beds have been kept available for the admission of ante-natal cases from the Royal Maternity and Simpson Memorial Hospital. Only 7 cases were admitted to these beds during the year.

The abnormal deliveries included 4 by operation—cæsarian section, and 7 by forceps.

Special Diet Department.

Cases treated by Special Diet during the year	90
Remaining at 1st January, 1933	26
Number of cases admitted	64
,, ,, discharged	78
,, ,, remaining at 31st December, 1933	12

The disabilities treated included the following :—

Diabetes	45 per cent. of cases.
Stomach	35 ,, ,,
Kidney disorders	10 ,, ,,
Rheumatism	3 ,, ,,
Blood diseases	4 ,, ,,
Obesity	3 ,, ,,

Of the patients treated by special diet, 20 per cent. were cured, 50 per cent. improved, and in 30 per cent. of the cases the condition remained stationary.

In addition to the medical cases of the special diet department, numerous ordinary acute and sub-acute medical cases have been treated by the physicians.

X-Ray Department.

314 X-Ray examinations were carried out, in addition to those performed in the urological theatre.

Urological Department.

Transurethral Prostatectomy	1	Cystoscopy	9
Retrograde Pyelograms	6	Lipiodol examination	2
Fulguration	1	Urethroscopy	1

Massage and Electro-Therapy Department.

The total number of patients treated during the year was 264, of which 64 were cured and improved, 110 not improved, and 90 remained under treatment.

During the year, 1,916 treatments were given.

Massage	973	Ultra Violet Artificial Sun light	250
Galvanism and Faradism	17		
Diathermy	204	Re-Educational Exercises	472

NORTHERN GENERAL HOSPITAL.

No structural alterations have been carried out during the year.

Statistics for the Year 1st January to 31st December, 1933.

	Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males	90	104	53	43	96
Females	149	107	72	61	125
Totals	239	211	125	104	221

Number of cases treated . . . 450.

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

Cured	16	Not Improved	17
Improved	92	Died	104
Remaining under treatment	221.		

CAUSES OF DEATH.

		Males.	*Females.*
1.	Senility	4	8
2.	Diseases of Brain and Nerves	9	18
3.	Cancer or other Tumours	4	4
4.	Diseases of Digestive Organs	...	1
5.	Diseases of Heart and Blood Vessels	13	19
6.	Diseases of Lungs	9	5
7.	Diseases of Kidney	1	2
8.	Diseases of the Blood and Blood-forming Organs	1	2
9.	Infectious and Parasitic Diseases	2	2
		43	61

Total Beds	260
Average number of occupied beds	240
Average length of residence, in days	98
Highest daily number of patients	260 on 28.2.33
Lowest daily number of patients	214 on 28.7.33

EASTERN GENERAL HOSPITAL.

No structural alterations have been carried out during the year.

STATISTICS FOR THE YEAR FROM 1ST JANUARY TO 31ST DECEMBER, 1933.

	Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males	217	1,358	11,35	236	202
Females	134	938	738	191	145
Totals	351	2,296	1,873	427	347

Number of Cases treated . . . 2,647

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

Cured	321	Not Improved	486
Improved	1,066	Died	427
Remaining Under Treatment	347		

Causes of Death.

		Males.	*Females.*
1.	Infectious and Parasitic Diseases . .	13	6
2.	Cancer and Other Tumours . . .	36	20
3.	Rheumatism, Diseases of Nutritition and other General Diseases . . .	2	5
4.	Diseases of the Blood and Blood-forming Organs	4	2
5.	Diseases of Nervous System and Sense Organs	46	61
6.	Diseases of Circulatory System . .	45	30
7.	Diseases of Respiratory System . .	57	25
8.	Diseases of Digestive System . .	8	3
9.	Non-Venereal Diseases of Genito-Urinary System	6	3
10.	Diseases of Skin and Cellular Tissue .	1	2
11.	Senility	17	30
12.	Deaths from Violence	1	2
	Two females died before diagnosis could be made. The Death Certificates were signed by outside Doctors . .	...	2
		236	191

Total Beds	360
Average number of Occupied Beds .	339
Average length of stay, in days, per patient	54
Highest daily number of patients .	386 on 30.1.33
Lowest ,, ,, ,, .	276 on 11.8.33

Massage and Electro-Therapy Department.

The total number of patients treated during the year was 204, of which 32 were cured and improved, 125 not improved, and 47 remained under treatment.

During the year, 1,157 treatments were given.

Massage	847	Ionisation . . .	5
Galvanism and Faradism .	38	Ultra Violet Artificial Sun-light . . .	18
Re-Educational Exercises .	249		

CRAIGLOCKHART INSTITUTION.

SICK WARDS.

STATISTICS FOR THE YEAR 1ST JANUARY TO 31ST DECEMBER, 1933.

	Remaining 1st January.	Admitted.	Discharged.	Died.	Remaining 31st December.
Males	13	516	514	2	13
Females	7	248	246	2	7
Totals	20	764	760	4	20

Number of Cases treated . . . 784

In the Out-patient Department of this Institution, 3,945 males and 762 females received treatment. The chief disabilities were sore feet (bunions and corns), colds, dyspepsia, otorrhœa, conjunctivitis, chronic ulcers, etc.

During the year 184 patients were supplied with spectacles.

An examination of all inmates in the Institution is made every quarter.

There were 44 ante-natal cases in the Institution during the year.

The number of mental defectives (under guardianship) was 4 males and 2 females.

CRAIGLEITH CHILDREN'S HOME.

During the year from 1st January to 31st December, 1933, on an average, 75 children were resident in the Children's Home.

The greatest number of children in the Home at one time was 105 on 29th November, 1933, and the lowest number was 50, on the 10th March, 1933. The number of toddlers was about 50 per cent. more than for the previous year.

During the year there were no epidemics of infectious diseases in the Home.

Eighty-six children were sent to country board—six less than the figure for the previous year.

Gifts of 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.

A splendid radiogramophone was presented to the children's section by the Radio Circle.

The Western General Hospital is indebted to ladies and gentlemen who, again this year, 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.

All members of the staffs of the hospitals have given zealous service.

MENTAL HEALTH SERVICES.

BANGOUR MENTAL HOSPITAL.

Report by Medical Superintendent.

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

	M.	F.	Total.	M.	F.	Total
In Hospital, 1st January, 1933	471	504	975			
Absent on Probation	3	1	4			
Absent on Pass	7	3	10			
Total on Register (including 75 voluntary)				481	508	989
Cases admitted (including 108 voluntary)—						
First Admissions	112	135	247			
Re-admissions	49	58	107			
Total cases admitted during year				161	193	354
Total cases under care				642	701	1,343
Cases discharged (including 100 voluntary)—						
Recovered	80	82	162			
Not insane	...	1	1			
Relieved	21	35	56			
Not improved	7	9	16			
Died	41	36	77			
Total cases discharged and died during the year				149	163	312
Remaining in the Hospital 31st December, 1933	480	534	1,014			
Absent on Probation	3	3	6			
Absent on Pass	10	1	11			
Total on Register (including 83 voluntary)				493	538	1,031
Average daily number on Register during the year				490	517	1,007

Admissions.—The total number of admissions, namely 354, represents an increase of 40 over last year's figures, but is only slightly in excess of the average of the last five years. It is reassuring to note that the number of voluntary admissions continues to increase, no fewer than 108 such admissions occurring during the year. Of the voluntary admissions the great majority suffer from states of depression so profound as to constitute a menace to their own and other people's safety. Not infrequently, so deceptive is the character of the illness, it is difficult to convince relatives of the necessity for hospital treatment even though the patient himself is fully aware of the risks. It is for that reason that attempts at suicide are so common in cases of depression, attempts which might be avoided if the dangers of this simple form of mental illness were better appreciated. Experience shows that it is best to treat as serious such conditions as are described in the terms "just nerves," "just his spirits down," and "he would be all right if he just bucked up." What misleads as to the gravity of the illness is that generally the patient's intelligence, and his grasp of his

surroundings are not impaired, and the sufferer does not therefore conform to the traditional picture of the mentally afflicted. Despite that, the condition is full of tragic potentialities, for the emotional depression may be so acute as to make death itself appear a merciful release. Known cases of contemplated or attempted suicide in the year's admissions are :—

	Male.	Female.	Total
Contemplated	22	19	41
Attempted :—			
By Gas	1	3	4
,, Drowning	1	3	4
,, Cut-throat	4	1	5
,, Hanging	1	2	3
,, Poisoning	3	2	5
,, Precipitation	...	3	3

In view of the extreme urgency of providing care for such patients at the earliest possible moment, it is suggested that the mode of admission might profitably be more direct. At present all such cases are referred to the Public Assistance Department so that preliminary enquiries may be made into their condition. Some patients resent this and in any case the procedure involves delay in admission. The difficulty might be surmounted by advising doctors that voluntary patients can be admitted direct to the Hospital on presenting themselves there. Such inquiries as are necessary can be made after admission. Not only would this prevent avoidable delay, but it would serve to emphasise what is in danger of being overlooked—namely, that the care of these patients is primarily a medical or health concern. To continue the present arrangements is to perpetuate the vicious association of mental illness with pauperism which everyone with any interest in the matter is anxious to break through once and for all.

The following table gives the assumed cause of insanity in the patients admitted during the year. Some of these causes are definitely physical in character, others just as definitely mental. While such a distinction is of some use for statistical purposes, it has to be kept in view that in the great majority of patients both factors are operative.

Causes of Insanity.

	Number of Instances.		
	Male.	Female.	Total.
Heredity	17	76	93
Previous Attacks	55	63	118
Adolescence	10	22	32
Climacteric	...	31	31
Pregnancy	...	1	1
Parturition and Puerperal States	...	6	6
Arterio-Sclerosis	13	19	32
Syphilis and Venereal Disease	8	10	18
Epilepsy	12	11	23
Influenza	4	1	5
Cerebral Disease	7	...	7
Encephalitis Lethargica	1	...	1
Other Bodily Diseases	12	7	19
Alcohol	18	9	27
Worry and Anxiety	25	35	60
Congenital	9	14	23

These figures are remarkable for the small proportion of mental illness due directly to epidemic diseases such as influenza. In years when influenza is rife, there is often an aftermath of debility and exhaustion which is apt to turn the scales against those with a pre-disposition to mental disease. This is only one of the many links which associate the onset of mental disease with the wider question of public health in general.

The physical state of the admissions may be tabulated thus :—

	Male.	Female.	Total.
Average	67	54	121
Poor	78	102	180
Very Weak or Exhausted	16	37	53
Total	161	193	354

Types of Mental Disorder in the Patients Admitted.

	Male.	Female.	Total.
I. Manic-Depressive Psychosis—			
(*a*) Manic State	8	21	29
(*b*) Depressive State	36	56	92
II. Schizophrenic and Allied States—			
(*a*) Schizophrenia	28	31	59
(*b*) Paraphrenia	14	17	31
(*c*) Paranoia	3	1	4
III. Organic Psychosis—			
(*a*) General Paralysis	3	6	9
(*b*) Specific other than General Paralysis	3	2	5
(*c*) Arterio-sclerotic	18	15	33
(*d*) Toxic	14	10	24
(*e*) Post-Encephalitic	1	...	1
(*f*) Associated with other Bodily Diseases	11	7	18
IV. Insanity with Epilepsy	12	10	22
V. Psychoneurosis	2	2	4
VI. Oligophrenia	8	14	22
Not Insane	...	1	1
Total	161	193	354

Discharges.—The total number discharged during the year was 235, of whom 100 were voluntary patients. Of the total, 162 were completely recovered, 56 were so far improved as not to require further hospital treatment and 16 left without improvement. Calculated on the number of admissions, the percentage of recoveries was 45·8, as compared with 42·3 for the previous year. If voluntary patients alone are taken into consideration the percentage of recoveries was 62·9, while an additional 15 per cent., though not regarded as recovered, were so far improved as to be able to live at home.

Deaths.—The deaths numbered 77 as against 93 for the previous year. The fall in the number of deaths was probably due in part to the exceptional weather conditions prevailing throughout the year. A considerable proportion of the Hospital population consists of senile and generally debilitated patients of whom inclement weather is apt to take ready toll. In the year under review there has been a relative absence of respiratory diseases such as commonly complicate senile debility.

The Causes of Deaths were as follows :—

General Diseases.

	Male.	Female.	Total.
Tuberculosis of Lungs	...	3	3
Tuberculosis of Peritoneum	1	...	1
Pernicious Anæmia	...	1	1
Influenza and Broncho-pneumonia	...	1	1
Septicæmia	1	...	1
Gangrene of Leg	1	...	1
Rupture of Uterus and General Peritonitis	...	1	1
Carcinoma—Colon	3	...	3
Bladder	1	...	1
Uterus	...	1	1
Diseases of the Nervous System	9	8	17
Diseases of the Cardio-Vascular System	14	18	32
Diseases of the Respiratory System	7	2	9
Diseases of the Alimentary System	3	...	3
Diseases of the Genito-Urinary System	1	1	2
Totals	41	36	77

Hospital Developments.—Considerable changes have been effected in the course of the year, all making for improvement in the working of the Hospital.

Temporary Buildings.—Ward 24 has been reconstructed in brick and has been in occupation for some months.

Ward 23 is in course of being similarly reconstructed and should be ready for occupation early in the new year.

Wards 25 and **27** still remain to be dealt with, but provision is being made for one in each of the next two years.

Ward 32.—This block has been greatly improved by the removal of the chimneys which formerly occupied a lot of floor space and made observation of the patients unnecessarily difficult.

Ward 10 has been redecorated throughout. In addition, new lavatory accommodation on an adequate scale has been provided on the upper flat for the use of the patients at night. Incidentally the last padded room on the male side of the Institution was in this block and has now been converted into an ordinary bedroom.

Centre Block.—The offices have been rearranged, the former board-room now being used by the Assistant Medical Officers. Their office is now used by the clerical staff and what was the clerical room before has been converted into a waiting room for patients' relatives.

Massage Department.—This department now houses, in addition to Massage and Electrical Treatment, an Occupational Therapy department and also the work which used to be done at the Special Treatment Block, namely, Dentistry, Chiropody and Ophthalmology. There is ample room in the massage department for all these activities and it is an advantage to have them grouped together.

Special Treatment Block.—The transfer of the work in this block to the Massage Department has set it free for other purposes. At the moment it is being reconstructed and verandahs are being added so as to provide accommodation for the patients housed in the verandahs at the Centre Block. These latter have been most unsatisfactory from every point of view, and nothing short of their complete removal could remedy the situation. The process of reconstruction in the Special Treatments' Block will be completed in the spring of 1934, and it will then be possible to remove the offending verandahs at the Centre Block. The isolation of the noisiest and most troublesome patients in a secluded home of their own will add immensely not only to the general amenity of the Hospital, but also to the peace and comfort of their neighbours.

Nurses' Home.—Excellent progress has been made with the Home extension, which is expected to be ready for occupation in the early summer of 1934. Its completion will bring the conditions for the female staff nearer to that standard of comfort which their arduous duties earn for them.

Central Heating.—A scheme of central heating for the Nurses' Home, the Church and six other conveniently situated blocks has been commenced.

Grounds.—The new bowling green for the use of patients and staff was completed in the spring and should be ready for play in the summer of 1934. Besides the bowling green two nine-hole putting courses have been laid out, one for male and the other for female patients. The ground has also been partly prepared for four small flower gardens in association with four of the female villas.

There is still a considerable amount of ground to be laid out in various parts of the Hospital, though during the year much has been done. The laying out of the Mortuary surroundings has now been finished except for the surfacing of the road round the building. The new sports' ground was used this year for the annual sports for the first time. It makes an ideal arena for competitors and spectators alike.

Library.—At the end of the year negotiations were completed with the West Lothian Education Committee for the establishment of a Branch Library at Bangour. Under the Committee's scheme, several hundreds of books are loaned to the Hospital at a time and are replaced by a fresh issue every three months. In addition any book in the Central Library at Bathgate is available on request, as are also the resources of

the Carnegie Library at Dunfermline. Unless considerable sums are spent on renewals, books in a small library are apt to "date" very quickly, and it is therefore a great boon to have fresh issues of recent literature at short intervals, such as the Education Committee have promised.

Staff.—The duties of the supervising officials have been re-allocated so that there is now in charge of each group of villas a doubly-trained Assistant Matron. She is directly responsible for the nursing efficiency of the staff, for the care of the property of the Hospital, and for the tactful management of the patients under her care. The presence of a well-qualified Assistant Matron tends to emphasise the idea of hospital treatment rather than mere custodial detention.

To enable her to co-ordinate the work of these officials the Matron has been relieved of some of the duties formerly performed by her. The management of the clothing store, for example, has been transferred to the Steward and his staff.

The health of the staff throughout the year has been good. To one and all a word of thanks is due for their loyal and efficient co-operation.

GOGARBURN CERTIFIED INSTITUTION.

(For Mental Defectives.)

REPORT BY MEDICAL SUPERINTENDENT.

General Statistics.—The following are the general statistics from which it will be evident that there have been few changes in the patient population during the year. The accommodation available has been fully and continuously occupied.

	Male.	Female.	Total.
Patients on Register at 1st January, 1933 .	167	146	313
Cases admitted during the year . . .	8	16	24
Total number under treatment . . .	175	162	337
Cases discharged	1	1	2
Cases transferred to other Institutions . .	3	2	5
Cases died	3	3	6
Total cases removed during year . . .	7	6	13
Patients on Register at 31st December, 1933 .	168	156	324

These figures represent an increase of one male and ten females in the patient population for the year.

The average daily number of patients on the Register during the year was 324.

Medical Statistics.—Twenty-four patients were admitted to the Institution during the year. Of this number eight were males and sixteen were females. Two females and two males were children under 16 years of age. The average age of the patients admitted was 26 years.

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

	Male.	Female.	Total.
Admitted direct from their Homes . .	2	8	10
,, from Bangour Mental Hospital .	...	2	2
,, ,, Western General Hospital .	...	1	1
,, ,, Eastern General Hospital .	1	...	1
,, ,, Craiglockhart Institution .	2	2	4
,, ,, St. Joseph's C.I. Whitehill .	1	...	1
,, ,, Royal Infirmary . . .	...	1	1
,, ,, Children's Home, Crewe Road	1	...	1
,, ,, Dean Terrace . . .	...	2	2
,, ,, Sheriff Court . . .	1	...	1
Totals	8	16	24

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

	Male.	Female.	Total.
In fair or average health and condition .	6	10	16
In poor or indifferent health and condition .	1	4	5
In weak or very weak health and condition .	1	2	3
	8	16	24

Thus in 16 or 67 per cent. of the total number of admissions the general health was average, and in 8 or 33·4 per cent. the general health was definitely below par. On the whole the patients admitted were younger and of better physical and mental development than in any previous year since the Institution was founded.

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

Classification.	5–10		11–15		16–20		21–25		26–30		31–35		36–40		Over 40		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Idiot	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Imbecile . . .	...	...	...	1	...	...	...	...	...	2	...	...	...	1	1	...	1	4
Feeble-minded . .	1	...	1	...	1	3	1	2	1	1	2	2	...	1	...	1	7	10
Total Males . .	1		1		1		1		1		2		..		1		8	
Total Females .		...		2		4		2		3		2		2		1		16

Briefly summarised the table shows that of the patients admitted 8 per cent. were idiots, 21 per cent. imbeciles, and 71 per cent. feeble-minded.

Of the 9 feeble-minded women between the ages of 16 and 40 who were admitted, one was found to be pregnant, four had given birth to two or more illegitimate children, and three were found to be suffering from acquired venereal disease.

Of the five feeble-minded men admitted of the same age period, all had been in prison—one for assault, one for theft, and three for sexual offences against children.

It is surprising how quickly and successfully this class of patient adapt themselves to the simplified environment of an Institution, despite their complete inadequacy to fulfil the ordinary social requirements of everyday life.

