

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

Contributors

Dundee (Scotland). City Council.

Publication/Creation

1933

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CITY OF DUNDEE

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

YEAR ENDING 31st DECEMBER, 1933

DUNDEE

PRINTED BY WILLIAM H. COX, 21 NORTH TAY STREET

CITY OF DUNDEE

REPORT

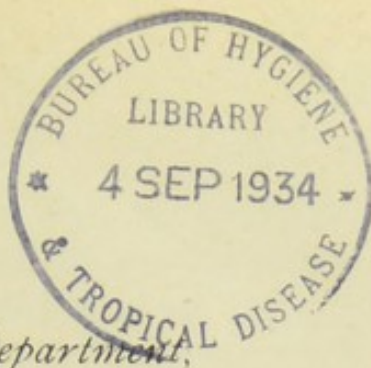
MEDICAL OFFICER OF HEALTH

YEAR ENDING 31st DECEMBER 1933

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Public Health Department,

Dundee, August, 1934.

The Lord Provost, Magistrates and
Town Councillors of the City of Dundee.

Gentlemen,

I have the honour to submit the Annual Report
of the Public Health Department for the year 1933

The opportunity is taken to thank all my colleagues
in the Department and all members of the staff for
their loyal co-operation and assistance throughout
the year.

I am, Gentlemen,

Your obedient Servant,

W. R. Burgess.

Medical Officer of Health

Summary of Vital Statistics.

The following is a summary of the principal statistics for the years 1931, 1932 and 1933 :—

	1931.	1932.	1933.
Population	176,006	176,833	177,177
Number of Deaths (corrected)	2,445	2,444	2,577
Death-rate per 1,000 Population (corrected)	13·9	13·8	14·5
Deaths of Infants under 1 year	317	236	304
Infantile Death-rate per 1,000 Births	92	72	98
Marriage-rate per 1,000 Population	7·2	7·3	7·9
Number of Births registered (corrected)	3,431	3,276	3,099
Birth-rate per 1,000 Population	19·5	18·5	17·5
Illegitimate Birth-rate per 100 Births	7·4	6·9	8·2
Number of Deaths from Pulmonary Tuberculosis	128	107	102
Death-rate per 1,000 from Pulmonary Tuberculosis	·73	·61	·58
Death-rate from all forms of Tuberculosis	·95	·78	·84
Death-rate from the Principal Epidemic Diseases	·84	·68	1·08
Deaths from Enteric Fever	2	0	1

Annual Report—1933

It has been stated in previous annual reports that the health of a community cannot be accurately measured by vital statistics, although they may be used as a helpful guide to progress. Attention has been directed to the need for examining the figures for a period of years and not those for any one year, if we are to get a fair idea of the tendency towards health. The findings of such an examination are certainly encouraging. The principal death-rates are reaching a more satisfactory level, and certain diseases are being brought under control. The vital statistics cannot yet be said to be as low as we would wish but, with one or two exceptions, they are showing a steady decline. The outstanding exceptions are the maternal mortality rate and the malignant disease death-rate. The former may not be increasing, but so far we have failed to bring about any very definite improvement. The latter, unfortunately, tends to move in an upward direction. It provides the most urgent single health problem of the present day. While generally the figures are showing a steady fall, we cannot be certain that the means employed to safeguard health and which we think have been mainly responsible for the decline in the rates are the best available. We cannot be sure that the results obtained have any satisfactory relation to the expenditure, both public and private, incurred. This question is being investigated by a Departmental Committee appointed by the Secretary of State for Scotland and the report of this enquiry should form interesting reading. A rapidly growing service like the public health service should be the subject of fairly frequent review, if efficiency is to be maintained.

Reasonably satisfactory vital statistics may tend to produce a self-satisfied apathy, and it is a good thing to keep in mind that these so-called "vital" statistics relate mostly to deaths. Their improvement means that a smaller proportion of individuals exposed to risk have died during the period under review than during an earlier similar period. That is, of course, very satisfactory, but vital statistics do not provide us with much information regarding the amount of sickness which prevails in the community. And,

after all, that is the important matter. The existence of sickness in the family affects not only the health of that family but its economics and its happiness. In turn, the community and the State are similarly affected. There are numerous elaborate and perhaps somewhat impressive tables in the statistical section of this report, but I am quite sure that anyone who may take the trouble to study them will not be able to form any clear idea as to the volume of sickness which occurred in the city of Dundee last year. The reason is that, except for certain notifiable diseases, we have no information regarding the prevalence of sickness and cannot therefore prepare statistics on the subject. Perhaps statistics are better left alone in this connection. It may be more impressive to state that in Dundee, a city with an estimated population of 177,500, there are to be found on any one day in the year some 2,000 persons ill enough to require indoor treatment in various institutions, voluntary, private and municipal; that last year there were some 300,000 attendances at various out-patient departments, clinics, etc., and that if each of the, say, 100 doctors in private or panel practice in the city saw on the average 20 patients per day, there were last year over 730,000 consultations between such doctors and their patients. These figures are admittedly insufficient, but they at least show the magnitude of the problem and raise many questions in the minds of those engaged in preventive work. One doubts if the whole organisation is so designed as to deal adequately with the vast amount of sickness; if the resources of medical science are immediately available to everyone who requires them; if sufficient emphasis is laid on the true preventive measures and too much on the various "schemes," child welfare and the like; if the general medical practitioner has yet found his true place in the organisation; if contact between the doctor and the "healthy" individual is sufficiently close; if departures from normal health are recognised at a sufficiently early stage. These are a few of the questions which one would like to have closely enquired into. They mainly concern the medical health services, but there are many others of the environmental sort which are equally important.

The various death-rates in Dundee for the year 1933 showed a tendency upwards as compared with the previous year. As was predicted in the last annual report, the unusually low infantile death-rate of 72 per 1,000 births in 1932 was not maintained last year, when the figure rose to 98. These fluctuations from year to year are often accidental, and it is only by studying the general trend over a number of years that any significant change in one direction or another can be determined. It is satisfactory to note,

therefore, that on examining the figures for infant mortality since the beginning of the present century there has been a very definite downward tendency. There is no evidence that any particular age period under one year more than another has contributed towards the increased rate. Whooping cough, which was rather prevalent during the late spring, pneumonia and cerebro-spinal meningitis may be particularly mentioned as infectious diseases partly responsible for the higher mortality, but the greatest part of the increase is undoubtedly accounted for by the group of congenital causes for which it is difficult to give any convincing explanation. The infantile death-rate for Scotland as a whole in 1933 was 81 and for the larger burghs 89 per 1,000 births, so that Dundee's rate of 98 does not bear such favourable comparison as in the previous year. It is hoped, however, and there is some reason to believe, that the present year will show another decline unless some exceptional outbreak of infectious disease occurs to upset calculations.

The tuberculosis death-rate shows a slight increase at .84 per 1,000 population, as compared with .78 in 1932. This increase is entirely accounted for by the non-pulmonary forms, the rate for pulmonary tuberculosis actually having fallen. It is doubtful whether the increase has any statistical significance.

The general death-rate was 14.5 per 1,000 population, as compared with 13.8 in 1932 and 13.9 in 1931. It is, however, lower than any rate recorded prior to 1931.

The birth-rate was 17.5 per 1,000 as compared with 18.5 per 1,000 in 1932, and 19.5 in 1931.

The administration of these services has been dealt with fairly fully in recent annual reports, and it is not proposed to say much about them this year. The actual work done in each of the various sections is described in detail in the special reports by the responsible medical officers which are included in this volume. Since the Local Government (Scotland) Act of 1929 came into operation, it has been our endeavour to try to blend these services as much as possible and to get rid of the so-called "schemes," which, in our view, tend to pigeon-hole the work. To a very large extent, the object aimed at has been achieved. But there is still a good deal to do. No special development occurred during the year, which calls for comment. Those engaged in carrying out the work of the various services are gradually becoming accustomed to the idea, as also are these members of the public using the services.

Maternity
Services,
Pre-School and
School Medical
Services,
Infectious
Disease
Control,
Outdoor
Nursing
Services,
Tuberculosis,
Venereal
Diseases.

No important changes have occurred in the various clinics, etc. The extended principal centre is proving satisfactory, as also are the new branch centres at Isles Lane and Ferry Road. The branch centre at St Margaret's, Ancrum Road, is being reconstructed. This was necessary as the premises are to be used as a central feeding centre for schools, as well as for child welfare work.

The various day nurseries have been somewhat busier. The Lochee Day Nursery, after being closed for fourteen months, reopened on 2nd January, 1933.

The Dundee Nursery School transferred to its newly-built premises in May of the present year. An annexe to this Nursery School serves as a day nursery for infants. On the whole, the city is now fairly well served by day nurseries, every district except Broughty Ferry having one within reasonable reach.

The Dundee Infant Hospital and the Armitstead Convalescent Home have continued their excellent work on behalf of child health in the city. These are voluntary institutions working in close contact with the health department.

Hospital Policy.