The Institution has on several occasions come to the assistance of the Law Courts and the Prison Authorities in dealing with offenders. Where anti-social conduct, particularly in the case of young persons, is due to an inherent mental inability to comprehend either the nature or quality of their acts, the mere infliction of punishment is an irrational, and from the point of view of deterrent effect, valueless method of procedure. The value of careful training and supervision in these cases is incalculable. That the children's courts which are to be set up in the coming year, in virtue of the Children and Young Persons (Scotland) Act, 1932, will result in the early recognition and treatment of offences due to mental defect is a consummation greatly to be desired, both in the interests of the juvenile delinquent and the community generally.

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

Primary Amentia (Inherited and Transmissible).

	Male.	Female.	Total.
Simple	5	8	13
Microcephalic	1	...	1
Mongolism	...	1	1
	6	9	15

Secondary Amentia.

(Arrest of cerebral development due to external factors.)

	Male.	Female.	Total.
Traumatic	1	...	1
Inflammatory	...	3	3
Hydrocephalic	...	1	1
Syphilitic	...	2	2
Endocrine disorder	1	...	1
Epileptic	...	1	1
	2	7	9

Discharges.—Seven patients were discharged from the Institution in the course of the year. The following table shows the distribution and destination of these patients:

	Male.	Female.	Total.
Discharged to their Homes	1	1	2
Transferred to Larbert Certified Institution	2	...	2
,, Baldovan Certified Institution	1	1	2
,, Bangour Mental Hospital	...	1	1
	4	3	7

The cases transferred to Larbert and Baldovan Certified Institutions were those chargeable to local authorities other than Edinburgh, and for whom Edinburgh was no longer able to provide accommodation on account of her own need for beds in Gogarburn. One female patient was deemed to be insane, and removed to Bangour Mental Hospital. Of the patients discharged to their homes, one was a youth who was discharged on completing a satisfactory probationary period of absence from the Institution on licence ; the other, a female child, who improved sufficiently to be discharged to the care of her parents.

The Deaths.—The deaths numbered six, as compared with the previous year's figure of nine. In four cases death was due to pulmonary tuberculosis, in one to disease of the central nervous system, and one to cardio-renal disease. The average age at death was 38 years.

General Health.—The general good health enjoyed by the colony was marred by an outbreak of diphtheria which occurred in the autumn and early winter months. Fifteen patients and fifteen nurses were affected by the disease, which fortunately was of a mild type, although it was generally more severe in the case of the nurses than in that of the patients from whom they contracted it. The outbreak was confined to the adult section of the colony and none of the children were infected.

The occurrence of infectious disease in an Institution such as this creates a difficult administrative problem, as many of the infected patients by reason of the severe conduct disorder from which they suffer, cannot be isolated and nursed in the ordinary hospital for infectious disease. In order so far as possible to prevent a recurrence of such an epidemic, every patient and nurse who is found to be susceptible either to scarlet fever or diphtheria is being immunised against these illnesses. It is unfortunate that some parents object to this measure, and a complete immunity is at present impossible of attainment.

It is recorded that the freedom from accident affecting the patients continues as in previous years.

Alterations and Additions.—The construction of two high grade blocks was commenced in the early part of the year and these buildings are now progressing towards completion. The conversion of the building originally designed as a Steward's store into a school and general recreation hall has been completed. The class rooms are roomy and well ventilated, and there is adequate cloak room and lavatory accommodation for the school children. These necessary adjuncts were completely lacking in the temporary school. The western portion of the kitchen block has been converted into the Steward's store, and the two eastern bays of the garage have been converted into a clothing store.

Education of Juvenile Patients.—The average daily number of children attending school throughout the year has been fifty. In addition to the teaching of juveniles, use is made of the school for continuation class purposes for adult patients whose education has previously been neglected, but who are capable of benefiting from instruction.

With the help of the Convener of the Mental Diseases Committee it has been possible, during the year, to inaugurate and equip packs of "Cubs" and "Brownies" for the children. These packs are officered by the nurses and form a valuable means of bringing our children into contact with normal children in similar organisations.

Employment of Adult Patients.—The employment of the adult patients of both sexes in the occupations best suited to their varying capabilities and to the needs of the Institution continues. Probably no single factor contributes more to the well-being of the mental defective than that of full and continuous employment. Where healthy work will rescue these unfortunate people from being stranded on the reefs of a purely vegetative existence, it must be fully and generously exploited. Keeping in view, therefore, the growth of the Institution the time has come to consider the expansion of the industries available for the employment of patients. Cobbling, basket-making, joinery, poultry farming, and increased fruit and vegetable production, are all available methods of utilising our labour, the development of which would be of mutual advantage to the patients and the Institution.

General Recreation.—During the year numerous entertainments were arranged for the recreation of the patients. We are much indebted to all those helpers who gave so freely of their time and means to amuse and entertain during the winter evenings.

The Guide and Scout troops have continued and expanded their activities during the year. Including "Cubs" and "Brownies" there are now 75 patients enrolled in one or other of these troops.

During the year the Institution football club entered the Edinburgh Juvenile Football League, this body kindly consenting that all games should be played at the Institution. The team, composed of staff and patients, succeeded in winning the competition, and have advanced to the Lothian Amateur League.

The Staff.—In the course of the year both Assistant Matrons were successful in obtaining posts as Matrons; one at the British General Hospital, Palestine, the other in the Somerset County Council Institution for Mental Defectives at Shepton Mallet. Their posts were filled by Assistant Matrons from London County Council and Bangour Mental Hospital.

Acknowledgments.—It is with pleasure that I acknowledge my indebtedness to Matron, the Assistant Matrons and the Staff generally, for their loyal and efficient help throughout the year.

SCHOOL MEDICAL SERVICE.

The following is a report on the work of the School Medical Service for the year ending 31st July, 1933.

Number of Schools.

The number of Schools and Special Classes under the Scheme of Medical Inspection is 108 :—

Elementary Schools	73
Intermediate and Secondary Schools	16
Special Schools and Classes	14
Merchant Company Schools	4
Edinburgh Institution	1
	108

The average number of pupils on the roll was 64,359, with an average daily attendance of 59,066 :—

	Average Roll.	Average Attendance.
Elementary Schools	41,732	38,229
Intermediate and Secondary Schools	10,378	9,621
Special Schools	1,163	1,023
Episcopal Schools	869	794
Roman Catholic Schools	6,088	5,575
Merchant Company Schools	3,862	3,582
Edinburgh Institution	267	242
	64,359	59,066

Altered Method of Medical Inspection.

During the past year there was continued the experiment in altered method of Medical Inspection. Briefly, it consists of (1) Routine examination of all new entrants ; (2) Routine examination of children in their 13th year ; (3) (*a*) Inspection of other children in their class-rooms, and (*b*) full examination of doubtful cases "selected" at class-room inspections.

Class-room Inspections.

In place of 4,467 nine-year-old children routinely examined last year, there were inspected in class-rooms 25,189 of varying ages. For these, 3,408 notices to parents of defects (13·5 per cent.) were given at once.

In addition, 1,053 were selected for further examination ; so far, 467 of these have been examined and 125 further notices (26 per cent.) were given ; a total of 3,533. Further, 126 children were placed under medical supervision.

Vision and Hearing in 7-Year-Olds.

Under the present scheme, the first routine testing of vision and hearing is held at age 7 instead of age 9 as formerly was the case. The statistics of these tests are as follows :—

Total number examined	4,834 (Boys, 2,522 ; Girls, 2,312)
No. found defective	731 or 15·1 per cent. (Boys, 57·5 per cent. ; Girls, 42·5 per cent.)
No. referred to the Medical Officer	174 (Boys, 50·9 per cent. ; Girls, 49·1 per cent.)

No. of Cards issued—

(*a*) Vision . . 474 (Boys, 49·4 per cent. ; Girls, 50·6 per cent.)
(*b*) Hearing . . 21 (Boys, 70 per cent. ; Girls, 30 per cent.)

To summarise :

(1) There have been brought under the direct purview of the Medical Officers, 20,722 more children than would have been, under the usual circumstances.

(2) Of the above, over 3,000 received " Notices to Parents " of defects of which the majority would probably not have been detected.

(3) Over 470 children were found to require specialist examination for visual defect two years earlier than under the prior system.

It is of interest to note that of the 467 " Selected " children acquired heart disease was found in 4 per cent., congenital heart disease in 0·8 per cent., and functional disease in 1 per cent.; lung conditions were found in 6·7 per cent.

Organisation and Administration.

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

In Primary Schools—

(*a*) Newly enrolled infants.
(*b*) Sub-leavers (in 13th year).
(*c*) Remainder inspected in class-rooms.

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.

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 examinations was 1,526.

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.

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

Duties in Schools.—In addition to assisting at routine inspections, where 1,473 visits were paid to schools, 6,551 special examinations were made in schools by the nurses in connection with neglect cases ; the testing of vision and hearing of 4,834 children was also carried out by the nurses.

Home Visitation.—The nurses paid 1,218 visits to homes.

Arrangements for "Following Up."—In connection with dirty and verminous conditions, 314 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 33 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 later in the Report.

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 :—

Form of Neglect.	Number of Notices served.
Insufficient Boots and Clothing	22
Dirt and Vermin	33
Neglect of Medical Treatment	6
	61

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.	Con. tacts.
1. Scarlet Fever	179	193	237	155	131	95	174	101	282	334	148	2,029	15·3	1,035	994
2. Diphtheria	125	71	124	61	67	53	101	41	69	85	66	863	6·5	338	525
3. Erysipelas	1	1	...	2	...	..	...	...	...	...	...	4	0·03	3	1
4. Cerebro-spinal Fever	...	...	...	1	...	...	...	...	1	...	...	2	0·01	1	1
5. Typhoid	2	...	...	...	...	...	...	1	...	...	...	3	0·02	3	...
6. Measles	24	192	446	838	542	736	845	183	118	121	21	4,066	30·7	3,511	555
7. Whooping Cough	217	101	155	161	187	237	238	174	177	146	24	1,817	13·7	1,697	120
8. Chicken-pox	51	95	332	419	289	261	364	185	248	448	180	2,872	21·6	2,474	398
9. Mumps	27	42	70	79	46	34	39	21	22	29	17	426	3·2	344	82
10. Skin Diseases	61	68	15	36	37	50	56	17	50	44	7	441	3·3	441	...
11. Ringworm	4	9	10	11	8	18	15	9	2	10	7	103	0·9	103	...
12. Itch	78	83	26	68	51	52	58	27	50	52	13	558	4·2	558	...
13. Eye Diseases	9	13	3	8	2	5	9	2	2	7	1	61	0·4	61	...
Totals	778	868	1418	1839	1360	1541	1899	761	1021	1276	484	13,245	100·0	10,569	2,676

Presence of Parents at Inspection.—The number of parents present at the routine inspection was 5,141 for the 12,082 pupils examined—42·5 per cent.

THE PHYSICAL CONDITION OF THE SCHOOL CHILDREN.

Total Number of Children Examined.

(a) At Systematic Examinations.

			No. of Examinations.
Infants . .	Boys, 2,746 ; Girls, 2,775 = 5,521		
12-year-olds .	,, 3,209 ; ,, 3,177 = 6,386		
16-year-olds .	,, 101 ; ,, 74 = 175		
		12,082	
Nursery Schools—			
Lochrin . .	Boys, 16 ; Girls, 25 = 41		
Tynecastle .	,, 13 ; ,, 10 = 23		
		64	
Merchant Company School		1,366	
Royal High		213	
Royal High (Preparatory)		46	
Edinburgh Institution		96	
Special Schools : Examinations and Re-examinations .		1,943	
			15,810

(b) Special Cases.

Psychological Examinations	277	
Special Cases at Schools	8,907	
Special Cases at Clinics	8,936	
Neglect Cases	6,551	
Children, aged 7, examined *re* Vision and Hearing .	4,834	
Class Inspections	25,189	
Re-examinations	1,462	
Examinations in connection with Employment Act .	*2,062	
Children for Stichill	275	
Children at Stichill	550	
In connection with Milk Scheme	†1,386	
		60,429
Total Number of Examinations		76,239

* Of this number, 27 were found to be medically unfit, and were dismissed from their employment.

† Of this number, 583 were recommended for Free Milk.

Number of Children Notified to Parents as Suffering from Defects.

At Systematic Examinations, 2,225 Notices were issued. Of these, 880 or 39·6 per cent. were in connection with defective vision ; 424 or 19 per cent. for tonsils and adenoids, otorrhœa, etc. ; 482 or 21·7 per cent. for teeth ; 314 or 14·1 per cent. for dirty or verminous condition of head ; 125 or 5·6 per cent. for other conditions. If the number of Notices given at class-room inspections be added, the total is 5,758.

Supervision.

Of the 8,907 Special Cases seen at schools, 461 were re-examined, and 349 or 5·7 per cent. were cured or improved ; the remainder continue under supervision.

At routine examinations, 1,250 cases were placed under medical supervision; of these, 1,002 were re-examined and 667 or 66·5 per cent. were cured or improved. The total number of cases remaining under medical supervision at the end of the year was 821.

Insufficiency of Clothing and Footgear.

The Committee of the Police-Aided Scheme supplied boots and clothing to 3,842 children. Through the kindness of the Leith Provident Society, 71 pairs of boots were supplied to necessitous children; 158 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 50 necessitous children under Section 6 of the 1908 Act; from the Flora Stevenson Fund, 202 pairs of boots were distributed.

Heights and Weights

	Number Examined.	Average Height in Inches.	Average Weight in Pounds.
Boys—			
Infants	2,603	42·05	40·8
12 year-olds	2,917	56·22	77·2
16-year-olds	98	64·49	117·06
Girls—			
Infants	2,627	41·75	39·16
12-year-olds	2,967	57·08	79·64
16-year-olds	74	63·77	116·75

Cleanliness of Head.

	Number. Examined.	Nits.		Verminous.		Dirty.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Boys—							
Infants	2,746	6	0·2	2	0·07	4	0·1
12-Year-Olds	3,209	2	0·06	...	...	...	...
16-Year-Olds	101	...	...	...	...	...	...
Girls—							
Infants	2,775	78	2·8	2	0·07	2	0·07
12-Year-Olds	3,177	148	4·6	3	0·09	...	...
16-Year-Olds	74	...	...	...	...	...	...
Total	12,082	234	1·9	7	0·06	6	0·05

Cleanliness of Body.

	Number. Examined.	Dirty.		Verminous.	
		Number.	Per Cent.	Number.	Per Cent.
Infants—					
Boys	2,746	1	0·03	1	0·03
Girls	2,775	...	...	...	...
12-Year-Olds—					
Boys	3,209	1	0·03	1	0·03
Girls	3,177	3	0·09	1	0·03
16-Year-Olds—					
Boys	101	...	...	...	...
Girls	74	...	...	...	...
Total	12,082	5	0·04	3	0·03

Condition of Skin.

(a) *Head.*

	Number Examined.	Ringworm.		Impetigo.		Others.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—							
Boys	2,746	1	0·03	7	0·3	9	0·3
Girls	2,775	5	0·2	5	0·2	13	0·5
12-Year-Olds—							
Boys	3,209	...	...	2	0·06	17	0·5
Girls	3,177	...	...	3	0·09	12	0·3
16-Year-Olds—							
Boys	101	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...
Total	12,082	6	0·05	17	0·1	51	0·4

(b) *Body.*

	Number. Examined.	Ringworm.		Impetigo.		Others.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—							
Boys	2,746	...	...	1	0·03	31	1·1
Girls	2,775	...	...	1	0·03	14	0·5
12-Year-Olds—							
Boys	3,209	2	0·06	3	0·09	40	1·2
Girls	3,177	...	...	1	0·03	17	0·5
16-Year-Olds—							
Boys	101	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...
Total	12,082	2	0·02	6	0·05	102	0·8

Nutrition.

	Number. examined.	Above Average.		Average.		Below Average.		Bad Nutrition.	
		Number.	Per Cent.	Number.	Per Cent.	Number	Per Cent.	Number.	Per Cent.
Infants—									
Boys	2,746	585	21·3	1,828	66·6	333	12·1	...	...
Girls	2,775	510	18·4	1,768	63·7	495	17·8	2	0·07
12-Year-Olds—									
Boys	3,209	553	17·2	2,293	71·5	357	11·1	6	0·2
Girls	3,177	770	24·2	2,055	64·7	344	10·8	8	0·2
16-Year-Olds—									
Boys	101	49	48·5	48	47·5	4	4·0	...	...
Girls	74	47	63·5	27	36·5	...	...	...	...
Total	12,082	2,514	20·8	8,019	66·4	1,533	12·7	16	0·1

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.
Infants—									
Boys .	2,746	600	21·8	1,765	64·3	381	13·9	38	1·3
Girls .	2,775	621	22·4	1,824	65·7	330	11·9	47	1·7
12-Year-Olds—									
Boys .	3,209	1,221	38·0	1,889	58·9	99	3·1	22	0·7
Girls .	3,177	1,324	41·7	1,750	55·0	103	3·2	27	0·8
16-Year-Olds—									
Boys .	101	60	59·4	38	37·6	3	3·0	1	0·1
Girls .	74	41	55·4	31	41·9	2	2·7	2	2·7
Total	12,082	3,867	32·0	7,297	60·4	918	7·6	137	1·1

Nose, Throat and Glands.

(*a*) *Nose.*

	Number Examined.	Catarrh.		Obstruction.		Other Diseases.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—							
Boys	2,746	49	1·8	13	0·4	1	0·03
Girls	2,775	45	1·6	2	0·07	2	0·07
12-Year-Olds—							
Boys	3,209	20	0·6	6	0·6	3	0·09
Girls	3,177	7	0·2	4	0·1	3	0·09
16-Year-Olds—							
Boys	101	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...
Total	12,082	121	1·0	25	0·2	9	0·08

(*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.
Infants—											
Boys .	2,746	557	20·3	78	2·8	72	2·6	41	1·5	3	0·1
Girls .	2,775	612	22·0	90	3·2	82	2·9	...	...	7	0·2
12-Year-Olds—											
Boys .	3,209	209	6·5	50	1·6	25	0·8	1	0·03	6	0·2
Girls .	3,177	404	12·7	73	2·3	28	0·9	1	0·03	8	0·2
16-Year-Olds—											
Boys .	101	8	8·0	1	0·1	...	...	...	...	...	...
Girls .	74	3	4·0	...	...	...	...	...	...	...	...
Total .	12,082	1,793	14·8	292	2·4	207	1·7	43	0·4	24	0·2

(c) *Lymphatic Glands.*

(1) *Submaxillary Glands.*

	Number Examined.	Palpably Enlarged.		Markedly Enlarged.		Cicatrices.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—							
Boys	2,746	179	6·5	7	0·3	2	0·07
Girls	2,775	152	5·5	...	...	3	0·1
12-Year-Olds—							
Boys	3,209	92	2·9	4	0·1	2	0·06
Girls	3,177	86	2·7	5	0·1	2	0·06
16-Year-Olds—							
Boys	101	7	7·0	...	...	...	...
Girls	74	...	...	...	...	...	...
Total	12,082	516	4·3	16	0·1	9	0·08

(2) *Cervical Glands.*

	Number examined.	Palpably Enlarged.		Markedly Enlarged.		Suppurating.		Cicatrices.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—									
Boys	2,746	289	10·5	11	0·4	1	0·03	11	0·4
Girls	2,775	296	10·6	4	0·1	...	...	17	0·6
12-Year-Olds—									
Boys	3,209	182	5·6	2	0·06	1	0·03	28	0·9
Girls	3,177	94	2·9	1	0·03	1	0·03	28	0·9
16-Year-Olds—									
Boys	101	...	...	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...	...	...
Total	12,082	861	7·1	18	0·1	3	0·03	84	0·7

External Eye Diseases.