The Council have continued their consideration of the hospital services question. Attention has been directed mainly to the reorganisation of the various institutions under their own management, and the stage has not yet been reached when complete co-operation with the University and with other hospitals is possible. One is inclined to think that there is a tendency to emphasise too much the "hospital services" or the "hospital scheme" as if these services or that scheme were a movement apart from the general health movement. The effect might easily be that hospitals would tend to become a service by themselves not properly linked up with the other medical and allied services. There can be no doubt that the hospitals of the future must all fit in to a general health scheme. That does not mean that voluntary hospitals will cease to be voluntary hospitals. It is perfectly possible for these institutions to retain their old character and traditions and at the same time serve the public even more efficiently by becoming a unit in an improved health organisation. At the moment, there is believed to be a shortage of hospital beds and the natural tendency is to provide more beds. Before doing so, it is essential to be sure that the beds actually available are being used to the best advantage. This question has been given careful

consideration by Dundee Town Council, who have satisfied themselves that by administering Maryfield Hospital under the Local Government (Scotland) Act, 1929, instead of under the Poor Law (Scotland) Act, 1845, better use can be made of the beds in that Institution. It is no longer open only to persons whose names are on the poor roll, but is open to the public generally.

While formerly at certain times of the year the hospital was not in full use because it was only open to one section of the population, now the beds can be, and are, used to the utmost. The result is that without the addition of a single bed, the hospital accommodation available to the community has been definitely increased. That point is mentioned as an illustration of the action which may be taken other than actual building. It may be possible to act in other directions. A vigorous campaign against slums is now in operation, and if brought to a successful issue, it is fair to assume that treatment at home will become possible for a number of persons, who, under present conditions, would have to be treated in hospital. An extension of the facilities for home nursing might also have a very definite influence on the demand for hospital treatment, and I am quite sure that were the National Health Insurance Scheme extended to cover wives and dependents, and all persons in similar economic circumstances, the hospital problem would no longer be such a formidable one. Reference has been made more than once in these reports to the fact that for financial reasons women and children delay calling in the services of a doctor until the last moment. Were medical attention easily available, earlier treatment would in many cases prevent the hospital stage being reached. Again, if certain additional facilities were made available to medical practitioners to assist them in diagnosis and treatment, the home treatment of a larger number of persons would become possible, or at any rate the average stay in hospital would be shortened. Such facilities might include laboratory assistance, consultation with specialists, X-Ray reports, etc. It is satisfactory to know that a Departmental Committee is at present considering the whole question of the health services in Scotland, and until their report is available, it is wise to proceed cautiously so that any step which may be taken will not prejudice future action. That does not mean that we are to do nothing unless we are of opinion that the various institutions and schemes cannot be improved upon. Such is not the case in Dundee. Nevertheless, care is taken not to take any action which will prejudice the general scheme no matter what form it may take.

Reference has been made to the fact that Maryfield Hospital has been removed from the category of poor law hospitals. It is now a general hospital open to the public. While that is so it has to fulfil certain statutory obligations and in that respect differs from the voluntary hospital. The scheme under Section 27 (1) (4) of the Local Government (Scotland) Act, 1929, which was detailed in the Annual Report for 1932, has been approved of by the Department of Health for Scotland and came into operation on 15th November, 1933. That scheme is the instrument which transferred the administration of the hospital from the Poor Law (Scotland) Act, 1845, to the Local Government (Scotland) Act of 1929. The transfer took place smoothly and since that date, fuller use has been made of the Institution. During the winter, there was a very extensive outbreak of scarlet fever, and the accommodation at King's Cross Hospital was fully taxed. We were able, however, to admit patients suffering from pneumonia and erysipelas to Maryfield Hospital, thereby relieving a certain number of beds in King's Cross Hospital for the use of scarlet fever patients. Such an arrangement was not possible formerly, and in this way, a somewhat troublesome problem was comparatively easily solved.

The Council having completed action under Section 27 of the Local Government (Scotland) Act, 1929, turned their attention to Section 28, which gives them power to recover contributions towards the cost of maintenance in Maryfield Hospital from a patient or any person legally liable to maintain that patient. The City Chamberlain was asked to report on the subject and the principal recommendations in his very full statement are as follows :—

In the following recommendations, it has been found convenient to classify the patients in groups according to the procedure to be adopted in recovering contributions.

1.—PATIENTS ADMITTED THROUGH THE PUBLIC ASSISTANCE DEPARTMENT AND HAVING A SETTLEMENT IN DUNDEE.

This group will be a large one, as Maryfield Hospital will still be utilised to a greater extent than any other hospital for carrying out the Town Council's statutory duty of providing hospital treatment for all poor persons who require it.

The Medical Officer of Health will be responsible for initiating the collection of contributions from the patients or their relatives, etc., either by means of accounts rendered monthly, or at the end of a period

of treatment, and payable to the City Collector, or, as will probably be more convenient in many cases by the collection of weekly payments at the Public Health Office. The sums so collected will be paid over to the City Collector at regular intervals to be credited to Maryfield Hospital. Where Navy, Army or Air Force pensions are available for the maintenance of patients, the Medical Officer of Health will lodge claims with the appropriate Department.

2.—PATIENTS ADMITTED DIRECTLY THROUGH THE PUBLIC HEALTH DEPARTMENT.

For some time to come, this is likely to be a very small group. Accounts will be rendered by the Public Health Department, or weekly payments will be arranged as for Group 1.

3.—OLD AGE AND CONTRIBUTORY PENSIONERS.

A considerable number of patients in Group 1, and perhaps a few in Group 2, will fall into this category. At present, pensions payable to patients in Maryfield Hospital are collected on behalf of the patients and paid into bank by the Public Assistance Department for the credit of Maryfield Hospital. The responsibility of collecting and accounting for these pensions will be transferred to the Medical Officer of Health.

Under the present arrangement, the collection of the pensions is carried out by the staff of the East House, and it is suggested that this procedure be continued on behalf of the Public Health Department, the Medical Officer of Health to account to the City Collector for all pensions collected.

Any pensions collected on behalf of "other district" patients (Group 7) will be credited to the Public Assistance Account, and a list supplied to the Director of Public Assistance so that he may credit local authorities concerned.

4.—TUBERCULOUS EX-SERVICE PATIENTS.

It is understood that a few such patients may, from time to time, be under treatment in Maryfield Hospital. The Medical Officer of Health will submit a six-monthly claim on the prescribed form to the Ministry of Pensions. This is regularly done for patients in Ashludie Sanatorium and King's Cross Hospital, and the claim for the period ended 16th May, 1933, included for the first time some patients in Maryfield Hospital.

5.—OTHER LOCAL AUTHORITY PATIENTS ADMITTED BY SPECIAL ARRANGEMENT.

Where patients, not being poor law patients, are admitted to Maryfield Hospital by special arrangement between the Medical Officer of Health and the Local Authorities concerned, accounts, payable to the City Collector, will be rendered to the Local Authorities by the Public

Health Department. A similar arrangement is already in force regarding patients in the other Public Health institutions of the City.

6.—PATIENTS CHARGEABLE TO OTHER BRANCHES OF THE PUBLIC HEALTH SERVICE.

Patients in Maryfield Hospital, suffering from tuberculosis or venereal disease, the cost of whose maintenance is properly chargeable against another branch of the Public Health Account, will be charged for by means of accounts rendered against the appropriate branch, as is already done in respect of some patients in King's Cross Hospital.

7.—POOR LAW PATIENTS CHARGEABLE TO OTHER LOCAL AUTHORITIES.

The Director of Public Assistance will continue the present practice of rendering accounts against the appropriate authorities in respect of the patients for whom liability has been admitted.

Although such patients will really be boarded by the Public Health Department, on behalf of the Public Assistance Department, it will not be necessary for accounts to be rendered between these Departments. The Director of Public Assistance can continue, from the information available to him, to recover the cost of maintenance, and credit the amount recovered to the Public Health Department. The true position as between the two departments will be made clear by suitable adjusting entries at the close of the financial year.

BASIS OF ASSESSMENT OF CONTRIBUTIONS

Paragraph 5 (b) of the Town Council's scheme for administration of functions relating to Public Health, refers the recovery of expenses under Section 28 of the Act to the Public Health Committee. It is assumed that the Medical Officer of Health will exercise this function, having regard to the information supplied to him relative to each patient, and subject to the reference to the Public Health Committee of doubtful or disputed cases. In this connection, reference may be made to the City Chamberlain's report on the draft Reorganisation Scheme, dated 30th December, 1932, in which there was pointed out the desirability of assessing contributions as moderately as possible, so that the cost of treatment might not prevent the poorer members of the community from taking full advantage of the facilities offered.

These recommendations were agreed to by the Council, and now the Public Health Department are responsible for collecting contributions towards the cost of maintenance of all patients except those poor law patients who have a settlement outwith the city and the cost of whose maintenance is chargeable to other local authorities.

The matter of collecting contributions towards the cost of maintenance of patients in Maryfield Hospital represents another marked difference between it and the voluntary hospitals. The voluntary hospital treats all patients, rich and poor alike, free of charge, although the patients may be invited to give donations. The patients in Maryfield Hospital, although belonging mainly to the poorest sections of the community, are charged for their maintenance, the charge made being adjusted according to their economic circumstances. A necessary preliminary to full co-operation must be the consideration of this matter, so that whatever system is adopted, hospitals—both voluntary and official—will be on the same footing. It is somewhat anomalous that those least able to pay have to meet part, or the whole, of the cost of their maintenance while others more able to do so, are treated free or by payment of a voluntary contribution.

Apart from the question of hospital policy, the buildings and equipment at Maryfield sadly need attention. A report, covering some essential preliminary alterations, was generally approved of, and is in the hand of the City Architect, who is preparing plans, costs, etc. The nurses carry out their duties under exceedingly difficult circumstances. As the nurse-patient ratio is a very low one, and as many of the patients are in a more or less helpless condition, the nurses' task is not an enviable one. These and other matters will, I hope, receive the attention they need in the near future.

The staffing of Maryfield Hospital is very low numerically. This applies to the nursing staff and also to the medical staff—both visiting and resident. The residential accommodation is fully occupied and for that reason, the number of resident nurses and medical officers cannot be added to. In connection with the medical staff, it might be mentioned that the British Medical Association recommend as a standard for hospitals one visiting consultant for every 25 beds, and one resident medical officer for every 50 beds. Maryfield Hospital has a whole time medical officer and two visiting consultants for 324 beds, i.e. : 1 for 108 beds, while it has two resident medical officers, or 1 to 162 beds. These conditions make the work of running the hospital extremely difficult.

The position in the other hospitals of the Department is pretty much the same as last year. The provision of a new kitchen

at Westgreen has been agreed to by the Council, and approved by the General Board of Control. No decision has been arrived at regarding institutional accommodation for mental defectives, except that the Council have decided not to provide a separate institution for their own use. The argument for the provision of certain institutions on a regional basis is sound, and especially so in the case of those used for accommodation of mental defectives.

Infectious Disease.

The infectious diseases showed a marked increase during the year 1933. Altogether 6,475 notifications and intimations were received as compared with 5,698 in 1932, and 4,749 in 1931. An epidemic of scarlet fever accounted for 1901 cases compared with 605 cases in the previous year. There was also a definite increase in the number of cases of chickenpox—1,061 in 1933 against 823 in 1932. Whooping cough also showed a marked increase from 239 cases in 1932 to 893 in 1933. The number of intimations of measles fell from 2,005 in 1932 to 564 in 1933. Most of the other infections remained normal. The death-rate from the principal epidemic diseases was 1.08 per 1,000 in 1933, as compared with .68 in 1932, and .84 in 1931.

Some comments on the infectious diseases are made in the following paragraphs, and complete figures are given in the statistical section of the report.

Measles

564 intimations were made in the course of the year, and of this number 484 related to children of school age. The disease prevailed during the first six months of the year, when 549 cases were intimated. Only 15 cases were intimated in the second half of the year. The type of the disease was very mild, and 17 cases received hospital treatment. There were no deaths.

Whooping Cough.

The incidence of this disease showed a marked increase in 1933 as compared with 1932. The intimations received numbered 893 and 239 respectively. As in the case of measles most of the cases (758) occurred during the first six months. 137 cases were admitted to hospital. There were 35 deaths from the disease.

Primary Pneumonia.

791 cases were notified during 1933 as compared with 851 in 1932. Hospital accommodation was provided for 567 cases (72%)—308 cases in King's Cross Hospital, 241 cases in Dundee Royal Infirmary, and 18 cases in Maryfield Hospital. Many of the cases treated in Maryfield Hospital were diverted from King's Cross Hospital on account of the accommodation there being required for scarlet fever.

117 cases were notified during 1933, against 27 in 1932. In January and February 105 cases were notified, and the remaining 12 cases were notified spasmodically during the subsequent months. 29 cases received hospital treatment—21 in Dundee Royal Infirmary and 8 in King's Cross Hospital. Only 20 cases occurred in children under 15 years of age. The death-rate for the city during 1933 was very much inflated as a consequence of this disease. There were 112 deaths as compared with 24 in 1932 and 44 in 1931. Influenzal
Pneumonia

The increased prevalence of scarlet fever reported last year continued during 1933 and reached epidemic proportions in the late summer. The number of cases for the year was 1,901, a record figure. The type of the disease was fairly mild, although towards the end of the year, and during the beginning of the present year several cases of a more serious type were under treatment. Of the 1,901 cases notified, 583, or 30%, were children under five years of age; 1,109, or 58%, were of school age (5 to 15); and 209, or 11%, were adolescents and adults. Scarlet
Fever.

The number of cases admitted to hospital during the year was 1,153, or almost 61%, of the total notifications. In the following table the numbers of admissions are shown according to the size and the population of the house:—

Rooms in House	Home Treated Cases	Hosp. Treated Cases	No. of Persons in House.												
			1	2	3	4	5	6	7	8	9	10	11	12	13
1	18		—	—	8	6	1	1	1	—	—	—	—	—	—
		141	1	7	28	34	29	21	11	10	—	—	—	—	—
2	346		—	7	82	131	65	48	5	4	2	2	—	—	—
		722	—	5	52	148	176	139	92	57	24	18	10	1	—
3	238		—	3	38	76	54	23	18	9	14	2	1	—	—
		201	—	1	6	32	35	44	34	24	8	11	5	1	—
4 & over	146		—	3	13	30	38	23	21	14	2	—	1	—	1
		49	—	1	1	5	8	4	11	4	4	4	1	4	2
Institutions		40	—	—	—	—	—	—	—	—	—	—	—	—	—

On account of the pressure on the hospital accommodation, it was decided in mild uncomplicated cases to restrict the period of hospital isolation to 21 days from the onset of illness. After this period expired, patients were discharged to their own homes where they were kept under observation by the outdoor nursing staff or the family doctors. With very few exceptions, all the cases made straightforward progress. During the year there were only 42 return cases, and these mostly occurred where the first case had been kept in hospital for a protracted period. There were 13

deaths. In the King's Cross Hospital section of this report, the senior resident medical officer records his experience of the epidemic.

In the course of the year, 52 children in Duncarse Home were Dick-tested, and of these 22 gave positive reactions showing susceptibility to scarlet fever. Those 22 children were immunised with scarlet fever toxin, and it is gratifying to record that no case of scarlet fever occurred in the Home. Of the 22 children who had received prophylactic treatment, 17 who were still resident were again Dick-tested from four to six months after the last injection, and four were found to be still positive. These four received another dose of toxin, but have not again been re-tested.

The following is a synopsis of the prophylactic work done in the course of the year in connection with scarlet fever :—

Age Group	Dick Positive	Dick Positive & Immunised	Dick Negative	Total
Under 5 years,	7	41	41	89
5—15 years,	7	45	89	141
Over 15 years,	1	10	36	47
Totals,	15	96	166	277

Smallpox and Chickenpox.

The city remained free of smallpox in 1933, but as usual a number of contacts with the disease on board ships were notified to the department, and these were kept under observation.

Chickenpox ceased to be a notifiable disease from 1st January, 1933, under the Public Health (Infectious Diseases) Regulations (Scotland), 1932. Nevertheless 1,061 cases were intimated to the department in the course of the year through doctors, schoolmasters, health visitors, etc., and all these cases were visited.

Diphtheria.

368 notifications of diphtheria were notified during 1933 against 372 in 1932. There were only 10 deaths, which represents a case mortality of 2.7%—a very satisfactory figure, and a record one for Dundee. Nine of the deaths occurred in King's Cross Hospital, and one child died at home before removal to hospital could be effected. The certified causes of the deaths were as follows :—Diphtheria, 7 cases (including one case that died at home); laryngeal diphtheria, 2 cases—one of which was complicated with broncho-pneumonia; post diphtheritic paralysis: cardiac failure, 1 case. The average stay in hospital of the fatal cases

varied from two hours to eleven days, and in all of them there was very considerable delay in administering the specific remedy.

819,000 units of diphtheria antitoxin were issued in the course of the year to medical practitioners for the treatment and prophylaxis of the disease.

In connection with active immunisation against diphtheria, 172 persons were dealt with. Of this number 126 were Schick negative; 40 were Schick positive, and received three immunising doses; and 6 children were immunised without previous Schick testing. In addition to the total of 172 persons, there were 13 defaulters—3 who failed to have the Schick test read; 4 who were Schick positive and refused further treatment; 1 who was Schick positive and only received one immunising dose; and 5 who were Schick positive and only received two immunising doses.

No case of diphtheria notified during 1933 was known to have been previously immunised against the disease.

There were 29 cases of enteric fever notified during 1933, as ^{Enteric Fever} compared with 5 cases in 1932. The diagnosis in 26 cases was confirmed bacteriologically—22 cases suffered from para-typhoid fever, 3 from typhoid fever, and 1 from both typhoid and para-typhoid fevers.

The source of infection in these cases could not be definitely established, but in four cases there was a history of the patients drinking water from streams, and perhaps on account of the exceptionally hot and dry summer these may have become polluted with organic matter. In three cases the only suspicious source of infection was the consumption of periwinkles.

There were 13 notifications of this disease during 1933, and all ^{Cerebro-spinal} cases received treatment in King's Cross Hospital. There were ^{Fever.} 11 deaths—8 under 1 year; 1 between 1 and 5 years; 1 between 5 and 10 years; and 1 adult.

252 cases were notified, and of these 130 received hospital ^{Erysipelas} treatment. 9 deaths occurred in the course of the year.