	Number examined.	Blepharitis.		Conjunctivitis.		Corneal Opacities.		Strabismus.		Other Diseases.	
		No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
Infants—											
Boys	2,746	24	0·9	3	0·1	1	0·03	127	4·6	9	0·3
Girls	2,775	16	0·6	6	0·2	2	0·07	99	3·6	13	0·5
12-Year-Olds—											
Boys	3,209	23	0·7	6	0·2	8	0·2	103	3·2	9	0·3
Girls	3,177	18	0·5	6	0·2	4	0·1	91	2·8	...	...
16-Year-Olds—											
Boys	101	...	...	...	...	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...	...	...	...	...
Total	12,082	81	0·7	21	0·2	15	0·1	420	3·4	31	0·3

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.
12-Year-Olds—							
Boys	3,209	2,441	76·0	390	12·1	378	11·8
Girls	3,177	2,322	73·1	423	13·3	432	13·6
16-Year-Olds—							
Boys	101	85	84·1	10	9·9	6	6·0
Girls	74	54	73·0	16	21·6	4	5·4
Total	6,561	4,902	74·8	839	12·8	820	12·4

Ears.

	Number Examined.	Otorrhœa.		Wax.		Other Diseases.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—							
Boys	2,746	33	1·2	4	0·1	2	0·07
Girls	2,775	21	0·7	6	0·2	2	0·07
12-Year-Olds—							
Boys	3,209	34	1·0	3	0·09	9	0·3
Girls	3,177	21	0·6	17	0·5	8	0·2
16-Year-Olds—							
Boys	101	...	...	...	...	...	...
Girls	74	...	...	...	...	2	2·7
Total	12,082	109	1·0	30	0·3	23	0·2

Hearing.

	Number Examined.	Slightly Deaf.		Markedly Deaf.	
		Number.	Per Cent.	Number.	Per Cent.
Infants—					
Boys	2,746	10	0·3	...	...
Girls	2,775	10	0·4	...	...
12-Year-Olds—					
Boys	3,209	20	0·6	7	0·2
Girls	3,177	25	0·8	3	0·09
16-Year-Olds—					
Boys	101	...	...	...	...
Girls	74	...	...	...	...
Total	12,082	65	0·5	10	0·08

Speech.

	Number Examined.	Defective Speech.		Stammering.	
		Number.	Per Cent.	Number.	Per Cent.
Infants—					
Boys	2,746	8	0·3	...	...
Girls	2,775	5	0·2	...	...
12-Year-Olds—					
Boys	3,209	3	0·09	10	0·3
Girls	3,177	3	0·09	4	0·1
16-Year-Olds—					
Boys	101	...	...	...	...
Girls	74	...	...	...	...
Total	12,082	19	0·1	14	0·1

Mental Condition.

	Number Examined.	Dull or Backward.	
		Number.	Per Cent.
Infants—			
Boys	2,746	1	0·03
Girls	2,775	1	0·03
12-Year-Olds—			
Boys	3,209	4	0·1
Girls	3,177	7	0·2
16-Year-Olds—			
Boys	101	...	...
Girls	74	...	...
Total	12,082	13	0·1

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.
Infants—									
Boys	2,746	5	0·2	5	0·2	2	0·07	19	0·7
Girls	2,775	4	0·1	6	0·2	4	0·1	22	0·8
12-Year-Olds—									
Boys	3,209	1	0·03	26	0·8	8	0·2	3	0·09
Girls	3,177	2	0·06	37	1·1	22	0·7	19	0·6
16-Year-Olds—									
Boys	101	...	...	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...	...	...
Total	12,082	12	0·1	74	0·6	36	0·3	63	0·5

Lungs.

	Number examined.	Chronic Bronchitis.		Tuberculosis.		Suspected Tuberculosis.		Other Diseases.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—									
Boys	2,746	37	1·3	...	...	2	0·07	52	1·8
Girls	2,775	36	1·3	...	...	1	0·03	56	2·0
12-Year-Olds—									
Boys	3,209	7	0·2	1	0·03	2	0·06	18	0·5
Girls	3,177	8	0·2	...	...	4	0·1	18	0·5
16-Year-Olds—									
Boys	101	...	...	...	...	...	...	...	...
Girls	74	...	...	...	...	...	...	...	...
Total	12,082	88	0·7	1	0·008	9	0·07	144	1·2

Nervous System.

	Number examined.	Epilepsy.		Chorea.		Infantile Paralysis.		Other Diseases.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—									
Boys .	2,746	...	...	...	...	3	0·1	6	0·2
Girls .	2,775	2	0·07	1	0·03	...	...	10	0·4
12-Year-Olds—									
Boys .	3,209	...	...	3	0·09	5	0·1	3	0·09
Girls .	3,177	2	0·06	1	0·03	1	0·03	7	0·2
16-Year-Olds—									
Boys ..	101	...	...	...	...	...	...	...	...
Girls .	74	...	...	...	...	...	...	...	...
Total	12,082	4	0·03	5	0·04	9	0·07	26	0·2

Tuberculosis.

	Number examined.	Glands.		Bones and Joints.		Abdominal.		Skin.	
		Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Infants—									
Boys .	2,746	3	0·1	5	0·2	...	...	1	0·03
Girls .	2,775	4	0·1	2	0·07	2	0·07	...	...
12-Year-Olds—									
Boys .	3,209	1	0·03	3	0·09	1	0·03	...	...
Girls .	3,177	1	0·03	2	0·06	1	0·03	...	...
16-Year-Olds—									
Boys .	101	...	...	...	...	...	...	...	...
Girls .	74	...	...	...	...	...	...	...	...
Total	12,082	9	0·07	12	0·1	4	0·03	1	0·008

Rickets.

	Number Examined.	Slight.		Marked.	
		Number.	Per Cent.	Number.	Per Cent.
Infants—					
Boys . . .	2,746	37	1·3	4	0·1
Girls . . .	2,775	22	0·8	5	0·2
12-Year-Olds—					
Boys . . .	3,209	8	0·2	...	...
Girls . . .	3,177	3	0·09	1	0·03
16-Year-Olds—					
Boys . . .	101	...	...	...	...
Girls . . .	74	...	...	...	...
Total .	12,082	70	0·6	10	0·09

Deformities.

	Number Examined.	Congenital.		Acquired.	
		Number.	Per Cent.	Number.	Per Cent.
Infants—					
Boys	2,746	13	0·4	31	1·1
Girls	2,775	5	0·2	20	0·7
12-Year-Olds—					
Boys	3,209	9	0·3	39	1·2
Girls	3,177	5	0·1	17	0·5
16-Year-Olds—					
Boys	101	1	0·1	...	...
Girls	74	...	...	2	2·7
Total	12,082	33	0·3	109	0·8

Infectious or Contagious Diseases.

(These are given under Skin Diseases and Tuberculosis.)

Vaccination.

	Number Examined.	No Mark.	
		Number.	Per Cent.
Infants—			
Boys	2,746	489	17·8
Girls	2,775	442	15·9
12-Year-Olds—			
Boys	3,209	423	13·1
Girls	3,177	372	11·7
16-Year-Olds—			
Boys	101	...	...
Girls	74	5	6·8
Total	12,082	1,731	14·3

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 as at the close of the session :—

For Mentally Defective Children—

Balfour Place	174
Duncan Street	102
St. Christopher's	101
St. Nicholas	106
	483

For Ineducable Children—

Slateford Occupation Centre	85

For Physically Defective Children—

Clarebank	139
Duncan Street	62
Gorgie	153
Willowbrae	109
	463

For Children Suffering from Ringworm—

Lauriston Place	14

For Delicate Children—

Stichill	76

For Children Suffering from High Myopia—

Myopia School	91

For Children Suffering from Tuberculosis—

Colinton Mains Hospital Class.	21

For Cripple Children—

Douglas Home	*31
Taught at home by Visiting Teachers	20
	51

For Hard of Hearing Children—

Deaf and Dumb Institution	6

* Of this number, the Education Committee paid for the maintenance of 4. (This number (31) includes children from outwith Edinburgh.)

Physically Defective Children.

There were 463 pupils on the roll at the end of the session classed as physically defective. The following is a rough classification of the defects formed :—

Paralysis of various types	38
Tubercular diseases of—	
Bones	4
Hip Joint	12
Abdomen	12
Glands	16
Spinal Cases	13
Rickets	35
Accidents	7
Heart Affections	87
Speech defects	7
Otorrhœa and Deafness	9
Lung Disease (bronchitis and pre-tubercular cases)	113
Defective vision	7
Malnutrition	20
Other conditions	83
	463

162 pupils left during the session. The reasons for leaving were :—Returned to ordinary schools, 64 ; transferred to other special schools, 28 ; over age, 31 ; medically exempted, 31 ; left district, 8.

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.

The number of cases examined psychologically and reported on during the session was 277.

The disposal of these was as follows :—

Passed for Special Schools	*55
Passed for Special Schools (on probation)	11
Considered dull	102
Considered backward	31
Continued for further consideration	37
Considered ineducable	†15
Considered more physically than mentally defective	13
Recommended for admission to Certified Institutions	‡7
Admitted to Royal Blind Asylum	1
Recommended for instruction by Voluntary Teacher	1
Considered normal (" behaviour " cases)	4
	277

* Included in this figure are 4 children who were transferred from Occupation Centre to Special Schools.

† 12 of this number were considered suitable for Occupation Centre.

‡ 4 were admitted to Gogarburn Institution ; 1 to St. Joseph's ; 1 was over-age ; and in one case parents refused consent.

There were 483 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	241	or 50 per cent.
Fair	166	,, 34.3 ,,
Little progress	76	,, 15·7 ,,

69 pupils left during the session. The reasons for leaving were as follows :— Transferred to other Special Schools, 12 ; sent to Institution, 12 ; over age, 28 ; medically exempted, 7 ; left district, 6 ; granted temporary exemption before attaining 16 years, 3 ; ineducable, 1.

The temporary exemption granted is conditional upon satisfactory reports at specified intervals being received from the Medical and Attendance Departments ; the pupil's name is not removed from the school roll.

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

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

	Boys.	Girls.
Baldovan	1	1
Larbert	3	1
Waverley Park	...	1
St. Joseph's R.C.	4	3
Gogarburn	13	2
	21	8
	29	

Blind and Partially Blind Children and Deaf and Mute Children.

Blind, Deaf-Mute and Epileptic Children.—Blind and deaf-mute children are dealt with under the powers of 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. As the Education Committee have no schools under their management for the education of such children, they are sent to special institutions. The following shows the institutions to which children have been sent, and the number of children maintained there by the Education Committee as at the end of the session :—

	Boys.	Girls.
Royal Blind Asylum, Edinburgh	7	3
Deaf and Dumb Institution, Edinburgh	12	9
Donaldson's Hospital, Edinburgh	6	6
St. Vincent R.C. School, Glasgow	...	2
Colony for Epileptics	1	...
	26	20
	46	

Blind Persons' Act, 1920.—The Education Committee are responsible for the technical training at the Royal Blind Asylum workshops of 15 adult blind persons (8 men and 7 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.

Pupils Suffering from Ringworm and Favus.

Lauriston Place Special School.—This school has accommodation for 60 pupils, and during the session 58 pupils attended, 38 being sent out cured. Of the 38 cases cured, 9 had X-ray treatment, 7 drug treatment, and 22 thallium acetate treatment.

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 275 children 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.

Arrangements for Physical Education and Personal Hygiene of Children.

PHYSICAL EDUCATION.

Physical education is included in the Syllabus of all the Education Committee's schools. In the 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 the 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.

BATHS.

Swimming.

There are six School Baths and the staff for these consists of six teachers. In addition, six Corporation Baths and the attendant Instructors are extensively utilised.

Arrangements for Feeding of Children.

Administration.

Under the Education Committee's present arrangement, 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.

Supply of Milk to School Children.—It has now been clearly demonstrated that the addition of milk to the diet of children has a striking effect in the improvement of physical and general health and increased mental alertness. The Education Committee's Scheme for the supply of milk to school children continued to operate successfully during the year. A daily ration of milk was provided, free of charge, to 583 children on the free food roll at schools in congested districts and who were certified by the medical staff to be in need of additional nutriment, and to 5,209 children on the payment of cost. Fifty-six schools are now participating, and the total number of milk meals supplied during the year was 1,092,773, representing 45,532 gallons. The scheme is now limited to children in the infant and junior departments, except in the case of children receiving milk free of charge.

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 Niddrie : 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 following shows the number of cases and the number of attendances at these Clinics :—

	No. of Cases.	No. of Attendances.		No. of Cases.	No. of Attendances.
Lauriston	4,055	18,246	St. John's	503	2,589
Links Place	2,015	11,970	Regent Road	286	1,432
Niddrie	733	1,643	Special Schools	541	4,554
Dalry	609	2,601	Occupation Centre	194	558
	7,412	34,460		1,524	9,133

Totals : 8,936 Cases ; 43,593 Attendances.

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 £186 12s. 6d., representing 1,493 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, 95 ; girls, 127—Total, 222. The number of attendances made was 1,650. *Links Place Centre*—Number cured :—Boys, 72 ; girls, 81—Total, 153. The number of attendances made was 1,515. The number of children bathed and disinfected at the Public Disinfecting Station was :—Boys, 87 ; girls, 121—Total, 208.

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 1,700 children were examined for defective vision, of whom 1,564 were found to require glasses. In 136 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 (468) were treated for external diseases of the eye, the total number of attendances for treatment being 3,000. 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.

Links Place Treatment Centre.—In all, 849 cases were examined, making 1,173 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 475 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.

Provision of Spectacles.—1,448 pairs of spectacles were supplied during the year by the Education Committee; 195 pairs were given free, 103 pairs were paid for by the Public Assistance Committee, while 1,150 were paid for by the parents.

REPORTS BY AURISTS.

Lauriston Place Treatment Centre.—There were 730 examined—383 boys and 347 girls, the number of attendances for the session being 834.

The following conditions were found:—Impacted cerumen, 139; chronic otitis media suppurativa, 187; enlarged tonsils and adenoids, 434.

Palliative remedies are employed at the clinic, such as syringing for discharge, wax, and foreign bodies, douching of nose, politzerisation, etc.; 2,276 attendances were made for treatment.

Links Place Treatment Centre.—There were 235 cases examined—108 girls and 127 boys.

The following conditions were found:—Enlarged tonsils and adenoids, 198—girls, 83; boys, 115. Otitis media suppurativa, 117—girls, 53; boys, 64; other conditions, including accessory sinus suppuration, impacted wax, furunculosis, etc., 113—girls, 67; boys, 46.

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 180—girls, 93; boys, 87.

We are glad to note that, in future, children operated on for tonsils and adenoids will be supervised by their teachers in school, so that proper nose breathing after the operation will be assured.

Defective Teeth.

The pupils selected this session for dental treatment were pupils 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 treatment 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 the necessary treatment 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 :—

90 Schools were visited.

The total number of children who received dental treatment was 7,932. It is often difficult to get parents to realise the importance of preventive treatment. 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, 6,294 ; girls, 6,369—Total, 12,663.

There were also examined 334 children (Boys, 187 ; girls, 147) attending Special Schools whose ages were other than 6, 9, and 12 years.

B. Links Place Treatment Centre.—Boys, 1,569 ; girls, 1,705—Total, 3,274.

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, 1,524 ; Girls, 1,521—Total, 3,045 or 24 per cent. of number examined.
B. Boys, 442 ; Girls, 482—Total, 924 or 28·5 per cent. of number examined.

II. *Numbers with Dental Caries.*

A.	6-year-olds—Boys, 1,444 ;	Girls, 1,489—2,933	9,618 or 76 per cent. of number examined.
	9-year-olds—Boys, 1,717 ;	Girls, 1,713—3,430		
	12-year-olds—Boys, 1,609 ;	Girls, 1,646—3,255		
B.	6-year-olds—Boys, 343 ;	Girls, 366— 709	2,350 or 71·5 per cent. of number examined.	
	9-year-olds—Boys, 407 ;	Girls, 425— 832		
	12-year-olds—Boys, 377 ;	Girls, 432— 809		

The following table gives the number of pupils in each age group, 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	688	928	1,219	756	789	390
Girls	731	910	1,249	758	803	397
Total	1,419	1,838	2,468	1,514	1,592	787
B. Boys	214	304	345	129	103	32
Girls	239	346	377	127	79	55
Total	453	650	722	256	182	87
Grand Total	1,872	2,488	3,190	1,770	1,774	874

A. Of the 9,618 (plus 224 of other ages examined in Special Schools) requiring dental treatment, 2,578 or 26·8 per cent. accepted the services of the school clinic.

It should be noted that the dentists visited, for inspection purposes, most of the outlying schools, where the number of acceptances for treatment was very small.

In addition to the above, 2,124 pupils—996 boys, 1,128 girls—were treated as special cases, so that in all 4,702 pupils received dental treatment.

B. Of the 2,350 requiring dental treatment, 999 or 30·5 per cent. accepted the services of the school clinic.

In addition, 880 pupils—430 boys, 450 girls—were treated as special cases, so that in all 3,230 pupils received dental treatment.

Analysis of Dental Treatment.

(*a*) *Conservation.*

	Teeth Filled.		Teeth Conserved by Treatment.		Total Number of Teeth Conserved.
	Temporary.	Permanent.	Temporary.	Permanent.	
A. Boys	17	746	20	30	813
Girls	22	974	8	21	1,025
Total	39	1,720	28	51	1,838
B. Boys	...	42	19	5	66
Girls	...	93	23	4	120
Total	...	135	42	9	186
Grand Total	39	1,855	70	60	2,024

(*b*) *Extraction.*

	Number of Teeth Extracted.		Total.	Anæsthetics.
	Temporary.	Permanent.		
A. Boys	6,876	1,938	8,814	1,741
Girls	6,503	2,470	8,973	1,893
Total	13,379	4,408	17,787	3,634
B. Boys	1,260	562	1,822	690
Girls	1,297	680	1,977	728
Total	2,557	1,242	3,799	1,418
Grand Total	15,936	5,650	21,586	5,052

Note.—*A.* refers to Dental Treatment at 45 Lauriston Place.
B. refers to Dental Treatment at 5 Links Place, Leith.

EDINBURGH MERCHANT COMPANY SCHOOLS,

ROYAL HIGH SCHOOL AND EDINBURGH INSTITUTION.

	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	323	...	327	...	490	...	226	...	213	...	46	...	96	...
Examined by School Doctor	*140	43·3	†211	64·5	214	43·7	57	25·2	194	91·0	20	43·5	53	55·2
Examined by Family Doctor	183	56·7	116	35·5	276	56·3	169	74·8	19	9·0	26	56·5	43	44·8
Teeth—														
None decayed	143	44·2	253	77·3	287	58·5	138	61·0	92	43·2	15	32·6	79	82·3
1 to 5 ,,	149	46·1	68	20·8	194	39·6	76	33·7	105	49·3	29	63·3	17	17·7
6 to 10 ,,	31	9·6	6	1·9	9	1·8	12	5·3	16	7·5	2	4·4	...	...
Stoppings	125	38·7	117	35·7	12	2·4	19	8·4	45	21·1	...	...	17	17·7
Visual Acuity—														
6/6	257	85·1	175	95·1	370	87·7	213	94·2	169	79·3	42	91·3	92	95·8
6/9—6/12	38	12·5	8	4·3	33	7·8	7	3·2	20	9·4	4	8·7	4	4·2
6/18 and above	7	2·4	1	0·6	19	4·5	6	2·6	24	11·1	...	...	...	...
Eyes—														
Wearing Glasses	29	9·0	39	21·2	29	5·7	12	5·3	28	13·1	2	4·4	3	3·1
External Eye Diseases	3	0·9	5	1·5	...	...	...	...	3	1·4	...	...	...	...
Squint	6	1·9	...	...	6	1·2	4	1·7	13	6·1	1	2·2	...	...
Deafness	9	2·8	...	...	2	0·4	5	2·2	4	1·9	...	...	...	...
Mouth Breathers	1	0·3	6	1·8	6	1·2	2	0·9	3	1·4	2	4·4	...	...
Tonsils—														
Enlarged	37	11·4	22	6·7	39	6·9	30	13·3	35	15·9	8	17·3	6	6·2
Tonsils and Adenoids Operation	108	33·4	68	20·8	161	32·9	67	29·2	69	32·4	11	23·9	26	27·1
Glands—														
Enlarged	55	17·0	26	7·9	14	2·8	7	3·2	15	7·0	6	13·0	...	...
Cicatrices	4	1·2	8	2·4	6	1·2	...	...	6	2·8	...	...	...	...
Heart—														
Valvular	1	0·3	2	0·6	2	0·4	...	...	2	0·9	...	...	1	1·0
Impure Sounds	6	1·9	3	0·9	...	...	1	0·4	1	0·5	...	...	...	...
Irregular	1	0·3	2	0·6	...	...	...	...	1	0·5	...	...	...	...
Anæmia	...	...	6	1·8	2	0·4	...	...	...	...	...	...	...	...
Rheumatism	3	0·9	1	0·6	...	...	...	...	9	4·2	...	...	...	...