14 cases of dysentery were notified in 1933 — 13 cases of ^{Dysentery} bacillary dysentery, and 1 of amoebic dysentery. 6 cases were removed to hospital and 8 cases were treated at home. There were no deaths,

The diagnosis in the hospital treated cases, and in 6 of the home treated cases was confirmed bacteriologically.

Six of the cases occurred in institutions; 6 cases occurred in two families that were related. The source of infection in these two series of cases could not be definitely established.

Other
Infectious
Diseases.

Two cases of encephalitis lethargica were notified. One of these patients was admitted from outwith the city boundary to a local nursing home for treatment.

Three cases of poliomyelitis were notified.

Ophthalmia
Neonatorum.

In the course of the year 53 notifications were received. 15 patients received hospital treatment—10 in King's Cross Hospital and 5 in Dundee Royal Infirmary. There was only 1 severe case. Smears were taken in 42 cases with the following results:—1 was positive for gonococci; 7 were suspicious; and 34 were negative. In no case was there any appreciable loss of vision.

Puerperal Fever
and Puerperal
Pyrexia.

71 notifications of these conditions were received in 1933, as compared with 59 in the previous year. 29 cases were notified as puerperal fever and 42 as puerperal pyrexia. Of the total number of notifications 64 cases received institutional treatment.

The senior resident medical officer of King's Cross Hospital reports in the usual way on the cases that were under his treatment during 1933, and for further details reference should be made to that section of the report.

Diabetes and
Supply of
Insulin.

At the end of 1932 there were 32 patients receiving insulin in terms of the Public Health (Scotland) Amendment Act, 1925. During 1933 there were three new applications, and these were granted. In the course of the year two patients died; two ceased using insulin; and two patients attained an age entitling them to receive insulin under the National Health Insurance Act. There were thus 29 patients receiving insulin from the department at 31st December, 1933.

The total amount of insulin issued was 1,332 bottles of 5 ccs. (100 units each) and 278 bottles of 5 ccs. (200 units each). In several cases of necessity syringes and needles were also issued.

The sum of £28 2s was collected from patients who were considered able to contribute towards the cost of the insulin supplied.

The Chief Sanitary Inspector in his report, included in this ^{Housing.} volume, gives a very complete record of the advances achieved in the housing of the citizens during the year 1933. The report covers an immense amount of painstaking work on the part of Mr Mitchell and his staff, and reflects the zeal and enthusiasm they have brought to bear on the subject. To repeat what has already been so admirably set forth would be merely redundant.

During the year 1933, 731 new houses were provided in the city, 606 of these by the Corporation and 125 by private enterprise. The initial portion of the Fleming Trust Housing Scheme having been completed in the previous year, no additional houses from this source were available to swell the total. It appears also that 109 further houses were made available for occupancy as the result of the conversion of shops into dwelling-houses, the reconstruction or re-opening of houses and the sub-division of large houses. To offset these figures, 599 houses were closed or demolished or otherwise ceased to be dwellings. There are, therefore, 241 more houses available for human habitation than in the previous year.

As I have said in previous reports, however, I regard as of greater importance than any large increase in the number of houses, the fact that some hundreds of dwellings which had become a menace to the health of the community have been replaced by as many of modern construction, so situated as to receive their share of sunshine and fresh air and affording possibilities for healthy living.

In September, 1933, I represented a large number of areas situated in Wards 1, 2, 4, 5, and 6 for clearance. The Council thereafter passed a clearance resolution declaring 57 of these areas to be clearance areas. The majority of these areas are included in the densely populated part of the city west of Hilltown, between Constitution Street on the north and Bell Street on the south, where some very bad housing conditions prevail.

The reconstruction and modernising of existing houses on a larger scale than at present has been suggested as an additional mode of attack on the housing problem, but in Dundee this would probably be only of limited application. It would be unwise to resort to this method unless the modernised property were to have a life reasonably comparable to that of a new house and would conform to the bye-laws in operation for new dwelling-houses.

Cases of overcrowding are constantly being brought to our notice, but the means at our disposal of dealing with them are somewhat limited. Overcrowding as a problem is for the most part coincident with insanitary housing conditions, and could therefore be abated to a considerable extent by closure and demolition of slum dwellings and the re-housing of the occupants in houses of appropriate size. Overcrowding does, however, occur in dwellings which are by no means unfit for human habitation, and it is in these circumstances that further powers are necessary.

At the present time, the Improvement Area under the 1930 Act offers one method of tackling the problem in selected parts of the city. A local authority may declare an area to be an improvement area where they are satisfied that the housing conditions in that area are injurious or dangerous to the health of the inhabitants by reason of the disrepair or sanitary defects of dwelling-houses therein and also by reason either of overcrowding in the area or of the bad arrangement of the houses or of the narrowness or bad arrangements of the streets, and that those conditions can be effectively remedied, without the demolition of all the buildings in the area, by taking two or more of the following steps:—(1) the execution of works on, or the demolition or closing of those dwelling-houses which are unfit for human habitation; (2) the demolition by the local authority after purchase of buildings consisting partly of dwelling-houses which are unfit for human habitation and cannot at a reasonable expense be rendered so fit; (3) the purchase by the local authority of land for opening out the area and, if any buildings on that land have not previously been demolished, the demolition of those buildings so far as is necessary; (4) the abatement of overcrowding in the area.

The Government contributes a unit grant not only in respect of the persons re-housed from houses demolished or closed but also for the excess of persons over the standard displaced from overcrowded but otherwise good houses. The authority must enforce bye-laws for preventing and abating overcrowding, but these apply only within the limits of the Improvement Area.

The Dundee Town Council has not yet passed an improvement resolution. The area in Blackness Road represented in May, 1931, for this purpose has since been dealt with otherwise. In the present year (i.e., 1934) two further areas have been so represented, one at Whorterbank, Lochee, and the other in and around John Street, but no decision has yet been reached by the Council.

The absence of any accepted standard of overcrowding requires to be remedied. Probably the most comprehensive one at present is that suggested in the draft bye-laws for Improvement Areas issued by the Department of Health for Scotland, as it provides not only for a fixed number of persons per room, but also regulates the floor space per occupant and insists on sex separation over ten years of age, except in the case of husband and wife. In any new statute which may be introduced to deal with overcrowding, I am definitely of the opinion that the child under 10 or even under 5 years should, except in the matter of sex separation, be subject to the same standards as the adult for, after all, one of the main evils of overcrowding is increased liability to spread of infection, and surely the young child is even more likely to suffer in this respect than the older person.

It has been suggested in some quarters, and I am inclined to agree, that the present procedure in dealing with unhealthy areas is unnecessarily complicated, and that this might in some measure be overcome by making it obligatory for a local authority to take only *one* or more of the steps mentioned above with regard to improvement areas. By some such arrangement the machinery for dealing with the present clearance area and improvement area would be one and the same, but the means taken to remedy the situation would vary according to the circumstances. At the same time, overcrowding could be attacked as an independent problem.

It has been stated more than once at the Housing Committee that the Public Health Department are too quick in reporting uninhabitable houses and unhealthy areas. Suggestions have been made that the medical officer of health should cease making official representations until a larger number of new houses had been completed to serve as alternative accommodation. It is certainly the case that the provision of a large number of new houses is essential to the solution to the housing problem, but it seems to me to be important that members of the Council should have fairly exact information regarding the number of unfit homes and their situation in the city. The speed with which these unhealthy dwellings and areas is dealt with is a matter for the Council and not for the official. In any case, the medical officer of health is bound by statute to report houses which, in his opinion, are unfit for human habitation and areas which he thinks should be dealt with by clearance or improvement. Section 36 of the Housing (Scotland) Act, 1930, reads as follows:—

"The medical officer of health of a local authority shall make an official representation to the authority whenever he is of opinion that any dwelling-house in their district is unfit for human habitation, or that any area in their district is an area which should be dealt with either as a clearance area or as an improvement area."

Food Supply.

Details of the food samples examined and inspections made are contained in the report of the Chief Sanitary Inspector.

No recognised outbreaks of food-poisoning occurred during the year, although a few suspicious cases of illness were reported which proved on investigation to be due to other causes.

The year's work under the Public Health (Meat) Regulations (Scotland), 1932, is analysed in the tables submitted by the Superintendent of the Slaughterhouse and included in the statistical section of this report.

The milk supply of the city has as usual received particular attention. For information regarding the routine investigations carried out, reference should be made to the reports of the Chief Sanitary Inspector and the Veterinary Surgeon. During the year, 77 samples of milk taken in the course of distribution were bacteriologically examined by Professor Tulloch. An excessive number of micro-organisms usually indicates that the milk has become contaminated during production or distribution, and where such occurs the fact is brought to the notice of the dairyman concerned in order that he may take the necessary steps to prevent the recurrence of the complaint. Of the 77 samples taken, 48 were sold as ordinary sweet milk, 14 as Pasteurised, 8 as Grade A (Tuberculin Tested) and 7 as Certified Milk. Of the 15 samples of Certified and Grade A (T.T) milk examined, one showed an excessive *b. coli* content, while one actually yielded tubercle bacilli. The necessary action was taken in each case. Two of the 14 samples of Pasteurised milk were unsatisfactory according to the official standards. In the case of 48 samples of ordinary sweet milk—it must be remembered, of course, that some of this has been pasteurised although not sold under that designation—28 (58%) might be deemed bacteriologically clean since they conformed to the standards of *b. coli* and total bacterial count laid down for Grade A milk, 10 (21%) were of doubtful quality, while

10 (21%) were definitely unsatisfactory. Of 26 specimens of ordinary milk examined for tubercle bacilli, 2 gave positive results. There is therefore no improvement to report in the cleanliness of the undesignated milk sold in the city, rather is the reverse the case as evidenced by the increased percentage showing excessive contamination. On the other hand, the standard reached by the Certified and Grade A (Tuberculin Tested) milks is remarkably good on the whole, showing what can be done with proper care and under the best conditions.

There was in 1933 a slight increase in the number of bacteriological examinations carried out on behalf of the department by Professor Tulloch at University College. The total for the year was 10,387, as compared with 9,980 in 1932. Professor Tulloch's report is included elsewhere in this volume, and, as usual, will be found well worthy of study. No special comment is necessary except to express once again our warm appreciation of the valuable services rendered by him and his staff during the year.

Bacteriological
Laboratory
Services.

Full details of the shipping activities at the Port of Dundee during the year 1933 and of the routine sanitary inspection of ships will be found on reference to the report of the Chief Sanitary Inspector and to Tables XXXVII., XXXVIII., and XXXIX.

Port Sanitary
Administra-
tion.

A feature of the year under review was the absence of infectious disease on board ships in the Port. A number of cases of venereal disease were reported, and several of these received treatment at the Dundee Centre.

During the year, 100 vessels arrived from infected ports abroad, 13 direct and 87 coastwise. Since 1st May, 1933, when the new Port Sanitary Regulations came into operation, all such ships, whether arriving direct or coastwise, have been boarded on arrival by a medical officer who makes the necessary enquiries as to the health conditions on board and carries out such inspections and medical examinations as are appropriate to the circumstances. In all, 70 ships were medically inspected, but no cases of infectious disease and only one of bodily infestation with lice were discovered.

No deratisation certificates were issued under the Regulations, but 21 exemption certificates were granted.

In May, 1933, the Port Sanitary Regulations (Scotland), 1933, came into operation to replace the Cholera, Yellow Fever and Plague Regulations of 1907, the Public Health (Deratisation of Ships) Regulations (Scotland), 1929, and the Public Health (Port Administration Infectious Diseases) Regulations (Scotland), 1930. These new Regulations, in addition to consolidating in one single code practically the whole of the law relating to the sanitary control of shipping in ports, include also provisions for carrying into effect certain additional obligations assumed by the government under the International Sanitary Convention of Paris, 1926. The aim of the Regulations is uniformity of procedure at all ports which will afford maximum security against the importation of infectious disease with minimum hindrance to trade and shipping.

Brief mention may be made of some of the changes brought about as a result of the new Regulations. The Town Council as Port Local Authority is required to establish, with the concurrence of the Customs and Harbour Authorities, mooring-stations both within and outside the docks where ships having or suspected of having on board infectious disease or arriving from unhealthy ports abroad may be detained and isolated pending medical inspection and the application of any necessary preventive measures. The old quarantine station in the centre of the River Tay, opposite Harecraig, was agreed upon as the outer mooring station, but it was not found practicable to designate any particular part of the docks as an inner station, and it was ultimately decided that the recognised mooring-station for any ship should be its ordinary place of mooring, discharge or loading.

Special measures are now prescribed to be taken where cholera, plague, yellow fever, smallpox or typhus fever is present or suspected on board ships in port instead of, as heretofore, in the case of the first mentioned three diseases only.

At the suggestion of the Department of Health for Scotland, a local exemption from detention and isolation was made by the Medical Officer of Health in the case of infections other than the above-mentioned, where such detention would normally be unnecessary, and also in the case of ships from infected ports which had already been medically inspected in this country.

Under the new Regulations a medical officer must inspect on arrival all ships arriving from foreign ports infected with cholera, yellow fever, plague, smallpox or typhus fever as well as ships on which any of these diseases has occurred or been suspected. This inspection is necessary whether or not the ship has already called at another port in this country. The result has been to increase very considerably the number of visits paid to ships by medical officers of this department.

In order to facilitate the receipt of messages relating to shipping and to bring Dundee into line with other ports in Great Britain, the telegraphic address " Portelth " has been adopted by the department.

Very little difficulty has been experienced in the administration of the Regulations, and in this regard one must acknowledge the able assistance given by the Sanitary Inspector and his staff and the ready co-operation of customs officers, pilots and ships' officers.

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TABLE I.

AGE and SEX DISTRIBUTION of POPULATION, 1933.

Population (estimated by Registrar-General), 177,177.

Percentage of Males to total population (Census, 1931)	...	44.9%
" " Females " " " "	...	55.1%
Estimated Sex Distribution for 1933—Males	...	79,552
Females	...	97,625

Age Groups.	Percentage to total at all ages (Census 1931).		Estimated Age and Sex Distribution for 1933.		
	Males.	Females.	Males.	Females.	Both Sexes.
0-5	9.7	7.7	7,717	7,517	15,234
5-10	10.2	8.5	8,114	8,298	16,412
10-15	8.9	7.3	7,080	7,127	14,207
15-25	18.1	17.2	14,399	16,791	31,190
25-35	15.2	15.8	12,092	15,425	27,517
35-45	11.9	13.2	9,467	12,886	22,353
45-55	10.7	11.8	8,512	11,520	20,032
55-65	9.1	9.9	7,239	9,665	16,904
65-75	4.8	6.1	3,818	5,955	9,773
75-85	1.3	2.2	1,034	2,148	3,182
85 and over	.1	.3	80	293	373
All Ages	100.0	100.0	79,552	97,625	177,177

TABLE II.

Estimated Population in various Wards, 1933.

WARD.	Population (Census 1931).	Percentage to total Population (Census 1931).	Estimated Population for 1933.
I. ...	16,846	9.6	17,009
II. ...	11,698	6.7	11,871
III. ...	16,499	9.4	16,655
IV. ...	17,428	9.9	17,541
V. ...	24,720	14.1	24,982
VI. ...	17,240	9.8	17,363
VII. ...	22,355	12.7	22,501
VIII. ...	18,975	10.8	19,135
IX. ...	19,092	10.9	19,312
X. and XI.	10,732	6.1	10,808
Totals	175,585	100.0	177,177

TABLE III.

Return Showing the Causes of Death (Corrected for Transfers) at the Different Age periods during 1933 :—

CAUSE OF DEATH.	ALL AGES.		AGE.										85 & Over	
	Total.	Males.	Females.	—1	1—5	5—10	10—15	15—25	25—35	35—45	45—55	55—65		65—75	75—Over
Typhoid Fever (including Paratyphoid)	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	13	6	7	...	6	...	2	1	1	1	...	...	...	...
Whooping Cough	35	11	24	14	21	...	...	...	...	...	...	...	...	...
Diphtheria	10	5	5	2	3	1	1	...	1	...	...	...	...	...
Influenza	112	47	65	3	4	1	2	11	10	20	10	25	21	5
Cerebro-Spinal Fever	11	4	7	8	1	...	...	1	...	...	...	...	...	...
Other Epidemic Diseases	10	4	6	...	1	...	...	1	...	1	2	4	...	1
Tuberculosis of Respiratory System	102	52	50	1	...	5	22	28	13	17	10	3	1	...
Other Tuberculous Diseases	46	24	22	5	2	6	7	5	2	1	2	...	...	...
Cancer, Malignant Disease	321	142	179	...	...	...	...	6	17	45	97	112	41	3
Diabetes Mellitus	18	3	15	...	...	...	...	...	2	...	3	10	2	1
Diseases of Nervous System	302	134	168	11	3	4	4	4	14	17	66	83	84	11
Diseases of Circulatory System	471	249	222	...	1	4	5	11	17	32	90	167	120	24
Bronchitis	151	64	87	9	1	1	1	...	4	12	20	49	43	11
Pneumonia (all forms)	230	112	118	62	53	3	4	10	12	17	23	21	17	3
Other Respiratory Diseases	22	8	14	1	...	...	1	1	...	2	4	6	5	2
Diarrhoea, etc. (all ages)	36	18	18	23	5	...	...	...	...	...	3	1	2	...
Appendicitis	17	9	8	...	1	...	3	2	1	...	2	2	1	...
Other Digestive Diseases	77	41	36	5	3	...	4	4	8	9	19	13	11	1
Acute and Chronic Nephritis	70	28	42	1	1	...	1	6	3	13	16	17	12	...
Other Diseases of Genito-Urinary System	27	18	9	...	1	1	1	...	3	1	9	5	4	2
Puerperal Sepsis	9	...	9	...	...	...	3	3	3	...	...	...	...	...
Other Puerperal Causes	15	...	15	...	...	...	6	2	6	1	...	...	...	...
Congenital Debility, Premature Birth, Malformations, etc.	153	93	60	149	2	1	...	...	...	...	...	...	...	...
Old Age	113	41	72	...	...	...	...	...	...	...	...	19	59	35
Violent Deaths	113	65	48	4	2	1	8	7	13	19	21	16	11	...
All other Causes	92	46	46	7	3	6	4	6	5	14	16	18	9	2
All Causes	2577	1225	1352	304	129	36	80	109	135	222	413	571	443	101

TABLE IV.