* In addition, 74 children submitted by Head Mistresses as "Special Cases" were examined by the School Medical Officer.

† In addition, 57 do. do. do. do. do.

PORT SANITARY ADMINISTRATION.

The Port Sanitary Regulations (Scotland), 1933, came into operation on the 1st May of this year. These regulations amend and consolidate certain of the existing regulations for the prevention of infectious disease, and give further effect to the International Sanitary Convention of Paris, 1926.

The regulations revoked are those referring to Cholera, Yellow Fever, and Plague, made in 1907 ; the Public Health (Deratisation of Ships) Regulations (Scotland), 1929 ; and the Public Health (Port Administration Infectious Diseases) Regulations (Scotland), 1930.

Under Article 10 of the new regulations, the Port Authority is required to establish mooring stations both within and outside the docks, at which ships can be moored without coming into contact with other ships or with the shore. These have been established with the concurrence of the Customs officials and the Harbour masters as follows :—

Leith :—

Outer Mooring Stations : Two miles out between the Martello Tower and the Wardie Burn.

In Docks : (1) East End of Imperial Dock for large vessels.
(2) North East End of Edinburgh Dock for smaller vessels.
(3) The ships' ordinary place of mooring, discharge or loading in the Victoria or Old Docks.

Granton :—

Outer Mooring Station : Granton Roads.

In Harbour : The ships' ordinary place of mooring, discharge or loading.

During the part of the year in which the new regulations were in force, it was not found necessary to send any ship to these special mooring stations, and it is not anticipated that such action will be of frequent occurrence.

Under Article 11, the Medical Officer is required to prepare and keep a list of foreign ports which are infected or believed to be infected with plague, cholera, yellow fever, typhus fever or smallpox. These lists are prepared each week and are circulated to Customs Officers, Pilots, Immigration Officers, and Harbour Masters.

Article 13 requires that the Master of a foreign-going ship arriving from a foreign port, except ports between the River Elbe and Brest inclusive, shall fill up and sign a declaration of health which, after perusal by the customs officer, is delivered to the Port Authority. In the case of a vessel arriving from a foreign port included in the list prepared by the Medical Officer under Article 11, or where the answers in the declaration of health are unsatisfactory, the ship is detained until it is medically inspected. During the period 1st May to 31st December, 1933, 365 ships arrived from foreign ports and of these, 44 came from infected ports and were detained until inspected by the Medical Officer. No infectious illness or suspicious circumstances were discovered and all were granted their clearance.

During the year notification was received of 39 passengers who had been in contact with smallpox and who having landed at other ports were proceeding to Edinburgh. All these persons were visited and were found free from the infection during the period of surveillance.

The great majority of the foreign shipping comes from continental ports but there are also a number of arrivals from North and South American ports, from North African, Indian and Far Eastern ports.

The number of ships entering the Port Sanitary District was 11,084, representing a tonnage of 2,947,896, an increase of 198 vessels and 122,310 tons when compared with 1932.

AMOUNT OF SHIPPING ENTERING THE PORT SANITARY DISTRICT DURING THE YEAR 1933.

		Numbers Inspected.					
		Number.	Tonnage.	By the Assistant M.O.H.	By the Sanitary Inspector.	Number Reported to be Defective.	Number of Notices Issued.
Foreign	Steamers	1,336	1,194,533	150	458	9	9
	Motor	29	38,231	4	29	...	...
	Sailing	...	...	...	...	...	...
	Fishing	...	...	...	...	...	...
		1,365	1,232,764	154	487	9	9
Coastwise	Steamers	5,251	1,365,965	5	280	7	7
	Motor	16	2,039	...	6	...	...
	Sailing	2	188	...	...	...	...
	Fishing	4,450	346,940	...	300	...	...
Total Coastwise		9,719	1,715,132	5	586	7	7
Total Foreign and Coastwise		11,084	2,947 896	159	1,073	16	16

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 greatest export.

A problem of considerable importance has arisen regarding the importation of certain cargoes of rice-bran, ground nut and cotton seed cake, which have been heavily contaminated with flour beetles. These articles are used for animal foodstuffs and not for human consumption and are, therefore, outwith the Imported Food Regulations. The matter has been dealt with by notifying railway companies and carting contractors when they are handling infested cargoes, and requesting them to see that their vehicles are thoroughly cleansed before being put to another use.

Medical Inspection of Aliens.—During the year, 822 alien passengers arrived at the Port. Of these, 153 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.					
32	190	414	109	2	4	31	22	28

Cases of Illness.—During the year, 3 cases of venereal disease were noted amongst sailors arriving at Leith. Three cases of appendicitis, one of gastric ulcer, one of kidney trouble and two cases of injury by accident were also reported.

Ship Inspection and Fumigation.—The routine inspection of all ships is carried out as soon as possible after docking, and details of nuisances and defects found are contained in the report of the Chief Sanitary Inspector.

The inspection of ships for rat infestation is carried out under the Port Sanitary Regulations (Scotland), 1933, and under Article 19 of this Order, 133 Deratisation Exemption Certificates and 32 Deratisation Certificates were granted during the year. The greater number of exemption certificates indicates that ship masters continue to appreciate the necessity for maintaining their vessels as free from rats as possible.

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.

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 1933.

1. INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Occupiers Prosecuted.
Factories	457	48	Nil.
Workshops / Workplaces (Other than Outworkers' premises.)	1,270	61	Nil.
Total	1,727	109	Nil.

2. DEFECTS FOUND.

	Number of Defects.			
	Found.	Remedied.	Referred to H.M. Inspector.	Number of Prosecutions
Want of cleanliness	193	193	...	...
Want of ventilation	13	13	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other Nuisances	107	107	...	...
Sanitary Accommodation — Insufficient	8	8	...	...
Sanitary Accommodation — Unsuitable or defective	56	56	...	...
Sanitary Accommodation — Not separate for sexes	4	4	...	...
Illegal Occupation of Underground Bakehouses (sec. 101)	...	...	...	...
Breach of provisions relating to Bakehouses—Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921 (Sec. 99 Factory Act)	39	39	...	...
Other Offences (Excluding Offences relating to Outwork)	12	...	12	...
Total	432	420	12	Nil.

3. HOME WORK—OUTWORKERS' LISTS (sec. 107).

	Feb. 1933.	Aug. 1933.
Total Number of Lists received	37	39
Number of Outworkers on Lists (*i.e.*, those residing in Edinburgh)	79	87
(*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	2	3
Number of Addresses of Outworkers received from other Local Authorities	5	4
Actual Number of Outworkers on Register, at date of last Returns	...	76
(*Note.*—The majority of these are Home-workers but a number of them actually do the work in ordinary factories and workshops.)		

Nature of Work—

(1) Making, altering, repairing, etc., of wearing apparel.

(2) Making up, finishing, and repairing of table linen, etc.

(3) Making of boxes or other receptacles made wholly of paper, cardboard, etc.

(4) The weaving of any textile fabric or any processes incidental to the latter (rug making).

Outwork in Unwholesome Premises (Sec. 108)	Nil.
Outwork in Infected Premises (Secs. 109 and 110)	Nil.

4. REGISTERED FACTORIES AND WORKSHOPS.

Premises on Registers at end of year.

			Number.
Workshops (various trades including small bakeries)			1,054
Bakehouses	Factories	123	
	Workshops	29	
		—	152
Underground Bakehouses in use at end of year			61

5. OTHER MATTERS.

Matters referred to H.M. Inspector of Factories :—		
(*a*) Failure to affix Abstract of the Factory and Workshop Act (Sec. 133)	12	
(*b*) Other Matters.	3	
	—	15
Action taken in matters referred by H.M. Inspector of Factories :—		
Matters remediable under the Public Health Act but not under the Factory Act		10
Sanitary Accommodation for Factories and Workshops—Intimations received by Local Authority in order that work might be carried out according to Local Regulations		42
Notices received for the information of Local Authority *re* Bakehouses —Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1931 (Secs. 97-100 Factory Act)		5
Notices received *re* provision of means of escape in case of fire (Sec. 14)		2
Notices received from H.M. Inspector of Factories—Petroleum Acts		1
Number of Notices of Occupation of Workshops received from H.M. District Inspector of Factories		46
Miscellaneous Complaints :—		
Received from other Departments	4	
Anonymous	1	
Received from Public	12	
	—	17

FACTORIES AND WORKSHOPS.

There are few more significant and characteristic features of the hygienic advance of modern times than the increasing importance which is now attached to the health and well-being of the individual. The clearance of slum areas and the creation of healthy conditions in the home are of first importance, but sound hygiene in factory and workshop is also necessary. There is no doubt that good home conditions are as a rule accompanied by higher standards of cleanliness and efficiency in industrial life.

The main object of factory legislation, from first to last, has been to secure wholesome working conditions so as to promote the safety and health of the industrial population. In aiming directly at these things, factory legislation has, however, accomplished much more and has added immeasurably to the happiness and brightness of individuals and social existence. Especially has this been stimulated by the most recent advance in Industrial Welfare Work.

Legislation has often excited the apprehension of some masters in industry, but there has never been wanting a sufficient number of humane and enlightened employers to welcome beneficent measures enacted by Parliament and to turn them to good account both for their workpeople and for industrial progress. In such cases the Inspector's duties have little to do with compulsion, and are concerned mainly with instruction in matters within the compass of Factory or Public Health law, and in the giving of skilled advice and help on matters outside the scope of the law.

While vigilance is still necessary, it is safe to say that the general level of compliance by employers is high. Consultation between the Department and employers is becoming a feature of present-day administration. The improvements made in recent years in all standards of hygiene have, of course, been reflected in better working conditions. It is noteworthy that far-seeing employers are realising that for the operatives to work in cheerful surroundings and under comfortable conditions is less exhausting, more pleasant, and is conducive to better health, than to work under unsuitable conditions. Much can be done at quite a small cost. A good light or a splash of colour has a beneficent psychological effect, and produces a feeling of being considered besides stimulating the will to work.

To-day, when new buildings are erected or structural alterations effected, the attitude of those responsible is very different from what it formerly was. It is recognised that light, air, and amenities promote efficiency and economy. Unfortunately, however, many occupiers of small premises are not in a position to reconstruct their workplaces although these were erected two or three generations ago. It is true that the worst of the old factory conditions from the point of view of hygiene are not such as to conserve the physique of the workers or to promote a high degree of working efficiency. Such out-of-date conditions are observed in the older premises where the plant and fittings, and even the structure itself, may be antiquated or worn out. These defects cannot be easily remedied on account of the prohibitive cost.

These remarks apply particularly to underground bakehouses which have been the subject of comment in previous reports. The need for satisfactory working conditions in such a place as a bakehouse, where food is manufactured, hardly requires to be stressed. No one can fail to have legitimate pride in, or be impressed by, the high standard of the more modern bakehouse factories, where the walls, floors, fittings, and furnishings are beyond reproach. In other premises, however, the hygienic standard is not so high. There are still those who think a bakehouse is sufficiently clean if the dirt is not patently obtrusive, the dangers that lie in accumulations of dust, rubbish and refuse not being fully appreciated by the occupier.

It should be emphasised that the present provisions of the Factory Act of 1901 in regard to sanitary regulations require to be strengthened. Thirty-two years have elapsed since the last consolidating Act was passed. Since then supplementary Acts and a multitude of Orders and Statutory Regulations have come into force but have not covered the ground adequately. The special regulations in regard to sanitation of bakehouses are, in my submission, no longer in accord with modern practice and modern tendencies. For example, lime-washing and painting are mentioned, but no reference is made to the many varieties of distempering and washable paints which are used now-a-days, nor of the enamel brickwork so much seen in modern interiors. There is, of course, a comprehensive phrase in the Act to the effect that " every factory must be kept in a cleanly condition," but that in itself is capable of being interpreted to suit circumstances. For bakehouses there is a need for more definite provisions in regard to cleanliness of floors, windows, fittings, furniture and machinery, and for power to deal with vermin. In the latter connection it may be stated that an underground bakehouse had to be closed during the year by the Department on account of infestation by insects. While the number of underground bakehouses is slowly diminishing—three were discontinued during the year—radical reduction cannot be looked for until further legal powers are obtained.

Another important innovation which has only arisen within later years is the opening throughout the City of many small shops under the title of " Home Bakeries." The majority of these places are outwith the Factory Act as no " hands " are employed, and although compliance with such general requirements as are applicable to other bakehouses have been secured voluntarily, the provisions of the Act cannot be enforced. Regular inspection is, however, made of these places under the Public Health Act, for general sanitation purposes.

The past year has also seen another matter arising in association with housing. Applications for permission to use houses which have been closed under Section 16 of the Housing (Scotland) Act, 1930, for purposes other than human habitation, are sometimes made. In addition, where proprietors have agreed to close houses for human habitation a request occasionally follows that the premises might be sanctioned for use as workshops. In this connection, inspections were made in seven instances, but as suitable workshops are just as essential as suitable houses, these applications were refused in all cases except one, and even in this instance certain conditions were attached to the occupancy of the premises.

SANITARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, *May*, 1934.

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, LADIES AND GENTLEMEN,

I have the honour to present the Annual Report of the Sanitary Department of the City of Edinburgh for the year 1933.

HOUSING.

Housing (Scotland) Act, 1925—Improvement Schemes.—During the year further progress was made with St. Leonard's (Second Section) Improvement Scheme by transferring a considerable number of the remaining tenants from the insanitary dwellings to the new re-housing areas. Some of the areas are now completely evacuated and demolition of the old buildings is proceeding apace.

Housing (Scotland) Act, 1930—Five-Years' Programme.—In terms of the Housing (Scotland) Act, 1930, a re-survey was made of the City and a report submitted to the Local Authority in which it was estimated that there were still approximately 7,500 occupied houses coming under the insanitary category. The Local Authority considered this report along with a memorandum by the Town Clerk, and reports from the City Architect and the City Chamberlain, as to the preparation of the Housing Programme for the years 1934-38, and resolved as follows :—

"(1) The erection by the Corporation of 750 houses per annum to replace houses unfit for human habitation and to accommodate persons living under overcrowded conditions."

"(2) The erection of 750 houses per annum to meet the needs of other persons requiring houses, these houses to be provided by private enterprise. In the event of the houses not being provided by private enterprise, the Corporation will erect those houses."

Clearance Areas.—It was decided as part of the Five-Years' Programme to deal with the following areas during the first year :—

(1) Ann Terrace, Spring Gardens and Violet Bank—87 houses—301 persons.
(2) Trafalgar Lane, Leith—152 houses—571 persons.
(3) Maryfield, Wilson's Park and Baxter's Place, Portobello—40 houses—approximately 155 persons.

Totals—279 houses. Approximately 1,027 persons.

Individual Uninhabitable Houses.—Apart from Clearance Areas considerable progress was made during the year by the demolition and closure of individual insanitary dwelling-houses. The following Returns submitted to the Department of Health show the number of houses dealt with.

REPORT for the year ended 31st December 1933, on proceedings taken as regards the Inspection, Improvement, and Demolition and Closure of Dwelling-Houses.

HOUSING (INSPECTION OF DISTRICT) REGULATIONS (SCOTLAND), 1928.

1.	Number of dwelling-houses inspected	**1,092**
2.	Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	**575**

HOUSING (SCOTLAND) ACT, 1925.

3.	Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :—		
	(*a*) Cases where requirements complied with by owners	(*a*)	
	(*b*) Cases where works carried out by Local Authority after failure of owners to do so	(*b*)	Nil.
	(*c*) Cases still pending	(*c*)	
4.	Number of houses of (*a*) one apartment, and (*b*) two apartments, for the erection of which the consent of the Local Authority has been given in terms of Section One hundred and eleven	(*a*) (*b*)	Nil.

HOUSING, TOWN PLANNING, ETC. (SCOTLAND) ACT, 1919.

5.	Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :—		
	(*a*) Cases where requirements complied with by owners	(*a*)	
	(*b*) Cases where works carried out by Local Authority after failure of owners to do so	(*b*)	Nil.
	(*c*) Cases still pending	(*c*)	

HOUSING (SCOTLAND) ACT, 1930.

6.	Number of dwelling-houses in respect of which notices were served under Section 14 (1)		Nil.
7.	Number of dwelling-houses rendered fit for human habitation following on notices under Section 14 (1)		Nil.
8.	Number of dwelling-houses in respect of which work has been done by the Local Authority under Section 15 (1)		Nil.
9.	Number of dwelling-houses in respect of which in terms of Section 17 a demolition order or closing order under Section 16 (3) has been substituted for a notice under Section 14 (1)		Nil.
10.	Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1)		**512**
11.	Number of dwelling-houses referred to in 10 :—		
	(*a*) Which have been rendered fit for human habitation	(*a*)	Nil.
	(*b*) In respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit	(*b*)	**131**
	(*c*) In respect of which demolition orders have been made under Section 16 (3)	(*c*)	**96**
	(*d*) In respect of which closing orders have been made under Section 16 (3) and (4)	(*d*)	**202**
12.	Number of dwelling-houses in respect of which closing orders have, in terms of Section 16 (3), been determined by the Local Authority, following upon the houses having been rendered fit for human habitation		Nil.
13.	Number of houses in respect of which advances have been made in terms of Section 34 towards cost of repairs and amount so advanced		Nil.

*If permission to reconstruct a building has been granted, the number of houses existing prior to the reconstruction should be stated (see in this connection, sub-section (3) of Section 49 of the Housing (Scotland) Act, 1930).

Note.—Any general information or observations to the character of defects usually found to exist, as to the extent to which overcrowding was found to prevail and the steps taken to remedy it, or as to the work of inspection generally, should be entered in the space below :—

The conditions found were those usually associated with old houses, viz.:—Dampness, overshadowing, general dilapidation, over-subdivision, and inadequate sanitary accommodation.

HOUSING (SCOTLAND) ACT, 1930.
Position as at 31st December, 1933.

	Number of Dwelling-Houses Demolished (Sec. 16)	Number of Dwelling-Houses Closed (Sec. 16.)	Number of Persons Displaced from Houses in Cols. 2 & 3.	Number of Dwelling Houses made Fit (Secs. 14 & 16)	Number of Dwelling-Houses Vacated but not yet Demolished.	Number of Persons Displaced from Houses in Col. 6.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Under Part II. of Act: Unfit Houses not included in Clearance Areas or Improvement Areas	33	370	1558	Nil.	67	234

Bug Infestation of Houses.—The problem of the infestation of the new houses by bugs was very acute last summer, due in all probability to the exceptionally warm weather. Every precaution was taken to prevent the new houses becoming infested, but despite active co-operation between this Department and the House-letting Department, these vermin appeared in several houses. This Department was notified of all proposed removals to Corporation houses, and after a thorough inspection was made of the old houses, a report was sent to the House-letting Department as to their condition. When a house was found to be bug-infested the tenant was advised as to the measures which should be taken to prevent transference of the vermin in their furnishings and furniture, and arrangements were made for the removal of the bedding to the steam disinfector. Altogether 1,209 investigations were made from May to December and it was found that about 10 per cent. of the houses visited were bug-infested.