Death Rates at various age-periods (from all causes)
each year.

1929-1933.

Ages. Periods.	1929		1930		1931		1932		1933	
	No. of Deaths.	Death Rate.	No. of Deaths.	Death Rate.	No. of Deaths.	Death Rate.	No. of Deaths.	Death Rate.	No. of Deaths.	Death Rate
All ages	2670	16.0	2661	16.0	2445	13.9	2444	13.8	2577	14.5
0- 5 years	513	35.2	572	39.4	437	28.9	367	24.1	433	28.4
5-10 ..	35	2.3	45	3.0	44	2.7	37	2.3	36	2.2
10-15 ..	24	1.5	24	1.5	17	1.2	23	1.6	34	2.4
15-25 ..	104	3.3	101	3.2	91	2.9	77	2.5	80	2.6
25-35 ..	121	5.0	98	4.0	125	4.6	102	3.7	109	4.0
35-45 ..	167	7.8	166	7.7	127	5.7	145	6.5	135	6.0
45-55 ..	229	11.5	229	11.5	212	10.7	198	9.9	222	11.1
55-65 ..	407	29.7	387	28.4	371	22.1	404	23.9	413	24.4
65-75 ..	565	75.7	551	74.1	526	54.2	569	58.3	571	58.4
75-85 ..	414	171.5	412	171.3	394	124.6	415	130.7	443	139.2
85 and over	91	350.0	76	293.4	101	273.0	107	288.4	101	270.8

TABLE V.

Death Rate (from all causes) each month during the years

1929-1933.

(From Registrar General's monthly returns.)

Month.	1929	1930	1931	1932	1933
January ...	21.7	16.6	17.4	13.1	29.0
February ..	31.2	17.2	17.0	15.2	23.1
March ...	17.3	21.2	20.7	15.5	14.9
April... ..	15.1	20.3	17.9	17.0	12.3
May	14.9	18.3	15.2	14.6	12.5
June... ..	12.6	13.2	12.5	13.3	11.7
July	12.1	14.0	10.8	11.4	9.7
August ...	10.6	12.7	10.8	12.3	10.5
September ...	11.3	11.9	10.4	12.4	13.2
October ...	13.6	12.3	9.7	12.5	12.5
November ...	13.5	16.9	14.1	13.2	11.3
December ...	12.5	16.4	15.2	15.3	14.0

TABLE VI.

Death-rate (from all causes) in various Wards each year since 1920.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.
1920	15.8	16.2	16.7	16.9	15.1	13.6	18.1	14.6	15.2	14.1	10.2
1921	15.8	15.2	16.5	15.2	15.3	13.8	17.4	14.2	16.9	13.5	12.8
1922	16.7	16.0	17.0	18.1	15.5	14.4	18.1	15.0	18.1	15.3	14.0
1923	14.7	15.0	14.0	14.8	14.0	12.8	16.4	15.0	15.4	14.3	12.1
1924	16.4	15.7	16.6	17.2	14.8	13.5	18.6	16.5	17.6	16.6	13.4
1925	16.7	17.8	15.3	18.4	15.9	15.3	16.8	15.2	17.6	18.6	12.8
1926	14.8	15.7	15.5	16.7	14.0	12.5	14.8	14.5	15.5	14.1	13.2
1927	16.9	16.9	17.9	19.4	15.7	15.2	17.6	16.3	16.5	18.0	12.8
1928	15.1	16.6	15.2	17.3	13.0	13.9	13.6	14.8	14.0	15.8	11.3
1929	16.0	16.1	15.7	17.8	14.2	13.6	14.4	16.1	16.9	16.1	12.9
1930	16.0	17.3	14.0	16.2	13.0	15.3	16.4	16.1	16.1	16.3	12.8
1931	13.9	12.4	15.6	13.5	14.1	13.2	14.1	12.7	14.2	14.7	11.2
1932	13.8	12.7	14.4	12.6	12.9	12.6	15.5	11.7	15.8	14.6	13.1
1933	14.5	11.8	13.6	14.7	13.6	13.6	15.1	14.7	14.8	14.7	13.1

TABLE VII.

Birth-rate in various Wards each year since 1920.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.
1920	27.4	29.3	27.4	29.3	24.6	26.7	28.9	28.0	30.1	27.0	21.0
1921	26.5	27.9	27.7	25.2	25.1	26.8	29.3	24.9	32.3	24.1	17.8
1922	24.6	27.2	24.6	24.6	22.5	21.1	27.5	24.6	28.3	25.1	19.2
1923	24.6	27.7	24.6	26.0	21.8	22.3	27.7	25.8	28.5	24.0	13.6
1924	22.6	23.1	21.8	25.5	20.8	21.3	24.7	20.1	26.9	23.7	14.0
1925	21.8	23.3	19.9	22.2	21.7	20.2	24.1	22.1	25.0	22.1	14.4
1926	21.9	24.7	23.2	26.5	19.6	18.9	25.1	20.3	24.2	23.4	10.9
1927	20.4	24.6	20.6	25.0	18.1	18.5	22.4	20.1	22.2	18.9	11.6
1928	20.3	25.5	19.4	23.1	18.2	18.3	22.0	20.6	21.9	18.9	15.1
1929	20.9	25.3	17.6	25.0	16.7	20.3	22.9	20.0	23.7	21.6	12.9
1930	21.1	25.6	18.4	24.2	18.7	21.5	21.6	20.8	21.4	22.0	14.0
1931	19.5	21.0	15.4	22.6	18.3	17.2	23.5	15.8	22.5	22.1	15.0
1932	18.5	18.3	17.1	23.2	15.5	18.5	23.1	17.2	18.6	18.6	13.2
1933	17.5	17.9	16.4	20.2	14.9	17.2	20.0	18.7	17.1	18.2	10.9

TABLE VIII.

Infantile Death-rate (per 1,000 births) in various Wards each year since 1920.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.
1920	131	131	153	150	142	141	150	87	131	133	52
1921	114	130	124	103	101	109	130	131	114	96	99
1922	109	81	101	136	121	109	115	99	125	98	76
1923	98	89	79	121	76	119	121	78	88	92	74
1924	120	104	144	137	121	112	133	108	96	136	71
1925	126	156	128	162	124	118	119	85	150	123	57
1926	103	114	75	110	94	96	100	100	132	93	66
1927	138	121	160	127	137	139	175	135	140	130	62
1928	102	93	126	82	91	108	96	79	111	127	65
1929	102	91	101	116	80	124	80	101	119	87	86
1930	113	101	101	117	109	92	135	124	113	135	60
1931	92	87	94	86	75	75	113	88	112	116	19
1932	72	52	54	65	44	63	100	70	101	89	42
1933	98	92	123	101	76	116	121	81	85	88	51

TABLE IX.

Death-rate in various Wards each year since 1920 from principal Epidemic Diseases.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11
1920	1.05	1.15	.90	1.18	.96	.93	1.95	.78	.89	1.09	.34
1921	1.09	1.00	1.15	1.04	.90	.93	1.56	1.37	1.24	1.04	.37
1922	.80	1.09	.72	.66	.67	.95	1.08	.89	.84	.43	.54
1923	1.17	1.65	.97	1.03	.77	1.00	1.48	1.29	1.75	1.12	.36
1924	1.69	1.51	2.42	1.93	1.54	1.48	2.67	1.45	1.59	1.71	.36
1925	1.70	1.58	1.60	2.49	1.27	.57	.90	.82	1.21	.37	.27
1926	.79	.96	.72	1.24	.79	1.60	1.69	1.82	2.21	1.70	.45
1927	1.43	2.16	1.25	2.32	1.45	1.13	1.44	1.19	.93	1.78	.54
1928	.65	1.08	.55	.67	.47	.79	.66	.43	.93	.47	.09
1929	.38	.35	.40	.57	.37	.36	.46	.11	.48	.38	.09
1930	.78	.63	.41	.95	.64	.63	1.03	.39	1.56	.97	.18
*1931	.84	.89	.76	.48	.75	.56	1.28	.31	1.37	1.46	.47
*1932	.68	.47	.68	.42	.69	.68	.98	.45	1.05	.83	.46
*1933	1.08	.94	1.26	1.80	1.14	.92	1.15	.98	.52	1.14	1.30

*Norg.—Figures are for 18 Infectious Diseases (excluding Infantile Diarrhoea).

TABLE X.

Pulmonary Tuberculosis Death-rate in various Wards each year since 1920.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11
1920	.99	.90	1.35	1.29	.81	.81	1.21	.88	.93	.86	.51
1921	1.00	1.12	1.23	1.04	.99	.80	1.38	.85	1.13	.74	.56
1922	.98	.54	1.12	.95	.87	1.17	1.18	.72	1.16	.92	.63
1923	.98	1.24	1.05	1.15	.82	.69	1.08	.89	1.27	.93	.45
1924	.85	1.30	.56	.54	.92	.65	1.13	1.00	.95	.88	.45
1925	.87	.89	.80	1.12	.74	.80	1.12	.66	.79	1.06	.55
1926	.81	.96	.79	.87	.32	.93	.56	.77	.95	1.17	.54
1927	.89	1.35	.56	1.10	.57	.96	.77	.76	.78	1.20	.45
1928	.80	.74	.47	.98	1.09	1.00	.66	.65	.83	.63	.54
1929	.78	.56	.81	.94	.64	.54	.91	.62	1.07	1.08	.55
1930	.76	1.05	.73	.70	.48	.90	.46	1.18	.91	.70	.09
1931	.73	.53	.68	.79	.69	.64	.81	.98	.79	.68	.28
1932	.61	.65	.68	.54	.63	.60	.40	.31	1.36	.52	.09
1933	.58	.29	.59	.48	.63	.60	.63	.35	1.10	.52	.46

TABLE XI.