It was felt that in order to ensure that infestation of the new houses would be prevented, more drastic steps would require to be taken, and it is now proposed to have the furniture and furnishings from infested houses removed in a Pantechnicon and subjected to disinfestation by hydro-cyanic acid gas for a period of three to four hours and thereafter delivered to the new address. The bedding will be removed for treatment at the steam disinfector. It is hoped by these means to exterminate all bugs and their eggs in the household effects of the transferred tenants.

Supervision of Re-housing Areas.—With a view to having the houses in the re-housing areas kept clean and in proper order and also to prevent overcrowding and subletting, their regular visitation by Sanitary Inspectresses was continued with most gratifying results. Year by year further improvement in the conditions both within and outside the houses is observed and the majority of the occupiers seem to appreciate their new opportunity of living in healthy conditions amidst pleasant surroundings. Altogether 12,896 visits were made during the year.

Housing Repairs and Improvements.—Many minor repairs were executed on houses by owners at the request of the Department. No notices, however, were served under Section 14 of the Housing (Scotland) Act, 1930, as the difficulties associated with many properties would necessitate the provision of alternative accommodation for the tenants, and it was thought inadvisable to take any action until the proposals of the Scottish Departmental Committee on Housing were known.

Evidence was given by the Local Authority before this Committee, when it was estimated that there were approximately 50,000 houses in Edinburgh unprovided with

baths. Included in this number there were 7,000 one-apartment houses and 32,000 two-apartment houses where it would not be possible to provide baths without re-arrangement or combination of houses. Apart from the provision of baths it was also estimated that approximately 8,000 houses were regarded as in need of re-conditioning to the extent of requiring the introduction of modern and separate sanitary conveniences for each house.

The " Whitson Report " has now been issued and the decision of the Government in regard thereto is eagerly awaited as this will have a direct bearing on the improvement of existing houses.

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 45 farms and other rural cottages. All were granted and improvements were immediately proceeded with, including the provision of bathrooms, sculleries, drainage, improved lighting and repairs to floors, walls, roofs, etc.

Farm workers' houses in the suburban areas were visited by the Sanitary Inspectresses 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.

INCREASE OF RENT, ETC., ACTS.

Application was received from the tenants of two houses 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. The state of disrepair, however, was not sufficient for the granting of certificates and on the owners attention being drawn to the matter, all necessary repairs were carried out.

GENERAL SANITATION.

Nuisances and Sanitary Improvements.—No less than 15,036 insanitary conditions were dealt with by the Inspectorial staff. Of these 11,244 were discovered by the Inspectors. Intimations, statutory notices and written communications sent in connection with these matters totalled 12,370.

Of the total number of insanitary conditions, 2,728 or 18·14 per cent. necessitated the renewal, repair, or clearance of drains and sanitary appliances ; 2,759, or 18·35 per cent., required the painting of common staircases and the regulating or washing of common stairs, passages, etc.,; 2,734, or 18·19 per cent., called for the removal of accumulations of rubbish, garbage, etc. ; 2,400, or 15·96 per cent., dealt with miscellaneous nuisances, including the casting of garbage, the presence of rats, mice and other vermin, etc. ; 2,075, or 13·80 per cent., had reference to overcrowded houses ; 1,131, or 7·52 per cent., demanded repairs to roofs, walls, doors, windows, fire-places, etc., of dwelling houses ; 941, or 6·26 per cent., were concerned with dirty floors, dirty bedding, dampness, smoke and other nuisances in dwelling houses ; and 268, or 1·78 per cent., required the cleansing of cisterns and repairs to water pipes. These conditions are fully detailed and classified under the Wards of the City in a tabulated statement appended to this report.

Sanitary Conveniences used in Common.—The number of dry closets is 239 (inclusive of the number referred to in the table as being used in common). This is a decrease of 56 dry closets as compared with last year. All privy middens have now been abolished, the last six having been discontinued during the year. The number of water closets and sinks used in common was reduced by 241 and 54 respectively, due to the demolition and closing of houses under the various slum clearance schemes, and to improvements effected at other properties. The number of houses without sink and water supply within the house and without the use of a common sink has been reduced by 103.

	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.		
Common Waterclosets .	4,229	1,343	690	98	36	2	3	6,401	15,991
Common Sinks . .	311	280	172	41	15	5	...	824	2,480
Number of Houses without Sink or water supply within the house and without the use of a common Sink . .	...	...	...	...	...	...	...	...	557
Dry Closets . . .	78	5	...	...	...	...	...	83	171
Ashpits	10	5	5	...	...	...	...	20	55

Collection of Fish Offal.—Exception was taken to the crude and unsatisfactory method of collecting offal from fishmongers' shops in open barrels and bins by ordinary commercial motor vehicles. Obnoxious odours escaped therefrom during conveyance through the city and occasioned good cause for complaint by the citizens. Representation was made to the collecting firm regarding the offensive nature of the nuisance, and the company immediately issued strict instructions to their employees, under penalty of instant dismissal for negligence, to keep all receptacles covered with tarpaulin sheets during conveyance through the streets. In the warm summer, however, the stench was most offensive. The wear and tear of the covers permitted the escape of fumes, barrels leaked in some cases, and carelessness was observed in the execution of the firm's orders. Further representation was made to the company, and ultimately new motor vehicles were secured for this particular trade, fitted with water-tight metal tanks having specially fixed covers. It is hoped thereby to effect a considerable improvement.

Pigeons.—Several complaints were lodged regarding nuisance and annoyance from disowned or "wild" pigeons. The favourite breeding places of these birds were found to be buildings or structures which afforded adequate and convenient shelter, such as churches, tenements with exposed and unfinished gable ends, railway bridges, etc. The surroundings of those places were much fouled and the cooing of large numbers of pigeons became an annoyance to the occupiers of the neighbouring houses. Occupiers of houses themselves contributed to the nuisance by putting out scraps of bread and other foodstuffs on window sills. In some cases the occupiers have had occasion to regret this action, as, literally, the birds "came home to roost" and refused to be driven off. Buildings, bridges, tenements, etc., have been made bird-proof to some extent by the use of wire-netting for enclosing nesting places, by fixing metal spikes on projecting ledges, and by properly finishing exposed gable-ends, but, while this discourages the birds, they

ultimately settle somewhere else in the neighbourhood. Trapping has proved only partially successful and poisoning is a method attendant with too much danger to be recommended. The problem is a very difficult one and a satisfactory solution has, so far, not been found.

Noise.—A number of complaints were made by citizens about alleged nuisance caused by noise and these received careful and sympathetic consideration. Unusual noise may be a caused of incessant irritation to some people, whilst to others it either appears to disturb them very little or they are capable of accommodating themselves to it. Where annoyance was due to disturbance of rest by night work, restriction of the noise as far as possible to reasonable hours of the day met the case, and where the noise complained of occurred during the daytime, it was possible in most cases to persuade the parties concerned to have adjustment made to lessen the offence.

Complaints have become more frequent regarding noise from refrigerating plant in shops situated in tenemental property. In those cases the humming and vibration of the dynamo caused considerable annoyance to the occupiers of the dwelling houses above. In certain instances the complaints were considerably abated by adjustment of the mechanism, while in other cases new positions for the plant had to be selected. In one instance it was necessary to substitute modern plant for the existing antiquated apparatus.

Some noise nuisances were due to carelessness or thoughtlessness, for example where unnecessary shouting was complained of at dance halls. Arrangements were made in those cases for the prohibition of noisy dances, at least after midnight.

Noise arising from the careless handling of milk cans and cases containing bottles of aerated water was satisfactorily adjusted by the exercise of more care.

It is gratifying to acknowledge the sympathetic reception given by the parties concerned to the representations made by this Department, and their willingness to do everything possible to remove the cause of ccmplaint.

OVERCROWDING.

The number of overcrowding cases in the City which came to the knowledge of the Department was 2,075, this being an increase of 229 compared with last year. Of the total number 844 were entirely new cases.

While much of the overcrowding was caused by the size of the family in residence, in 286 cases it was either due to or aggravated by the keeping of lodgers or the sub-letting of rooms to other families.

Of the 2,075 overcrowded houses, 1,092 were of one apartment, 946 of two apartments, and 37 of three apartments and over.

In 212 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 feet.

In individual cases the available space had been reduced to extremely low figures, ranging from 100 to 138 cubic feet per person.

In 747 instances the overcrowding was abated and of this number 297 were of one apartment, 296 of two apartments, 19 of three apartments and 135 were instances of subletting of rooms or keeping of lodgers. Recommendations were made to the House-letting Department in 818 instances where overcrowding was serious and where there was a lack of proper sex separation.

Overcrowding—Special Survey.—As three years had elapsed since the first overcrowding survey was made in the Wardlaw district, it was thought advisable this year to make a re-survey to ascertain if any improvement had taken place in the conditions.

The same houses were visited, comprising 1,395 houses in Wardlaw Street, Place, Terrace, Gorgie Road, Whitepark, Newton Street and Stewart Terrace. The population was ascertained to be 5,707 as compared with 6,051 in the previous survey, an average of 3·82 persons per house.

During the three years, 313 removals or changes in tenancy had taken place. Despite this fact, however, the re-survey demonstrated that no material change in the conditions of overcrowding had occurred.

Taking the cubic space standard of overcrowding it was found that of the 59 cases discovered in the 1930 survey 33 had been abated, but there were 35 new cases, making a total of 61 houses in which there was less than 400 cubic feet per person. Somewhat similar results were ascertained in respect of the want of proper sex separation and the standard of persons per room.

Overcrowding Estimate.—To assist in the preparation of the Five-Years' Housing Programme for 1934-38, a Report was made to the Local Authority by this Department in which it was estimated that there were approximately 3,000 overcrowded houses in the City. This estimate was based on the standard of 400 cubic feet per person, but it is felt that this standard does not indicate the real extent of the problem and it is desirable that standards similar to those laid down for Improvement Areas under the Housing (Scotland) Act, 1930, should be adopted.

Any standards adopted should provide for a minimum floor space per person; the proper separation of the sexes; and a maximum number of persons per room.

Unfortunately there is no provision in the Act whereby Local Authorities may obtain a grant for the erection of houses to relieve overcrowding and the ordinary rent for new houses is greater than the majority of persons living under overcrowded conditions can afford to pay; in fact it is usually found that the larger the family the less money can be set aside as rent by the tenants.

As no real progress can be made until there is a sufficient number of low-rented houses it is to be hoped that the Government will consider the giving of a grant for overcrowding similar to the "Unit Grant" for insanitary dwellings closed or demolished.

VERMIN REPRESSION.

Verminous Children.—During the year 169 cases involving 198 children were notified by the Education Officials, and in connection therewith 7 beds and 248 sets of personal clothing were disinfected and 190 children were bathed at the City Disinfecting Station.

Verminous Houses.—540 houses, which upon examination, were found to be in a verminous condition, were dealt with and 246 beds were removed to the City Disinfector for treatment. 229 apartments were stripped of wallpaper and the walls thereafter treated with an insecticide.

Rat Destruction.—During the year the Department received 333 notifications regarding premises infested by rats and mice. Repeated visits were made and 285 premises were cleared of the vermin.

These rat infestations may be divided into two classes, viz.: (1) surface vermin which had gained access to premises, and (2) vermin that had a habitat underground, generally in the drainage or sewerage systems. The former type of infestation was not difficult to deal with. Trapping, poisoning and gassing methods were generally found to be effective in these cases. The use of poisons in inhabitated dwellings was discouraged, as obnoxious odours arise from carcases concealed under floors and in sheltered places. The tracing and removal of these dead rats causes considerable inconvenience and expense both to occupiers and owners. The underground source of infestation is more difficult to remedy and extensive surveys and expense are often involved. In many cases the renewal of drains and sewers is found necessary.

Rat Week.—Satisfactory results were again achieved during Rat Week when the Local Authority co-operated with the Department of Agriculture in an intensive campaign for the destruction of rodents.

LODGING HOUSES.

Common Lodging Houses.—At the beginning of the year there were sixteen common lodging houses with accommodation for 2,135 persons. At the end of the year the common lodging houses numbered fifteen, with accommodation for 2,041 persons. One lodging house in the Cowgate with accommodation for ninety-four men was discontinued as the premises were acquired by the Heriot Trust for the extension of the Heriot-Watt College. In another, baths and additional lavatory and water-closet accommodation were introduced.

Farmed-Out Houses.—The number of farmed-out houses on the register is similar to last year, namely, 57 with accommodation for 205 persons.

Houses Let-in-Lodgings.—At January, 1933, there were 15 houses let-in-lodgings with accommodation for 590 persons. During the year 2 houses with accommodation for 43 persons were removed from the register, the businesses having been discontinued. At the end of the year there were 13 houses let-in-lodgings on the register, with accommodation for 547 persons.

ACCOMMODATION FOR SEASONAL WORKERS.

During the year approximately 437 seasonal workers were employed on 16 farms.

New Bye-laws were adopted by the Local Authority last year, the principal additions being the measures for precaution against fire. Farmers were notified regarding these important additions and they have taken steps to carry out the necessary alterations. In some cases, the work has not been fully carried out and close touch is being kept with the farmers in an effort to have the accommodation provided in accordance with the Bye-laws. The regular visits of inspection to the various premises showed them to be kept in a cleanly and sanitary condition.

PLACES OF PUBLIC ENTERTAINMENT.

Picture houses, theatres and other places of public entertainment were regularly visited by the Inspectors and as a rule the cleanliness and sanitary accommodation were found to be satisfactory. Any matters requiring attention were immediately remedied by the management.

SMOKE ABATEMENT.

Atmospheric Pollution.—As air is one of the primary essentials of life, the prevention of atmospheric pollution is regarded as a matter of the utmost importance. It is now recognised that a smoky atmosphere with its consequent deprivation of sunlight adversely affects health. When the temperature of such an atmosphere is lowered, fog results. Although on account of its elevated and exposed situation, Edinburgh does not suffer from foggy conditions to the same extent as other cities, there are occasional reminders of the grossly polluting effects of smoke in the atmosphere. Apart from fog, the damage done by the constant discharge of smoke is demonstrated by its soiling effects on buildings and fabrics, and its withering influence upon vegetation.

Investigation of atmospheric pollution is undertaken in co-operation with the Department of Scientific and Industrial Research. For this purpose, three deposit gauges are stationed as follows :—One at Leith Links, one at Bruntsfield House and one at West Princes Street Gardens. Statistics for the year ending December 1933, show that the mean monthly deposits in total solids per square mile were 13·917 tons in Leith, 12·854 tons in Bruntsfield and 24·006 tons in West Princes Street Gardens, averaging 16·925 tons for the City. The latter station has always recorded the heaviest deposit, doubtless due to the low level and close proximity of the railway.

The annual report ending March 1933, issued by the Department of Scientific and Industrial Research, recorded the mean monthly deposits in total solids per square mile as follows :—Edinburgh, 18·563 tons ; Glasgow, 19·35 tons ; Newcastle-on-Tyne, 19·293 tons ; Sheffield, 22·11 tons ; Salford, 18·853 tons ; Liverpool, 37·715 tons ; and London, 21·35 tons. Liverpool, Glasgow and London, have two, nine, and thirteen recording stations respectively established, while Edinburgh, Newcastle, Sheffield, and Salford have three each.

Monthly Records of Deposit.

Month.	Station.	Millimetres of Rainfall.	Total Insoluble Matter. Metric Tons. per Sq. Kilometre.	Total Soluble Matter. Metric Tons per Sq. Kilometre.	Total Solids. Metric Tons per Sq. Kilometre.	Total Solids. English Tons per Sq. Mile.
January	Leith Links	46·85	3·71	2·43	6·14	15·72
	Bruntsfield House	42·53	3·71	2·63	6·34	16·23
	W. Princes St. Gds.	52·12	5·28	2·27	7·55	19·33
February	Leith Links	27·95	5·67	2·79	8·46	21·66
	Bruntsfield House	35·10	3·30	1·47	4·77	12·21
	W. Princes St. Gds.	36·83	5·32	1·98	7·30	18·69
March	Leith Links	15·74	2·61	0·85	3·46	8·86
	Bruntsfield House	24·91	3·74	1·00	4·74	12·14
	W. Princes St. Gds.	20·90	5·90	2·01	7·91	20·23
April	Leith Links	46·31	3·48	2·50	5·98	15·31
	Bruntsfield House	49·14	4·21	2·07	6·28	16·08
	W. Princes St. Gds.	45·54	10·79	1·37	12·16	31·13
May	Leith Links	43·47	2·89	1·72	4·61	11·83
	Bruntsfield House	44·28	2·44	1·20	3·64	9·32
	W. Princes St. Gds.	38·76	7·35	2·17	9·52	24·35
June	Leith Links	40·50	2·75	1·62	4·37	11·21
	Bruntsfield House	39·42	4·58	1·34	5·92	15·15
	W. Princes St. Gds.	41·73	17·71	1·91	19·62	50·19
July	Leith Links	88·83	4·45	2·48	6·93	17·74
	Bruntsfield House	88·02	2·82	2·11	4·93	12·62
	W. Princes St. Gds.	83·59	7·73	1·84	9·57	24·50
August	Leith Links	19·64	2·78	0·86	3·64	9·34
	Bruntsfield House	23·76	3·90	1·91	5·81	14·88
	W. Princes St. Gds.	18·06	5·36	1·88	7·24	18·55
September	Leith Links	43·88	2·71	2·20	4·91	12·57
	Bruntsfield House	45·90	2·20	1·83	4·03	10·32
	W. Princes St. Gds.	41·93	6·40	1·93	8·33	21·32
October	Leith Links	52·85	3·36	2·65	6·01	15·38
	Bruntsfield House	61·16	2·86	1·71	4·57	11·70
	W. Princes St. Gds.	56·88	5·26	3·47	8·73	22·34
November	Leith Links	34·43	2·75	1·79	4·54	11·62
	Bruntsfield House	37·80	1·96	1·74	3·70	9·47
	W. Princes St. Gds.	34·83	5·15	2·36	7·51	19·22
December	Leith Links	15·19	4·32	1·84	6·16	15·77
	Bruntsfield House	21·74	3·96	1·56	5·52	14·13
	W. Princes St. Gds.	19·67	5·55	1·57	7·12	18·23

Educational Measures.—Lectures on domestic aspects of the smoke problem were given by the senior smoke abatement inspector to women attending the continuation evening classes. Methods were explained whereby smoke from domestic fires could be reduced, but it was urged that substantial improvement could only be effected by the adoption of gas, electricity and smokeless fuels. Furnace and boiler management, with a view to smoke abatement in the industrial field, was made a subject of special study by a class for firemen at Heriot-Watt College. These lectures were well attended and it is hoped to continue them next winter.

Public Complaints.—Forty complaints were received during the year. The majority referred to smoke from low chimneys of central heating boilers in close proximity to dwelling-houses. By substituting coke for coal, and in some cases by heightening chimneys, satisfactory adjustment was made.

Railways.—The various railway depots and stations were visited from time to time. Owing to the central situation of the Waverley Station special attention was

given there. Drivers now fully appreciate the necessity of preventing unnecessary emission of smoke from engines. The few cases of neglect reported were due to carelessness.

Steam Road Waggons.—Steam waggons traversing the streets were closely watched. In narrow thoroughfares smoke from these vehicles, although not dense, is obnoxious by reason of the fact that the discharge occurs 8 to 10 feet only above the street level. Towards the end of the year, however, a number of locally-owned steam road waggons were withdrawn owing to the higher rate of taxation and motor vehicles substituted. Should this practice continue, this class of smoke nuisance will become negligible.

Factory and Workshop Chimneys.—Observations were made daily of the emissions of smoke from factory and workshop chimneys. Where excessive emissions took place, observations were extended over a period before action was taken. These observations totalled 368, each of one hour's duration. In twenty-five cases it was necessary to notify defaulting owners. In the majority of cases improvement was effected by adopting better methods of stoking. Altogether 1,792 visits were made.

The following is a tabulation of the improvements effected :—

New Steam Boilers installed, including replacement of old Boilers	9
Steam Boiler replaced by electric power	1
Secondary-air Smoke-preventing apparatus fitted to Steam Boiler Furnaces	4
Mechanical Stokers fitted to Steam Boilers	4
Mechanical Stokers fitted to Central Heating Boilers	3
New Chimneys erected or existing ones heightened to increase their draught	9
Furnaces in which anthracite, coke or non-bituminous fuel has been substituted for coal (This includes churches, institutions, garages, laundries, etc.)	19
	49

OFFENSIVE TRADES.

There is no change in the nature and number of the Offensive Trades carried on in the City. They comprise 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.

The various works were regularly visited in order to see that the Bye-laws were being observed.

FOOD SUPERVISION.

Shops and premises used for the manufacture, storage and sale of food were regularly inspected, and as a result, a measure of improvement was perceptible both in the condition in which these premises were kept and in the care exercised in purveying food. It is very necessary that this improvement should continue as a clean and wholesome food supply is one of the fundamental factors in maintaining the health of the people.

The legislation relating to the preparation and sale of food can scarcely be said to have kept pace with the modern hygienic trend on this subject and it is highly desirable that it should be brought up to a proper standard. Proper construction of the premises and adequate protection of the food by the installation of modern fittings are two of the most important points to be kept in view, and these could be more generally attained by means of regulations.

MILK SUPPLY.

The number of registered dairy-keepers, including hawkers, at 2nd January, 1933, was 473. Applications for registration were received during the year in respect of 17 premises and 11 hawkers. Four of the premises were fully registered, 13 were registered for the sale of bottled milk only, and the hawkers were provisionally registered for the sale of bottled milk from vehicles. In addition, application for registration from 81 dealers to sell sterlized milk in sealed bottles was provisionally granted. Certificates of registration were cancelled for 7 dairies and 1 hawker, the sale of milk having been discontinued. The total number of persons registered, at the end of the year, was 574.

The total approximate daily sale of milk of all classes was 25,406 gallons, which is equivalent to an average amount of about half-a-pint per person. The amount of milk sold in bottles was 79 per cent. of the total, this figure being similar to the previous year. Milk sold over the counter or passed on to the consumer other than in bottles accounted for 12 per cent., and the remaining 9 per cent. was supplied in bulk to institutions, etc.

The Milk (Special Designations) Order (Scotland), 1930.—The quantities of the specially designated milks now sold daily within the City are—315 gallons of "Certified," 877 gallons of "Grade A" (Tuberculin Tested), and 46 gallons of "Grade A." In addition, 15,914 gallons of milk are "Pasteurised," although only a small proportion of this is sold under licence, making a total of 17,152 gallons or about 68 per cent. of the total daily sale of milk. This is an increase of 1 per cent. as compared with last year.

The Local Authority has granted licences to 223 dealers for the sale of the various grades of milk under the Milk (Special Designations) Order (Scotland), 1930. 81 being for "Certified," 58 for "Grade A" (Tuberculin Tested), 15 for "Grade A" and 69 for "Pasteurised." This is an increase of 15 over the previous year.

ICE CREAM.

The number of shops registered for the Sale of Ice Cream is 273. Forty-four samples of Ice Cream were procured from shop premises, etc., in the City, for the purpose of chemical analysis, in order to determine the quantity of milk fat present, and the City Analyst reported that the average amount was 3·13 per cent.

PREVENTION OF FOOD ADULTERATION.

During the year the total number of samples procured for chemical analysis was 1,778, and consisted of 881 statutory and 897 informal samples, showing a rate of 3·93 per 1,000 of the population. The number of statutory samples taken represented

103 different articles of food and drugs. With regard to the statutory samples, Dr A. Scott Dodd, B.Sc., Ph.D., F.R.S.E., the City Analyst, reported 835 or 95 per cent. to be genuine, and 46 or 5 per cent. as not being in conformity with the statutory requirements.

Milk.—For obvious reasons, the number of samples of sweet milk was larger than that of any other article of food, the number of statutory samples being 195, while, in addition, 187 samples were procured at shops, railway stations, etc., for biological examination.

Of these statutory samples, 176 were reported as conforming to the standard specified in the Sale of Milk Regulations, and 19 as having been adulterated either by the abstraction of fat or the addition of water or both.

The average amount of milk fat, calculated from all the statutory samples, including those certified as having been adulterated, showed the creditable figure of 3·53 per cent., which compares most favourably with the presumptive standard, viz., 3 per cent.

The Milk (Special Designations) Order (Scotland), 1930.—As the standard of milk fat under this Order for the three principal grades is 3·5 per cent., samples of the various supplies were analysed each month.

The total number of samples taken was 225, and consisted of 105 "Certified," 62 "Grade A" (Tuberculin Tested), 23 "Grade A," and 35 of "Pasteurised" Milk.

A detailed statement is submitted, 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	4·03	6	4·14	2	3·54	3	3·72
February . .	9	3·87	6	3·82	2	3·58	3	3·55
March . .	9	4·00	6	3·93	2	3·14	3	3·52
April . . .	9	3·82	5	3·86	2	3·68	3	3·61
May . . .	9	3·88	6	3·82	2	3·72	3	3·48
June . . .	9	3·89	6	3·54	2	3·71	3	3·39
July . . .	9	3·87	5	3·50	2	3·76	3	3·53
August . .	8	3·84	2	3·58	1	3·66	3	3·65
September . .	7	3·96	6	4·20	2	3·93	2	3·92
October . .	9	3·72	5	4·07	2	3·75	3	3·57
November . .	9	3·75	5	3·70	2	3·81	3	3·40
December . .	9	4·07	4	4·02	2	3·90	3	3·58
Total . .	105	...	62	...	23	...	35	...
Average .	...	3·89	...	3·85	...	3·68	...	3·58

A scrutiny of the figures showed the following interesting results:—the average amount of fat present under each designation complied with the specified standard with one exception, when in the month of March, the "Grade A" milk was 3·14 per cent.

The principal grades, viz. :—"Certified" and "Grade A" (Tuberculin Tested) were not only higher than the standard, but on several months reached the satisfactory figure of 4 per cent.

Mince.—The infringements under the Preservatives Regulations in regard to Mince were comparatively few during the year, being a marked contrast to former years.

The number of samples purchased from butchers throughout the City were 58, and only 6 of these were reported upon adversely by the City Analyst.

While excessive amounts of sulphur dioxide have been the exception for several years, two of these samples contained 1,427 and 1,050 parts per million by weight. These are exceptional quantities and compare most unfavourably with the legal maximum of 450 parts.

Prosecutions were successfully instituted against 4 offenders, and a total sum of £7 5s. 6d. was inflicted in fines.

Sausages.—There is such a very extensive consumption of this popular article of diet that it necessitates greater supervision in regard to the presence of preservatives than any other foodstuffs.

Offences which, for some years were far too rife, had shown a considerable diminution during the past two years, and this has been more pronounced during the present term.

The results of the analyses are unique, as notwithstanding the large number submitted for examination, no sample contained preservative in excess of the quantity sanctioned under the Regulations.

Altogether, 87 samples of various descriptions of sausages were reported upon by the City Analyst, and while all complied with the specified standard, it was found that 20 of these were free from any preservative.

Imported Foodstuffs.—For several years there has been some dissatisfaction among certain traders with regard to the non-payment of samples taken upon importation. During the present year this question was raised in the House of Commons and the Under Secretary for Scotland, who replied on behalf of the Government, stated that the Act under which the regulations were made does not require payment for samples of such imports.

Visitation was made at regular intervals to the Port of Leith in order to procur samples of the imported articles of food detailed in the Preservatives Regulations whic come within the jurisdiction of the Local Authority.

Thirty-three samples, representing a variety of 12 different foodstuffs were for warded for chemical examination and all were reported as complying with the require ments of the Regulations.

Metallic Contamination of Canned Foodstuffs.—Owing to the increasin manufacture of canned foods it was decided to have a number of these analysed wit a view to the determination of the presence of metallic contamination.

Accordingly, a variety of 22 samples of different descriptions of canned meat fish, vegetables, etc., was purchased throughout the City, representing both Home an Foreign produce, and forwarded for analysis.

Quantities of tin varying from 0·22 to 1·40 grains per lb. were found in 13 samples while 9 were reported to be free from any trace of metals.

Dr. A. Scott Dodd reported as follows :—" The results of analysis of the variou kinds of canned food show that the Foreign and Home produce are equally satisfactor and that there is little to fear from either as regards metallic contamination.

" In former years excessive quantities of tin were frequently found and there were also some instances of contamination with lead and other metals.

" All the samples recently examined were found to be free from lead, and in those instances where tin was detected, the amount found was well below the suggested limit of 2 grains per lb. This would appear to indicate that the use of lacquers and other harmless inhibitors is attended with satisfactory results."

THE SALE OF FOOD ORDER, 1921.

The only provisions which have not been revoked under this Order are applicable to the labelling of Imported Meat, and these have been continued in force during the present year.

On visiting the butchers' premises throughout the City, it was apparent that the majority of the shopkeepers were alive to their responsibility in observing the terms of the Order.

There were, however, several instances where the labelling of the imported meat was not in conformity with the specified requirements. The persons in default were cautioned and subsequent visits were made to the premises, when it was invariably found that the labelling had since been carried out in an efficient manner.

THE RAG FLOCK ACT, 1911.

The high standard of cleanliness, which has been the feature of the past few years, has been well maintained and is highly creditable to the manufacturers of rag flock.

Eleven samples were procured at various bedding premises throughout the City and submitted for chemical examination.

The City Analyst reported ten of these as containing Chlorine well below the permissible maximum sanctioned by the Regulations.

The other sample, which did not comply with the standard, had been supplied by a firm in the West of Scotland, and as the City Analyst was of the opinion that it had undergone a certain process of washing, it was decided to refrain from taking legal action.

THE POISONS AND PHARMACY ACT, 1908.

Under the Pharmacy and Poisons Act, 1933, the above Act is repealed, but the date when the new Act comes into operation has not yet been fixed by Order in Council.

The total number of persons licensed to sell poisonous substances used in agriculture and horticulture is 29, all with one exception being holders of licences previously granted by the local Authority.

Visitation was made to the various premises and it was evident that the provisions of the Act were receiving due attention. All poisonous substances were being kept strictly apart from any other goods, while an examination of the Poisons Books shewed that the required details were being properly entered.

THE FERTILISERS AND FEEDING STUFFS ACT, 1926.

It is somewhat difficult to understand the attitude of indifference displayed by the farmers throughout the district, in regard to the legislation provided for their special benefit under this Act, for, since its inception, no demand has yet been made by them to the Local Authority with a view to their taking advantage of its provisions. This is the more surprising as the present Act is such a decided improvement on the previous Acts, and was framed, to a great extent with the distinct purpose of assisting the farming industry.

Inspections were made of premises throughout the City, where fertilisers and feeding stuffs were manufactured, and seven samples of scheduled feeding stuffs and one sample of fertiliser were taken in the prescribed manner for the purpose of analysis by the Agricultural Analyst. These were certified to conform to the statutory statements in all respects with one exception, viz., a sample of Egyptian Cotton Cake which was found to be slightly below the guarantee in Oil.

THE MERCHANDISE MARKS ACT, 1926.

The various "Orders in Council" which have come into operation under the above Act now represent many imported foodstuffs and their enforcement by Local Authorities demands considerable time and attention.

Inspection of the various business premises throughout the City proved that the shopkeepers, as a whole, were observant of the provisions detailed in the specified

Orders, but there was a small minority who appeared to adopt rather a careless attitude This applied especially to the marking of imported raw tomatoes and, in certain instances where a reprimand had failed to effect its purpose, it was reluctantly decided to prosecute

Legal proceedings were instituted against two Fruit Merchants who had bee repeatedly cautioned in regard to the ticketing of imported tomatoes, and Fines of £ and 10s. respectively were imposed. It was at once apparent that this action had most salutary effect, for these infringements practically ceased.

PORT SANITARY INSPECTION.

Shipping Arrivals.—The amount of shipping which entered the Port of Leit and Granton Harbour, inclusive of steamers, motor ships, sailing and fishing craft totalled 11,084 vessels of 2,947,896 tons, an increase in arrivals of 198 vessels and 122,21 tons over last year. Particulars of the inspections made and the insanitary condition dealt with are detailed in tabular form.

Sanitation.—The greater number of nuisances discovered on board ships ha to do with matters of general hygiene, such as the cleaning of fresh water tanks, bilges scuppers, sanitary appliances, holds, galleys, food stores, pantries, etc., the efficien heating, lighting and ventilation of the living quarters and the prevention of dampnes therein. Other conditions necessitated repairs to lavatories, wash-hand basins, sink and baths, and also included measures for the extermination of rats, mice and othe vermin.

Masters of vessels and their officers fully appreciate the necessity of maintainin a good standard of cleanliness, but for several reasons conditions on board many vessel in port are not always seen at their best. Keen competition and poor freight return necessitate the rapid discharge and quick dispatch of vessels, with the result that th time of the captain and his officers is almost wholly absorbed in the multifarious dutie involved in the accomplishment of this task ; the nature of the cargoes are often such as to foul the decks and quarters during unloading operations ; and, in many cases, th vacated quarters of discharged crews are found in a state of disorder, with all manne of rubbish and litter strewn about.

Notwithstanding economic and other difficulties, however, shipowners have endeavoured to comply with all the necessary sanitary requirements. A greate appreciation of the economic advantages to be gained by the maintenance of hygienic conditions on board ship is apparent in all progressive lines. These conditions contribute to the well-being of the crew, the comfort of the passengers and the protection of cargoes.

The construction and furnishing of the crews' quarters in many of the smaller vessels still leave much to be desired. Space is limited and the crews are herded together in common quarters which do not permit of much comfort or privacy. Recommendations for the improvement of the crews' quarters have been put forward by the Manning Committee of the Shipping Federation and the Association of Port Sanitary

Authorities, but these may yet require to be made compulsory before general effect is given to them.

Rat Destruction.—The deratization of vessels is a matter of great importance in the prevention of plague. By international agreement all foreign-going vessels require to be fumigated every six months for this purpose, unless, after inspection, conditions on board may warrant exemption. In this connection official certificates must be carried by the masters of vessels and produced at ports of call. These certificates are issued only by approved Port Sanitary Authorities having the necessary staff and facilities for the inspection and deratization of vessels. In this respect, shipowners in the ports of Methil, Burntisland, Inverkeithing and Bo'ness took advantage of the arrangement made by the Department of Health for Scotland for the services of the Edinburgh Port Sanitary Staff, and on fifteen occasions inspections were made and certificates issued at these ports, whilst one hundred and sixty-five certificates were granted at Leith.

Intensive measures are periodically taken by Leith Dock Commission for the destruction of rats in sheds and wharves. Traps and poison are found to be the most practicable methods ashore. Over 10,000 poisoned baits were laid during the year. Rats killed on board ship and in sheds and wharves ashore totalled 1,616. Seventy-four specimens of rats were submitted to bacteriological examination for plague infection with negative results. The high standard of cleanliness maintained throughout the dock area and the rat-proof construction of sheds and wharves are important factors in rat repression and, in this respect, Leith Dock Commission afford traders the maximum protection for goods.

Vermin Repression.—The living quarters on board vessels, particularly those of the crew, are at times found to be infested with bugs and cockroaches. Food stores, galleys, pantries and other places where food and heat are abundant, are the favourite resorts of cockroaches. The eradication of these objectionable pests can be accomplished by efficient fumigation and the maintenance of strict cleanliness.

Sailors' Home.—The Port is equipped with a most excellent home for the accommodation of officers and men of the seafaring population. Conveniently situated at the docks, well designed, affording the maximum of light and ventilation, having clean and comfortable individual bedrooms, generously equipped with modern sanitary conveniences, wash-hand basins and both foot and plunge baths, with, in addition, excellent kitchen, dining and recreation accommodation, this institution, with its moderate charges, is a great social asset and reflects the greatest credit upon the staff and all responsible for its most efficient administration and management.

V.D. Clinics.—Leaflets (printed in four languages) giving full particulars as to the location and facilities of these clinics are left on board vessels arriving in port.

In the execution of the duties of Port Sanitary Inspection, valuable co-operation and assistance have been received from H.M. Collector of Customs, the Leith Dock Commissioners and their staff, the Granton Harbour Officials and the many shipping companies and agents in the Port, to all of whom my best thanks are tendered.

Port Sanitary Inspection—Yearly Statement.
Year 1933.

Ships boarded and inspected	1,073
Re-visits made	682
Nuisances discovered	5,229
Nuisances abated	5,067
Communications written	26
Notices served	47
Verbal warnings	330
Ships fumigated or otherwise treated for vermin by owners	172
Fumigation certificates granted	60
International fumigation certificates granted	32
International Exemption Certificates granted	133
Local fumigation certificates granted	28
Rats exterminated	1,616
Ships provided with rat guards	682
Notices of regulations served upon Masters or Officers in charge	579
V.D. Pamphlets distributed on behalf of the B.S.H. Council	579
Rats submitted for bacteriological examination and Reported Negative	74

Nuisances Discovered.

Dirty floors, tables, decks, etc.	630
Dirty bunks and bedding	1,722
Dirty partitions and ceilings	456
Dirty lockers	637
Foul closets and latrines	211
Foul wash basins	68
Foul sinks	25
Foul baths	7
Choked scuppers	53
Choked and defective latrines	54
Choked and defective wash basins	9
Choked and defective sinks and baths	6
Obnoxious odours	3
Accumulations of garbage, refuse, etc.	161
Dirty fresh water tanks	112
Dirty and offensive bilges	418
Dirty galleys, food stores, pantries, etc.	109
Dirty wash places	68
Dampness in quarters	3
Insufficient light and ventilation	12
Ships without rat guards	92
Presence of rats and mice	90
Presence of cockroaches and beetles	51
Presence of bugs and fleas	72
Presence of flies	12
Miscellaneous	148
Total	5,229

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, Ladies and Gentlemen,

Your obedient Servant,

ALLAN W. RITCHIE, F.R.San.I., F.R.S.E.,
Chief Sanitary Inspector.

NUISANCES AND SANITARY IMPROVEMENTS IN 1933.