Tuberculosis (all forms) Death-rate in various Wards each year since 1920.

Year.	Whole	W A R D S.									
	City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11
1920	1.37	1.02	1.57	1.63	1.05	1.21	1.95	1.09	1.38	1.37	.68
1921	1.35	1.62	1.81	1.60	1.30	.98	1.68	1.31	1.40	1.04	.65
1922	1.37	.82	1.44	1.31	1.43	1.51	1.80	1.00	1.63	1.36	.63
1923	1.43	1.65	1.46	1.45	1.29	1.18	1.71	1.34	1.86	1.32	.64
1924	1.23	1.51	.80	1.33	1.18	1.04	1.64	1.40	1.48	1.07	.54
1925	1.22	1.37	1.12	1.37	1.11	.98	1.41	1.10	1.37	1.38	.82
1926	1.12	1.43	1.19	1.18	.53	1.19	.73	1.21	1.26	1.54	.63
1927	1.16	1.69	1.02	1.40	.67	1.26	1.05	.87	1.04	1.38	.54
1928	1.05	.88	.86	1.22	1.30	1.22	.94	.92	1.04	.89	.63
1929	1.05	.77	1.29	1.20	1.02	.76	1.08	1.01	1.28	1.35	.64
1930	1.05	1.68	1.14	.76	.70	1.31	.69	1.46	1.18	.92	.28
1931	.95	.71	.76	.97	.80	1.01	1.28	1.25	.95	.83	.28
1932	.78	1.00	.84	.78	.69	.88	.58	.53	1.47	.57	.09
1933	.84	.53	.59	.84	.91	.76	.98	.67	1.57	.67	.65

TABLE XII.

Certified causes of death at the various ages
under 1 year for 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 2 mths	2 and under 3 months	3 and under 6 months	6 and under 9 months	9 and under 12 months	Total Deaths under 1 year
Enteric Fever ...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...
Smallpox ...	...	...	...	...	...	...	...	...	...	...	...
Measles ...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough ...	...	...	...	...	...	...	2	4	6	2	14
Diphtheria ...	...	...	...	...	...	...	1	...	...	1	2
Infantile Paralysis ...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis ...	...	...	...	...	...	...	...	3	2	3	8
Tuberculosis {	Lung ...	...	...	...	...	...	...	...	1	...	1
	General ...	...	...	...	...	...	...	...	...	...	...
	Abdominal ...	...	...	...	...	...	...	1	...	...	1
	Brain ...	...	...	...	...	...	...	...	2	1	3
	Other Forms ...	...	...	...	...	...	...	1	...	...	1
Influenza ...	...	...	...	...	...	1	...	1	1	...	3
Other Infectious Diseases ...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms)	2	1	2	...	5	7	5	16	21	8	62
Bronchitis ...	...	...	2	2	4	1	1	2	...	1	9
Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Respirat'y System	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis ...	1	...	...	2	3	2	3	8	5	2	23
Other Diseases of Digestive System	...	...	...	...	...	...	...	4	1	...	5
Meningitis (not T.B.)	...	...	1	...	1	...	...	2	1	1	5
Convulsions ...	2	1	...	...	3	1	...	1	...	...	5
Other Diseases of Nervous System	...	...	...	...	...	...	...	...	...	...	...
Congenital Malformations ...	12	3	1	...	16	2	1	3	...	...	22
Congenital Debility, Icterus, Sclerema, Marasmus ...	10	1	1	4	16	7	5	9	1	1	39
Premature Birth ...	56	2	2	3	63	7	...	...	...	...	70
Injury at Birth ...	7	1	...	...	8	...	...	...	...	...	8
Other Diseases peculiar to Early Infancy ...	6	2	...	...	8	...	...	...	...	...	8
Suffocation, Overlaying ...	3	...	...	...	3	1	...	1	...	...	5
Rickets ...	...	...	...	...	...	...	...	...	...	...	...
Syphilis ...	1	...	...	1	2	...	...	...	...	...	2
Violence ...	...	...	...	...	...	...	...	...	1	1	2
All Other Causes ..	1	...	1	...	2	2	1	1	...	...	6
Totals ...	101	11	10	12	134	31	19	57	42	21	304

TABLE XIII.

Infant Mortality from various groups of causes 1890-94,
and each year from 1913.

Year.	Con- genital	Diges- tive.	Respira- tory.	Infectious Diseases.	All Other Causes.	Total.
Average						
1890-94	53	32	44	25	29	183
1913	62	40	28	12	20	162
1914	58	33	15	17	13	136
1915	64	38	38	51	18	209
1916	63	20	15	13	15	126
1917	57	24	24	13	19	137
1918	53	16	24	20	13	126
1919	60	13	30	8	15	126
1920	53	21	36	10	11	131
1921	58	16	19	13	8	114
1922	50	11	27	10	11	109
1923	46	4	21	13	14	98
1924	54	12	25	12	17	120
1925	53	10	35	16	12	126
1926	58	11	18	4	12	103
1927	50	14	46	17	11	138
1928	45	9	28	9	11	102
1929	48	12	30	7	5	102
1930	55	7	32	13	6	113
1931	42	7	24	12	7	92
1932	32	7	17	9	7	72
1933	48	9	23	12	6	98

TABLE XIV.

Infant Mortality from all causes at various age periods
since 1916.

DEATH RATES.

Year	Births.	Under 1 Week.	Under 1 Month.	Under 3 Months.	Under 1 Year.
1916 ...	3,725	32	49	74	126
1917 ..	2,842	25	42	68	137
1918 ...	2,902	27	45	65	126
1919 ...	3,466	29	51	78	126
1920 ...	5,047	26	44	72	131
1921 ...	4,450	27	47	67	114
1922 ...	4,227	26	46	66	109
1923 ...	4,199	29	44	61	98
1924 ...	3,865	31	48	68	120
1925 ...	3,694	25	42	65	126
1926 ...	3,724	35	49	65	103
1927 ...	3,517	26	46	70	138
1928 ...	3,501	23	39	54	102
1929 ...	3,486	25	40	55	102
1930 ...	3,506	28	46	65	113
1931 ...	3,431	26	34	51	92
1932 ...	3,276	23	31	41	72
1933 ...	3,099	33	43	59	98

TABLE XV.

Deaths and Death-rates from various groups of causes each year since 1929 (all ages).

DISEASE GROUP.	1929		1930		1931		1932		1933	
	Pop.		Pop.		Pop.		Pop.		Pop.	
	167,109		166,495		176,006		176,833		177,177	
	No. of Deaths.	Rate per 1000 Population.	No. of Deaths.	Rate per 1000 Population.	No. of Deaths.	Rate per 1000 Population.	No. of Deaths.	Rate per 1000 Population.	No. of Deaths.	Rate per 1000 Population.
Congenital ...	170	1.02	198	1.19	144	.82	107	.61	153	.86
Digestive ...	136	.81	114	.68	134	.76	133	.75	130	.73
Respiratory ...	607	3.63	522	3.14	429	2.44	390	2.21	403	2.27
Infectious ...	306	1.83	346	2.08	325	1.85	272	1.54	359	2.03
Circulatory ...	410	2.45	438	2.63	447	2.54	524	2.96	471	2.66
Genito-Urinary ...	106	.63	100	.60	72	.41	75	.42	97	.55
Malignant ...	280	1.68	311	1.87	276	1.57	297	1.68	321	1.81
Nervous ...	281	1.68	310	1.86	301	1.71	337	1.91	302	1.70
Other Causes ...	374	2.24	322	1.93	317	1.80	309	1.75	341	1.92
	2670	15.98	2661	15.98	2445	13.89	2444	13.82	2577	14.54

TABLE XVI.

Number of Illegitimate Births, number of Deaths (under 1 year) of Illegitimate Infants, and Death-rate per 1,000 Illegitimate Births since 1920.

Year.	Illegitimate Births.	Deaths of Illeg. Infants.	Rate per 1000 Illeg. Births.
1920	427	104	244
1921	344	65	189
1922	296	45	152
1923	331	43	130
1924	280	52	186
1925	235	33	140
1926	256	33	129
1927	268	48	179
1928	274	42	153
1929	265	29	109
1930	276	44	159
1931	254	28	110
1932	226	23	102
1933	254	45	177

TABLE XVII.

Five-yearly average annual death-rates per 100,000 population from certain of the Infectious Diseases, 18.6-1925, and number of deaths and death-rates per 100,000 each year since 1926.