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 Cramond.	Totals.
Water-closets :—																								
Water-closets introduced	...	...	...	...	...	...	6	...	1	...	1	1	...	1	...	...	...	...	...	...	69	4	14	97
New apparatus substituted	...	3	...	...	1	2	13	2	3	...	...	2	18	5	5	2	2	3	...	19	7	...	...	87
Improved or repaired	5	2	8	1	2	7	4	3	10	9	15	13	1	12	10	48	2	15	10	9	11	...	2	199
Partitions of W.C. apartments repaired	1	1	...	...	...	...	...	...	4	...	1	2	...	7	2	8	...	...	...	14	...	...	...	40
Water-closets and sinks in a filthy condition and cleansed	4	5	7	1	1	...	3	...	24	...	1	3	...	27	34	97	3	...	1	5	11	...	...	227
Choked water-closets cleared	4	5	...	...	...	...	...	5	3	6	2	16	...	11	16	45	6	5	4	1	6	...	...	135
Water-closet apartments insufficiently lighted and ventilated—improvements effected	1	1	...	...	...	2	6	3	1	...	2	...	...	4	...	...	...	...	...	...	...	...	...	20
New water-closet apartments provided	...	...	...	...	...	...	7	...	...	...	3	...	...	...	...	...	...	...	...	14	4	4	14	46
New bathrooms constructed	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Sinks, Tubs, and Wash-hand Basins :—																								
Sinks introduced	1	2	...	1	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	2	4	1	13	36
Insanitary sinks abolished	...	2	...	...	...	3	...	3	10	15	2	...	...	10	8	20	1	4	6	7	72	1	1	165
Earthenware sinks and tubs substituted	7	1	...	1	2	5	1	4	13	15	2	2	31	26	17	17	4	6	7	5	66	...	...	232
Repairs (woodwork, etc.)	22	3	7	7	4	28	5	6	19	12	5	7	32	27	14	29	6	10	5	16	6	...	1	271
Choked sinks, wash-tubs, etc., cleared	2	4	1	1	...	4	1	1	2	...	2	5	...	9	8	33	1	2	3	1	5	1	1	87
Wash-hand basins renewed or introduced	...	1	...	...	1	1	12	1	1	2	...	...	...	1	1	...	1	...	...	...	...	...	...	22
New sculleries constructed	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Drains :—																								
Choked drains cleared	34	14	9	13	9	78	8	19	19	27	22	23	44	38	50	59	23	58	6	19	13	4	5	594
Choked surface traps cleared	7	1	1	4	3	12	2	...	9	3	1	5	12	13	9	18	13	13	6	6	2	2	5	147
Drains repaired or renewed	...	3	...	4	4	2	...	...	2	...	2	2	2	6	3	13	1	3	1	...	...	...	...	48
Soil pipes repaired or renewed	...	2	2	...	2	2	5	...	2	...	1	1	2	2	10	13	2	3	1	...	4	...	1	55
Sinks, etc., waste pipes repaired or renewed	5	1	...	5	5	...	6	1	...	8	5	5	30	12	6	19	6	18	...	9	6	...	...	147
Rain-water conductors repaired or renewed	5	4	2	3	2	...	1	...	2	...	2	4	6	5	4	14	...	3	1	6	2	1	3	70
Carry Forward	98	55	37	41	36	146	92	51	125	97	69	91	178	216	197	435	71	143	51	133	288	18	60	2,728

NUISANCES AND SANITARY IMPROVEMENTS IN 1933—*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 Cramond.	Totals.
Brought Forward	98	55	37	41	36	146	92	51	125	97	69	91	178	216	197	435	71	143	51	133	288	18	60	2,728
Water Supply :—																								
Cisterns found dirty	3	2	1	...	...	...	1	3	...	...	...	4	...	4	4	2	...	...	...	...	...	...	...	24
Cisterns found without covers	1	1	...	...	3	...	...	...	...	...	1	1	...	2	2	...	7	8	5	3	...	...	...	34
Cisterns repaired or renewed	2	2	2	...	...	...	...	1	2	...	...	3	2	4	...	...	4	19	...	6	...	...	...	47
Branches taken off the main	...	2	...	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...	...	4	1	...	11
Water pipes repaired	5	1	3	2	2	...	...	3	3	4	2	6	4	...	...	11	3	8	1	3	...	...	...	61
Houses temporarily without water supply due to burst pipes, etc.	...	...	9	...	...	...	...	...	...	...	1	4	6	...	...	40	...	23	...	7	...	...	1	91
Repairs to Houses :—																								
Floors, hearths, doors, etc., repaired	3	1	4	...	...	8	2	3	5	5	...	9	...	...	...	10	1	3	4	...	1	...	8	67
Partition walls repaired	23	5	3	4	2	13	...	12	17	10	6	3	13	19	13	26	10	17	7	13	8	...	11	235
Windows and skylights repaired or renewed	31	2	20	2	5	30	...	15	7	39	13	14	8	41	14	17	1	17	4	14	6	...	8	308
Coal bunkers repaired or provided	4	...	...	...	...	...	2	3	...	7	...	1	...	8	...	22	...	5	1	...	3	...	5	61
Grates or ranges repaired or substituted	11	1	2	...	3	9	2	6	9	8	4	11	3	7	6	11	...	3	3	2	...	...	7	108
Wall and ceiling plaster repaired	18	12	2	7	9	16	...	5	32	5	3	12	4	17	16	18	8	40	2	20	5	5	16	272
Defective roofs repaired	4	1	...	4	1	...	1	3	9	1	...	1	2	2	1	9	...	10	1	4	3	3	10	70
Boiler of kitchen range renewed	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...	...	5	10
Nuisances in Houses :—																								
Floors and bedding of houses in a dirty condition and cleansed by tenants	4	9	2	1	1	2	...	1	11	...	6	2	5	33	37	40	1	10	1	2	14	2	2	186
Nuisances due to bad smells in dwelling houses caused by escape of gas, dead vermin, etc.	9	2	7	3	2	2	8	7	5	15	13	2	5	3	1	17	4	5	1	4	3	...	2	120
Smoke in houses due to foul or defective vents	4	3	7	9	4	3	3	7	16	6	4	7	5	16	7	22	10	13	4	1	5	...	...	156
Damp houses remedied or abated	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Houses overcrowded	112	185	31	4	6	84	34	34	43	69	100	210	145	139	169	66	127	264	95	133	16	7	2	2,075
Houses and shops flooded from defects on flats above	7	...	6	6	3	...	1	5	7	7	3	8	4	...	11	11	6	3	...	...	...	...	...	88
Carry Forward	339	284	136	83	78	314	146	159	291	273	226	390	384	511	478	761	255	591	180	345	356	36	137	6,753

NUISANCES AND SANITARY IMPROVEMENTS IN 1933—*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 Cramond.	Totals.
Brought Forward	339	284	136	83	78	314	146	159	291	273	226	390	384	511	478	761	255	591	180	345	356	36	137	6,753
Nuisances in Houses (continued) :—																								
Animals kept in, or in close proximity to dwellings	1	...	...	7	2	1	2	3	4	1	1	5	1	4	1	4	1	6	7	2	...	...	...	53
Houses distempered, papered or painted by—																								
Tenants	14	7	...	1	5	6	1	1	13	3	3	1	5	12	2	53	14	25	...	26	3	...	...	195
Owners	17	1	...	10	12	3	...	5	24	2	...	5	2	14	2	7	6	11	...	12	9	...	...	142
Stairs, Passages, etc. :—																								
Staircases painted	38	50	50	24	38	56	28	80	38	35	27	35	60	46	33	21	73	47	15	64	...	6	8	872
Stairs and passages in a dirty condition and cleansed by tenants	216	67	47	64	39	71	27	64	513	37	62	71	53	88	84	101	35	20	6	28	13	1	1	1,708
Dogs and cats committing nuisance in common stairs and back greens	17	5	8	12	6	13	4	5	11	2	6	5	13	14	16	28	4	6	...	1	2	...	1	179
General :—																								
Premises infested by rats	15	24	13	18	12	24	10	18	13	13	20	16	14	16	11	20	7	17	12	1	13	9	17	333
Premises infested by other vermin	22	56	38	3	1	31	3	10	11	15	20	40	28	35	48	10	25	52	23	37	32	...	...	540
Accumulations of rubbish, garbage and filth removed from areas, roofs, cellars and vacant houses	74	12	33	36	16	12	15	35	206	54	34	64	62	62	46	46	532	834	106	443	6	2	4	2,734
Accumulation of manure near dwellings	7	2	5	9	4	8	9	10	35	...	1	2	10	4	...	15	4	1	1	1	4	4	3	139
Disused cellars cleaned and closed	...	...	1	1	...	1	...	...	7	...	2	1	...	6	2	5	...	14	...	...	...	...	...	40
Tenants casting garbage over windows	24	2	13	22	16	13	7	5	49	19	8	15	3	21	22	65	14	11	4	5	6	4	1	349
Surfacing of courts repaired or renewed	...	...	...	...	1	...	...	...	...	...	...	1	...	2	...	2	3	3	...	1	2	...	...	15
Noise nuisances	...	1	...	...	2	...	2	...	...	1	3	...	...	1	...	...	...	1	...	...	...	...	...	11
Shops cleaned by tenants or owners	...	2	1	3	2	...	...	...	...	...	1	1	2	1	...	7	2	2	1	...	...	...	...	25
Seasonal workers' huts found dirty and cleansed	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	5	5	3	16
Miscellaneous nuisances	142	18	17	4	21	85	25	49	142	65	34	32	38	44	27	11	20	47	8	23	26	25	29	932
Totals	926	531	362	297	255	638	279	444	1357	520	448	684	675	881	772	1159	995	1688	363	989	477	92	204	15,036

SUMMARY.

Complaints by citizens	3,709
,, ,, other Departments	83
Nuisances discovered and reported by District Inspectors	11,244
Total nuisances dealt with by the Department	15,036

Intimations of existence of nuisance served	2,417
Notices to remove nuisances served at the instance of the Local Authority	39
Notices delivered cautioning persons against casting garbage over windows	2,847
Notices served on occupiers failing to take due rotation of stair sweeping and washing	589
Notices served for the cleaning of dirty areas, cellars, etc.	593
Notices and letters served for the white-washing and cleansing of houses	86
Notices and letters served for the removal of accumulation of manure	49
Notices served in connection with defective drains and soil pipes	218
Intimations under the Housing (Scotland) Acts, 1925-1930	735
Letters sent to tenants and owners of shops with regard to cleansing and sanitary provisions	13
Notices served in connection with the painting of common staircases	4,050
Notices served in connection with the cleansing of water cisterns	734
	12,370

VETERINARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, 1, *15th April*, 1934.

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, 1933, 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 1933, 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 attention.

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 807 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, 42 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, 1,880

cows were so examined in the market, representing an average of 36 cows exposed for sale each week. Two cows were ordered out of the Market Byres, one on account of emaciation and the other, injury. Both animals were removed to Gorgie Slaughterhouse and slaughtered at the owner's risk.

Health of Cows, etc.—Apart from tuberculosis, 110 diseased cows were detected in the course of inspections of cattle in registered or exempt premises. The diseases encountered were as follows :—

Mastitis	34
Suppurating conditions of udders and teats	16
Johne's Disease	3
Retained Placenta	13
Psoroptic Mange and Ringworm	23
Tumours	1
Injuries and General Disorders	20
	110

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 15 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, tuberculosis emaciation 3, chronic cough and showing definite clinical symptoms of tuberculosis 4.

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 1933 shows a higher occurrence than has been the average over a period of years. Of a total of 3,248 cows slaughtered, 1,457 or 44·86 per cent. were affected with tuberculosis in some degree. This compares with an average of 42·8 per cent. over the previous five years. In 10·71 per cent. of cases, the disease was advanced and the whole of the carcase and all the viscera were condemned. In 16·54 per cent. tuberculosis affected the viscera and localised areas on the carcase, and in 72·75 per cent., it was confined to one or more of the visceral organs. The importance of the economic side of tuberculosis is illustrated by the figures quoted in relation to meat inspection, where it is shown that tuberculosis was responsible for 86·9 per cent. (by weight) of seizures of cow beef from all causes, and 85·2 per cent. (by weight) of seizures of all classes of beef during 1933.

Number of Cowsheds.—At December, 1933, there were on the register 74 premises in the occupation of milk producers. The number of cowsheds on these premises was 127 and the average number of cows accommodated therein was 2,059.

Two certificates of registration were transferred to new tenants, two new certificates ere granted during the year, and three were cancelled. The number of dairy premises n the occupation of milk producers in the City was thus reduced by one.

At December, 1933, the number of exempted premises was 25, and the number f cows therein 63. These premises are all licensed under the Cattlesheds in Burghs cotland) Act, 1866. In only a few cases is milk sold from these premises. Exemption om registration under the Milk and Dairies (Scotland) Act, continued to be granted n 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 925, have been complied with so far as these articles apply to the premises of milk roducers in the City.

Milk and Dairies (Scotland) Act, 1914 (Sections 13, 14 and 21).—The City airymen continue to observe the terms of Sections 13 and 14 of the Act with regard to e withdrawal from sale of the milk from a diseased cow and notification of the existnce of disease.

The City being entirely a receiving and consuming district no question of taking mples of milk under Section 21 of the Act has arisen.

Milk (Special Designations) Order (Scotland), 1930.—The two producers' cences for the sale of designated milk under this Order have been continued, namely, ne "Grade A" and one "Certified." The licence for the production and sale of rtified milk is held by the Royal Victoria Hospital Tuberculosis Trust, Gracemount arm, Liberton. The average number of cows in the herd is 40, and the production approximately 24,000 gallons, all of which is retailed in the City by the producers. he tuberculin test was applied twice during the year to the dairy herd and to the oung stock belonging to the Trust. One cow reacted to the test and was removed om the herd.

All milks sold in the City under licences granted in terms of the Milk (Special esignations) Order, have been periodically sampled and subjected to bacteriological xamination. During the year, 147 samples of graded milk were thus examined. Of ese, 28 were samples of pasteurised milk and were representative of milk from both censed and non-licensed pasteurisers.

Milk Supply—City Hospitals.—The dairy herd at Colinton Mains Farm belonging the Corporation, has continued the supply of milk to certain of the Hospitals. The rd was subjected to the subcutaneous tuberculin test twice during the year and bercle-free condition has been maintained. The milk was repeatedly sampled ring the year for bacteriological examination and conformed to the bacterial standard r certified milk.

The average number of cows in milk during the year was 80, and the total output o milk for the year was approximately 70,000 gallons. Eight cows in the herd gave a production exceeding 1,300 gallons during the year. Two heifers gave 1,174 gallons in 50 weeks.

Milk Supply—Bangour.—It was reported last year that, at December 31st approximately 25 head of the old dairy stock remained and that a start had been made in the building up of a new herd of tubercle-free animals. In the early months of 1933 the balance of the old herd was disposed of and further purchases of tubercle-free stock were made from time to time during the year. At December 1933 the herd comprised 86 head, including three bulls and about a dozen young heifers which had been transferred from Colinton Mains. The latter will be ready for admission to the milking herd during 1934. The tuberculin test was applied to the whole of the stock in the month of April and again in October. There were no reactors.

The carcases of all animals slaughtered for food in the Abattoir on Bangour Farm have been inspected before issue to the Steward of the Institution. The number of carcases inspected during the year was, Cattle 17, Sheep 97 and Pigs 99.

The Department has continued to provide the clinical services required in connection with the stocks at Colinton Mains, Bangour and Roddinglaw Farms.

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 155 samples of milk as shown below were subjected to bacteriological examination for the purpose of ascertaining their respective hygienic standards.

Certified Milk	60
Grade "A" (Tuberculin Tested) Milk	40
Grade "A" Milk	19
Pasteurised Milk	28
Sterilised Milk	2
Milk for City Hospitals	6
	155

Eight samples of Certified and twelve of Grade "A" milk fell below the standard specified in the Milk (Special Designations) Order. The majority of the defective samples failed in respect of their content of coliform organisms, attributable probably in some degree to the abnormally warm summer weather. These lapses might have been obviated by better conditions of cold storage during transport and prior to sale. The faults were referred to the producers and the Local Authorities concerned with satisfactory results as shown by subsequent test samples.

Only one sample of pasteurised milk failed to conform to the bacterial standard specified in the Milk (Special Designations) Order, and the action necessary to remedy the defect was taken.

The coliform test, though not required by the Milk (Special Designations) Order, was applied to all samples of pasteurised milk and showed the presence of coliform organisms in 1/10th c.c. in 10 samples, equivalent to 35·7 per cent. of those examined.

(2) Milk from Individual Cows in City Byres.—One hundred and three samples were examined for the presence of the tubercle bacillus and other forms of infection. The tubercle bacillus was demonstrated in 8 samples by microscopical examination and in 2 by means of the biological test. Of the remaining samples, it was found that various types of infection (streptococci, staphylococci, and C. pyogenes, etc.) were present in 48.

(3) Bulk Milk Samples subjected to biological test for tuberculosis :—

(Brought forward incomplete at the end of 1932) :—					
	32	Positive	2		
Tested and completed at 31st December, 1933	194	Positive	15	Inconclusive	7
Total . .	226	Positive	17	Inconclusive	7
Remaining under test at 31st December, 1933	25				
Total . .	251				

The inconclusive results are attributable to the death of the experimental animals from intercurrent infection before completion of the test. Excluding inconclusive results, the samples tested and completed showed 7·76 per cent., to be infected with living tubercle bacilli.

The positive results were referred to the local authorities concerned and infection was traced in ten cases, involving the slaughter under the Tuberculosis Order of fifteen cows affected with tuberculosis of the udder. In the remaining seven cases, the source of infection had apparently been removed before the conclusion of the biological test, the negative clinical findings being confirmed by the biological test of check bulk samples from the herds concerned. Similar check samples from herds in which tuberculous animals were found showed that the milk had ceased to be infected after removal of the animals concerned.

In connection with tracing the sources of infection, thirty-one bulk, group and individual samples were submitted to microscopical and biological test in the Department and gave four positive results.

(4) Biological Test of Graded Milks.—Seven samples of Certified, Grade "A" (Tuberculin Tested), Grade "A" and Pasteurised milk were tested with negative results.

(5) Examination of Miscellaneous Materials—

Material.	Number Examined.	Result of Examination.	
Blood (Bovine)	30	*Anthrax*— Positive	6
Blood (Bovine)	157	*B. Abortus infection*— Positive Doubtful	35 21
Blood (Guinea Pig)	16	Positive	13
Blood (Avian)	400	*Bacillary White Diarrhœa*— Positive Doubtful	24 30
Skin scrapings	13	*Mange* (Scheduled Forms)— Positive	0
Expectorate (Cow's)	4	*Tuberculosis*— Positive	2
Diseased organs and materials	54	Tuberculosis B. Abortus infection C. Pyogenes infection Other Pyogenic infections B. Purifaciens infections Neoplasms Johne's Disease Undetermined Coccidiosis	19 17 4 6 2 2 1 2 1
Milk	33	*re* Fitness for use after mastitis *re* Complaints *re* Presence of Acetone *re* Presence of Blood	25 3 2 3
Cattle feeding cake and meals	6	*Anthrax*— Positive	0
Food materials	6	Adulterated or contaminated	6
	719		

(6) Tuberculosis in a Sheep.—A case of tuberculosis in a sheep is recorded in the foregoing table. Lesions were present in the lungs, liver and related lymphatic glands. The tubercle bacillus present in the lesions was typed and proved to be of the bovine variety. A similar case was recorded in each of the years 1926, 1927, and 1931. The rarity of this condition is well illustrated by reference to the numbers of sheep slaughtered in the City abattoirs. During the eight years 1926-33 inclusive, only four cases of tuberculosis were detected out of 1,203,775 sheep slaughtered.

(7) Preparation of Vaccines.—As in previous years, vaccines were prepared for the treatment or prevention of mastitis and certain other diseases in the farm stock.

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. Seventeen cattle, 26 sheep and 5 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 1933 :—

Cattle	46,047
Calves	5,908
Sheep	290,417
Swine	22,586
	364,958

(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 1933 is shown in the following table :—

		Gorgie.		Leith.		Total.	
Cattle	Oxen	25,000		2,807		27,807	
	Bulls	575		46		611	
	Cows	2,539		709		3,248	
	Heifers	1,108		78		1,186	
			29,222		3,640		32,852
Calves			3,646		74		3,720
Sheep			154,243		13,898		168,141
Swine			15,423		1,345		16,768
			202,534		18,957		221,481

The gross total of animals slaughtered is higher by 10,776 than in 1932 and by 26,454 than in 1931. Sheep show the largest increase, but all clases of animals have been consigned for slaughter in larger numbers than in the preceding two years.

(c) **Carcases and Offal condemned in Abattoirs.**—Carcases partially or wholly condemned in the City abattoirs weighed 143·55 tons. To this there falls to be added 107·66 tons (weight estimated) of condemned offal, making a total of approximately 251·21 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. Tuberculosis was responsible for 41·44 per cent. of the number of carcase seizures and for 35·89 per cent. of the number of offal seizures. Comparison between the weight of meat seized on account of tuberculosis and of non-tuberculous disease, shows that tuberculosis was responsible for 85·2 per cent. of all beef seized and destroyed, for 61·8 per cent. of veal and 58·5 per cent. of pork. Details of the seizures are shown in the following tables :—

Number and weight of carcases in the different classes of animals condemned at Abattoirs during 1933 :—

	Totally Condemned.		Partially Condemned.		Total Weight in Lbs.
	Number.	Weight in lbs.	Number.	Weight in lbs.	
Oxen	90	52,367	311	52,415	104,782
Bulls	8	6,219	29	6,078	12,297
Cows	194	104,259	255	43,284	147,543
Heifers	9	3,961	18	2,691	6,652
Calves	22	1,589	19	676	2,265
Sheep	479	18,889	533	11,768	30,657
Swine	92	13,791	79	3,567	17,358
Total	894	201,075	1,244	120,479	321,554

Number of carcases condemned in the different classes of animals slaughtered in Abattoirs during 1933, and causes of condemnation :—

	Cattle.										Sheep.		Swine.		Totals.
	Oxen.		Bulls.		Cows.		Heifers.		Calves.						
	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	
Tuberculosis	68	249	5	23	156	241	7	15	9	13	1	...	52	47	886
Œdema and Emaciation	3	...	...	...	11	...	...	...	4	...	273	193	3	1	488
Traumatism	...	8	...	...	...	5	...	1	...	...	8	23	1	11	57
Septic conditions	3	9	...	1	6	2	...	2	1	1	9	40	3	7	84
Pericarditis	4	...	...	...	...	...	...	...	...	...	...	1	1	...	6
Peritonitis and Enteritis	...	13	1	3	1	4	...	...	2	...	20	12	7	2	65
Pleurisy and Pneumonia	...	16	...	2	...	3	...	...	2	5	19	249	5	10	311
Dead, Moribund and Illbled	9	...	1	...	11	...	2	...	3	...	143	...	11	...	180
Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4
Neoplasms	1	2	...	...	...	...	...	...	...	...	3	12	...	...	18
Actinomycosis and Actinobacillosis	2	14	1	...	...	...	...	...	...	...	...	...	...	...	17
Melanosis	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Swine Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3
Mastitis	...	...	...	...	6	...	...	...	...	...	2	3	1	1	13
Metritis	...	...	...	...	2	...	...	...	...	...	1	...	1	...	4
Johne's Disease	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
	90	311	8	29	194	255	9	18	22	19	479	533	92	79	2,138

Comparison between tuberculous and non-tuberculous diseases as causes of condemnation in carcases of animals slaughtered in Abattoirs during 1933.

By Numbers.		Cattle.						Sheep.	Swine	Total.
		Oxen.	Bulls.	Cows.	Heifers.	Calves.	Total.			
Tuberculosis	Total	68	5	156	7	9	245	1	52	298
	Partial	249	23	241	15	13	541	...	47	588
Total and Partial		317	28	397	22	22	786	1	99	886
Non-tuberculous diseases	Total	22	3	38	2	13	78	478	40	596
	Partial	62	6	14	3	6	91	533	32	656
Total and Partial		84	9	52	5	19	169	1,011	72	1,252

By Weight.	Tuberculosis. (lbs.)	Non-tuberculous Disease. (lbs.)	Percentages tuberculous.
Oxen	87,704	17,078	83·7
Bulls	9,390	2,907	76·4
Cows	128,164	19,379	86·9 } 85·2
Heifers	5,751	901	86·5
Calves	1,391	874	61·8
Swine	10,151	7,207	58·5

In connection with the case of tuberculosis in the sheep which is recorded, it may be observed, in illustration of the rarity of tuberculosis in the sheep, that out of 168,141 sheep passing through the Slaughterhouses in 1933, only one case of tuberculosis was detected. The tubercle bacillus present was of the bovine type.

Number of organs condemned in the different classes of animals at Abattoirs during 1933 (excluding organs of animals totally condemned).

	Cattle.								
	Oxen	Bulls.	Cows.	Heifers.	Calves	Total.	Swine.	Sheep.	Total.
Lungs :—									
Tuberculosis	852	94	1,149	39	40	2,174	194	...	2,368
Other Causes	380	12	73	7	11	483	158	358	999
Hearts :—									
Tuberculosis	1	1	...	...	...	2	...	...	2
Other Causes	8	...	1	...	...	9	1	...	10
Bowels :—									
Tuberculosis	397	43	391	13	3	847	72	...	919
Other Causes	16	1	10	...	...	27	3	1	31
Stomachs :—									
Tuberculosis	48	7	59	1	1	116	26	...	142
Other Causes	116	3	24	3	...	146	3	4	153
Spleens :—									
Tuberculosis	43	6	51	1	1	102	30	...	132
Other Causes	5	...	...	...	...	5	...	2	7
Livers :—									
Tuberculosis	377	31	211	16	24	659	189	...	848
Other Causes	8,285	148	733	38	4	9,208	111	831	10,150
Kidneys :—									
Tuberculosis	68	7	60	3	...	138	...	...	138
Other Causes	38	2	26	2	1	69	4	3	76
Udders :—									
Tuberculosis	...	...	9	...	...	9	...	...	9
Other Causes	...	...	163	...	...	163	1	...	164
Heads and Feet :—									
Tuberculosis	758	67	387	34	...	1,246	768	...	2,014
Other Causes	129	2	10	1	1	143	3	1	147
Total	11,521	424	3,357	158	86	15,546	1,563	1,200	18,309

Percentage incidence of Tuberculosis in animals slaughtered at Abattoirs during 1933

		Per Cent.
Cattle	Oxen	5·83
	Bulls	25·60
	Cows	44·86
	Heifers	6·24
		10·08
Calves		1·61
Swine		5·31

(d) (1) **Wholesale Dead Meat Markets.**—During the year meat (fresh and frozen) estimated to be equivalent to 64,777 carcases 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.

(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 1933 :—

Butchers' Shops	1,112
Provision Shops	1,881
Fishmongers' Shops	417
Fruiterers' Shops	806
Meat Sales and Wholesale Meat Shops	2,420
Live Stock Sales and Markets	258
Street Hawkers	9
Hide and Skin Merchants	401
Fish Markets	309
Restaurants	314
	7,927

Inspectors are instructed to observe and to report on the sanitary condition of food premises and on the conditions under which foodstuffs are stored. In sixteen cases occupiers of food premises were called upon to carry out cleansing or repairs, and twenty-eight complaints relating to the sanitary condition of lavatories on food premises were passed to the Chief Sanitary Inspector for his attention.

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. During the year, twenty-six warnings were issued to butchers for negligence in complying with the terms of the Order.

Numbers and weights of foodstuffs seized in markets, shops, and other premises in the City, during 1933 :—

	No.	Weight in lbs.
Beef	107	23,176
Mutton	82	3,123½
Pork	63	779¾
Veal	22	560½
Poultry and Game	29	1,764
Edible Offal	25	2,317½
Fruit and Vegetables	28	8,581
Provisions	17	962¾
Fish	20	15,314½
Total	393	56,579½

(3) Carcases, etc., submitted for Inspection in terms of Article 10 of the Public Health (Meat) Regulations (Scotland), 1932.—This regulation places an obligation on the consignee of a carcase 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 carcases from beyond the City boundaries. During the year, notification was received in respect of 1,250 carcases and 49 parts of carcases. After inspection, 60 carcases, 25 parts of carcases, and 5 heads were seized and destroyed.

Proceedings were taken against the consignor of a parcel of meat, which, on arrival, was found to be badly affected with tuberculosis. The consignor was convicted and a fine of £20 was imposed.

(4) Approval of Meat Storage.—Article 15 of the Public Health (Meat) Regulations (Scotland), 1932 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. Eight certificates were granted by the Local Authority and, of these, 2 were cancelled in the course of the year. The storage accommodation provided is in each case satisfactory.

PORT FOOD INSPECTION.

The usual supervision has been maintained as to the condition and soundness of foodstuffs landed at the Port of Leith during 1933. 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 1933 :—

Country of Origin.	Foodstuffs.	Number of Consignments.	
Holland	Bacon	154	
	Canned Meats	9	
	Fruit	323	
	Lard	9	
	Oysters	25	
	Provisions	780	
	Vegetables	709	
	Yeast	103	
		——	2,112
Denmark	Bacon	104	
	Canned Meats	58	
	Casings	11	
	Fish	9	
	Fruit	3	
	Hams	35	
	Lard	27	
	Pigs' Feet	44	
	Pigs' Heads	1	
	Beef in Brine	1	
	Provisions	527	
	Vegetables	48	
	Sausages	10	
	Poultry	3	
	Yeast	53	
		——	934
U.S.A.	Canned Meats	4	
	Cereals	16	
	Fruit	6	
	Lard	5	
	Provisions	10	
		—	41
Canada	Canned Meats	24	
	Cereals	70	
	Hams	19	
	Lard	24	
	Provisions	51	
	Bacon	25	
	Fruit	19	
	Pig Carcases	2	
		——	234
	Carry forward		3,321

Country of Origin.	Foodstuffs.	Number of Consignments.	
	Brought forward . . .		3,321
Iceland	Fish (fresh)	5	
	Fish (salted)	54	
		—	59
Belgium	Fruit	73	
	Provisions	45	
	Vegetables	51	
		—	169
Germany	Fruit	27	
	Provisions	74	
	Vegetables	11	
	Yeast	1	
		—	113
South America . . .	Cereals		8
Argentine	Cereals		5
Roumania	Cereals		6
Greece	Fruits		1
Australia	Cereals		1
Egypt	Vegetables		1
Malay	Fruits		1
			3,685

Imported Foodstuffs condemned or rejected and re-exported at the Port of Leith during 1933 :—

	Weight in lbs.	Weight in lbs.
Fruit :—		
Pears	1,040	
Sultanas	756	
		1,796
Vegetables :—		
Carrots		19,385
Bacon		193
Butter		896
Lard		12,998
Flour		709,940
Wheat		168,000
Fish		560
		913,768

	Tons.	Cwts.	Lbs.
Equal to	407	18	72

Summary, showing total diseased and unsound foodstuffs dealt with by the Department in the City, during 1933 :—

	Weight in lbs.
At Abattoirs—Carcases	321,554
Offal (weight estimated)	241,149½
In Shops, Warehouses, etc.	56,579½
At the Port of Leith	913,768
	1,533,051

	Tons.	Cwts.	Lbs.
Equal to	684	7	107

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 carcases, 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.

In addition to numerous Orders controlling the movement of animals in foot-and-mouth disease infected areas, the Ministry of Agriculture issued the following new general Orders during the year :—

(1) Animals (Landing from Ireland, Channel Islands and Isle of Man) Order of 1933.
(2) Importation of Canadian Cattle Order of 1933.
These Orders consolidated and amended the existing Orders controlling the importation of Irish, Channel Islands and Canadian cattle.
(3) Animals (Importation) (Amendment) Order of 1933.
(4) Sheep (Movement into Scotland and Northumberland) Order of 1933.
This Order controlled the movement of sheep into Scotland, with the object of preventing the introduction of sheep scab from England.

Anthrax.—Six cases of anthrax occurred in the City during the year. These outbreaks occurred in association with a crop of cases in the districts of the surrounding county local authorities, and were presumably attributable to a consignment of infected feeding stuffs. The City outbreaks were confined to two premises on one of which four cases occurred at intervals of a few days. Samples of the different food materials from the premises were subjected to a bacteriological test for anthrax infection and proved negative in all cases. This is in keeping with general experience. Even when circumstances appear clearly to incriminate a particular article of food, infection is apparently localised to small areas in a large bulk consignment, and, only in very rare cases, and by the merest chance, is infection located by the ordinary methods of examination.

Thirty deaths of bovine animals on farms (including the six cases of anthrax above referred to) were reported and investigated in terms of the Edinburgh and Midlothian Order of 1910, the main object of which is to eliminate the risk of a case of anthrax escaping detection. The anthrax infected carcases were cremated and the remaining 24, which were negative so far as notifiable disease was concerned, were disposed of by the owners to the Knackery. The cause of death was similarly investigated in respect of 115 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 Slaughter-houses.

Foot and Mouth Disease.—Eighty-seven outbreaks of foot-and-mouth disease occurred in Great Britain during 1933, entailing the slaughter of 7,806 animals, as compared with 25 outbreaks and 2,659 animals slaughtered in 1932. The movement of animals within the City was not restricted or regulated by any of the Orders issued by the Ministry of Agriculture in relation to these outbreaks. The last outbreak of foot-and-mouth disease in the City occurred in 1922.

The following Orders, which are more or less complementary to the principal foot-and-mouth disease Orders, have continued in operation, and the observations and visits necessary for their enforcement have been made :—Foreign Hay and Straw Order ; Foot-and-Mouth Disease (Packing Materials) Order ; Foot-and-Mouth Disease (Boiling of Animal Foodstuffs) Order ; Importation of Carcases (Prohibition) Order ; Importation of Meat, etc. (Wrapping Materials) Order ; and Movement of Animals (Records) Order.

The Wrapping Materials Order provides that three red threads shall be woven together at intervals of twelve inches in the warp of jute, hemp, etc., used as wrapping cloth for meat and offal imported from certain countries. The subsequent use of these wrappers for the packing of feeding stuffs, bedding, etc., intended for, or to be used in connection with animals, is forbidden. It was observed during the year that, in a considerable number of consignments of bacon, the dye used for the red threads of the wrappers was not colour fast and that, in consequence, the contained bacon was badly and sometimes deeply stained. Some of the red threads were subjected to chemical analysis and the dye was shown to be non-poisonous, but the staining was very prejudicial to the marketability of the bacon. The attention of the Ministry of Agriculture was directed to the matter and steps were taken to ensure the use only of colour fast dyes for the red threads of the wrappers. For some months no evidence of staining from this source has been observed.

In connection with the Movements of Animals (Records) Order, a check of the record books of stockowners in the City was again made with the assistance of the Police. The check revealed a satisfactory improvement as compared with the preceding year.

Parasitic Mange.—Three 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 15th July to 31st August, and again during the period 1st September to 30th November, have remained in force. In terms of the Regulations, 19,140 sheep were dipped under supervision during the year.

In last annual report it was stated that representations had been made to the Ministry of Agriculture by the Association of County Councils in Scotland, the National Farmers' Union of Scotland, and the Scottish Chamber of Agriculture, urging the Ministry to exercise pressure on English local authorities to revoke their regulations requiring the double-dipping of sheep imported into England from Scotland. It was pointed out that the disease position in Scotland did not justify the discrimination on the part of English local authorities against Scottish sheep and that the continuance of the regulations seriously hampered trade. In a circular letter dated 27th March 1933, the Ministry stated that, as a result of the representation which they had made, a number of the English local authorities had agreed to revoke their regulations provided protective regulations were made against the reintroduction of disease into Scotland from other districts. In order to secure uniformity, the Ministry issued the Sheep (Movement into Scotland and Northumberland) Order of 1933, which became operative on 1st May, and required the double-dipping of all sheep (unless intended for immediate slaughter) moved into Scotland from England (with the exception of the County of Northumberland). The movement of sheep in the course of trade is mainly from North to South, trade and movement in the opposite direction is of only relatively small dimensions. Before the Order became operative, sheep scab had been introduced into the counties of Renfrew and Stirling through the agency of sheep imported from the North Riding of Yorkshire. As a result, the record of Scotland, so far as the mainland is concerned, with 17 outbreaks of sheep scab in 1933, appears in a worse light than it has done for a number of years past. The disease still simmers in the Outer Hebrides with 20 outbreaks during the year, and the movement of sheep from these islands to the mainland is subject to preventive control. It is noted with satisfaction that, during the past twelve to eighteen months, the Ministry has concentrated active measures against sheep scab in those districts of England and Wales in which there is a high incidence of sheep scab, in which it appears to be constantly present and from which infection escapes at frequent intervals by movement of sheep to establish new centres of disease in other districts. It is reasonable to expect that the concentrated activity of the Ministry will materially improve the position in respect of sheep scab, the continued prevalence of which is a reflection on the management of flock owners in the areas involved.

Swine Fever.—One report of suspected swine fever was received during the year. The premises were under restrictions for two months and repeated investigations were made, but the Ministry did not confirm the existence of swine fever. The carcases of 42 suspected animals which died or were slaughtered by the owner, were destroyed by the Local Authority.

Regulation of Movement of Swine Order.—Eleven 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-one animals were dealt with under the Tuberculosis Order of 1925. Six animals which were detected in the Live Stock Market were slaughtered by the owners at their own risk. The 21 animals were grouped as follows :—(1) Tuberculosis of the udder, 10 ; (2) Tuberculous emaciation, 7 ; and Chronic cough and showing definite clinical evidence of tuberculosis, 4. Tuberculosis of the udder constituted 47·6 per cent. of the cases dealt with in the City. This figure compares with 20·6 per cent. of milk and udder cases out of the total number of cows and heifers slaughtered in Great Britain under the Order in 1932. The 15 animals slaughtered by the Local Authority were classified for compensation into—Advanced 12 (80 per cent.) and Not advanced 3 (20 per cent.).

The aggregate value of the fifteen animals was £135, and the compensation paid amounted to £52 10s., an average of £3 10s. 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 £13 2s. 6d. The gross salvage realised was £21 15s. 1d. After deducting outlays a deficit of £3 15s. 8d. 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 30 persons for breach of the Order or the Regulations. Of these, 1 case was dropped, 2 persons were admonished, and 27 were fined sums varying from 2s. 6d. upwards.

Importation of Animals.—(1) 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 slaughter-house 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. 22,548 Irish cattle and 162 Canadian cattle were received at Gorgie Market under licence from ports, and 1,549 licences were issued authorising movement of these cattle from the Market. 6,273 Irish and 161 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. 1,574 Irish and 463 Canadian cattle were licensed from the Markets or ports to Gorgie Abattoir.

(2) Dogs and Cats.—The Importation of Dogs and Cats 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. Forty-five performing animals were received in the City under the Ministry's licence. The attention of the Ministry was directed to the movement out of the City of a number of performing animals without the owner having previously obtained the consent and the approval of the Ministry.

During the year 20 canine and feline animals (including 2 puppies born in quarantine) were received and detained in the City in Quarantine. They were maintained under observation and police supervision.

(3) Horses.—Four consignments, comprising 57 horses, were landed at Leith Docks from Iceland and Holland. 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 this 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, 161 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.

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, Holland and Germany, and of various prepared meat products to France, Switzerland and the United States.

Sea 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 211, Cattle 173, Sheep 35,309, Pigs 78. 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 horse-drawn 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. 4,784 vehicles were cleansed and disinfected at Gorgie Markets during the year, an average of 92 vehicles per week. 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 £5, for leaving the Market after the discharge of animals without cleansing and disinfecting his vehicle.

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 Marts 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 £5.
Control of Dogs Order	10	Fined 2s. 6d.
	13	Fined 5s.
	1	Fined 7s. 6d.
	3	Fined 10s.
	2	Admonished
	1	Dropped.

Protection of Animals (Scotland) Act, 1912.—During the year, 46 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 seventy-nine visits of attendance were made to the stud under the control of the Lighting and Cleansing Department, and 16 horses were subjected to inspection and examination prior to consideration of purchase for the Lighting and Cleansing Department.

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.