YEAR.	Smallpox.	Scarlet Fever.	Enteric Fever.	Typhus Fever.	Diphtheria.	Measles.	Whooping Cough.
	No. of Deaths.	No. of Deaths.	No. of Deaths.	No. of Deaths.	No. of Deaths.	No. of Deaths.	No. of Deaths.
	Death-rate per 100,000.	Death-rate per 100,000.	Death-rate per 100,000.	Death-rate per 100,000.	Death-rate per 100,000.	Death-rate per 100,000.	Death-rate per 100,000.
1876-1880	—	—	—	—	—	—	—
1881-1885	—	—	—	—	—	—	—
1886-1890	—	—	—	—	—	—	—
1891-1895	—	—	—	—	—	—	—
1896-1900	—	—	—	—	—	—	—
1901-1905	—	—	—	—	—	—	—
1906-1910	—	—	—	—	—	—	—
1911-1915	—	—	—	—	—	—	—
1916-1920	—	—	—	—	—	—	—
1921-1925	—	—	—	—	—	—	—
1926	0	28	1	0	66	1	4
1927	0	9	0	0	69	76	48
1928	0	0	0	0	30	16	36
1929	0	3	2	0	13	1	7
1930	0	0	1	0	13	65	29
1931	0	0	2	0	17	14	44
1932	0	3	0	0	17	48	10
1933	0	13	1	0	10	0	35

TABLE XVIII.

Five-yearly average annual Case Mortality (per cent.) from certain Infectious Diseases 1891-1925, and No. of Case notified and intimated, No. of Deaths, and Case Mortality each year since 1926.

YEAR.	Smallpox.			Scarlet Fever.			Enteric Fever.			Typhus Fever.			Diphtheria.			Measles.			Whooping Cough.		
	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.	Cases.	Deaths.	Case Mortality.
1891-1895	—	—	3.7	—	—	3.3	—	—	15.1	—	—	9.8	—	—	38.0	—	—	8.7	—	—	70.8
1896-1900	—	—	—	—	—	4.2	—	—	15.2	—	—	22.5	—	—	23.2	—	—	8.4	—	—	47.9
1901-1905	—	—	5.4	—	—	2.3	—	—	16.6	—	—	14.0	—	—	16.2	—	—	10.2	—	—	38.8
1906-1910	—	—	1.5	—	—	3.0	—	—	11.3	—	—	12.1	—	—	17.3	—	—	10.4	—	—	17.6
1911-1915	—	—	5.3	—	—	2.5	—	—	9.9	—	—	13.3	—	—	11.1	—	—	11.0	—	—	13.2
1916-1920	—	—	6.7	—	—	1.4	—	—	11.2	—	—	26.7	—	—	11.0	—	—	5.7	—	—	5.2
1921-1925	—	—	—	—	—	2.4	—	—	7.3	—	—	—	—	—	9.8	—	—	6.3	—	—	8.9
1926	0	0	—	1275	28	2.2	25	1	4.0	0	0	—	786	66	8.4	77	1	1.3	149	4	2.7
1927	152	0	—	414	9	2.2	9	0	—	0	0	—	1023	69	6.7	2032	76	3.7	924	48	5.2
1928	5	0	—	208	0	—	3	0	—	0	0	—	623	30	4.8	1062	16	1.5	829	36	4.3
1929	0	0	—	822	3	.4	17	2	11.8	0	0	—	437	13	3.0	72	1	1.4	208	7	3.4
1930	0	0	—	302	0	—	15	1	6.7	0	0	—	403	13	3.2	2605	65	2.5	673	29	4.3
1931	0	0	—	246	0	—	18	2	11.1	0	0	—	395	17	4.3	383	14	3.7	840	44	5.2
1932	0	0	—	605	3	.5	5	0	—	0	0	—	372	17	4.6	2005	48	2.4	239	10	4.2
1933	0	0	—	1901	13	.7	29	1	3.4	0	0	—	368	10	2.7	564	0	—	893	35	3.9

TABLE XIX.

MALIGNANT DISEASES.

Number of Deaths during each year since 1921 :—

Year.	Males.	Females.	Total.
1921	113	176	289
1922	104	168	272
1923	115	146	261
1924	103	167	270
1925	114	173	287
1926	111	154	265
1927	111	165	276
1928	138	200	338
1929	101	179	280
1930	136	176	312
1931	122	154	276
1932	130	163	293
1933	142	179	321

TABLE XX.

Death-rate per 10,000 population, from Malignant Diseases, each year since 1921, sexes given separately and together.

Year.	Males.	Females.	Total.
1921	15.13	18.80	17.17
1922	13.62	17.55	15.91
1923	15.17	15.36	15.27
1924	13.55	17.52	15.76
1925	15.16	18.37	16.95
1926	14.70	16.29	15.58
1927	14.50	17.21	16.01
1928	18.05	20.89	19.63
1929	13.61	19.27	16.76
1930	18.40	19.01	18.74
1931	15.44	15.88	15.68
1932	16.37	16.73	16.57
1933	17.85	18.34	18.12

TABLE

Age and Sex Distribution of Deaths from Malignant Disease

AGE GROUPS.		BUCCAL CAVITY						PHARYNX, OESOPHAGUS, STOMACH, LIVER and ANNEXA							PERITONEUM, INTESTINES and RECTUM								
		Antrum	Jaw	Lip	Mouth	Nasopharynx	Tongue	Tonsil	Anus	Duodenum	Gall Bladder	Liver	Oesophagus	Pylorus	Stomach	Ventriculi	Bowel	Caecum	Colon	Ileum	Intestine	Pelvic Colon	Rectum
Under 20	M	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20-25	M	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-35	M	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
35-45	M	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	1
	F	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..
45-55	M	..	..	..	..	1	1	..	..	..	1	1	..	2	..	..	..	2	..	..	..	..	..
	F	..	..	..	1	..	..	..	..	1	..	3	..	5	2	..	..	..	..	..	..	..	2
55-65	M	..	1	..	2	..	6	1	1	..	10	1	..	9	..	..	..	..	..	..	..	..	2
	F	..	..	..	..	..	..	..	..	..	2	3	..	11	..	1	1	6	..	1	..	3	..
65-75	M	1	2	..	2	..	3	1	..	..	1	1	2	1	11	..	..	..	4	1	1	..	2
	F	..	..	..	..	..	..	..	..	..	4	5	..	24	1	..	1	3	..	1	..	4	..
75 and up	M	..	..	1	2	..	..	..	..	..	..	1	1	4	1	..	..	1	..	..	1	1	1
	F	..	..	..	..	..	1	..	..	..	..	..	..	11	..	1	..	2	..	1	..	..	..
Totals		1	3	1	7	1	11	2	1	1	1	18	17	3	80	4	2	2	19	1	6	2	15

I.

ing 1933, showing parts of the body affected

FEMALE GENITAL ORGANS			BREAST	SKIN			OTHER OR UNSPECIFIED ORGANS														TOTALS
Uterus	Vagina	Vulva		Ear	Face	Rodent Ulcer	Abdomen	Bladder	Brain	Kidney	Larynx	Lungs	Mediastinum	Pancreas	Pelvis	Prostate	Spine	Testicle	Other Parts	Not Specified	
..	0
..	0
..	0
..	0
..	1	..	..	..	1	..	..	..	1	..	..	4	8
..	1	..	..	..	..	..	..	4	8
..	1	..	..	..	..	2	1	..	..	..	..	..	1	10	17
11	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	7	17
..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	11
45	1	..	5	..	..	..	..	..	..	..	..	2	..	..	1	..	1	..	1	1	32
..	1	..	1	..	3	..	1	..	2	2	2	..	..	..	1	2	2	50
45	1	..	5	..	1	..	2	..	1	..	..	1	..	..	1	..	..	..	2	..	48
..	1	..	..	3	..	..	1	..	2	2	..	2	..	..	3	1	48
46	..	1	7	..	1	..	..	..	..	..	..	..	..	4	1	..	..	..	1	..	64
..	1	..	..	..	..	..	..	..	..	..	..	3	..	..	2	..	19
42	1	..	..	1	1	..	..	..	..	..	1	1	..	..	..	..	1	..	24
49	2	1	20	1	4	2	5	7	2	1	1	7	8	10	3	5	1	2	13	5	321

TABLE XXII.

Five-yearly average annual Death-rates per 100,000 population 1876-1925, and, number of Deaths and Death-rates per 100,000 each year since 1926, from the Respiratory Diseases (including Bronchitis, Pneumonia (all forms), Pleurisy, Asthma, Laryngitis, etc.).

Year	Total Deaths	Death-rate per 100,000
1876-1880	—	508.5
1881-1885	—	482.3
1886-1890	—	463.2
1891-1895	—	473.2
1896-1900	—	419.8
1901-1905	—	387.1
1906-1910	—	345.6
1911-1915	—	329.5
1916-1920	—	327.3
1921-1925	—	278.6
1926	401	235.8
1927	592	343.3
1928	471	273.5
1929	607	363.2
1930	522	313.5
1931	429	243.7
1932	390	220.5
1933	403	227.5

TABLE XXIII.

Five-yearly average annual Death-rates per 100,000 population 1876-1925, and, number of Deaths and Death-rates per 100,000 each year since 1926 from Diabetes Mellitus.

Year	Total Deaths	Deate-Rate per 100,000
1876-1880	—	—
1881-1885	—	1.8
1886-1890	—	.5
1891-1895	—	2.0
1896-1900	—	2.4
1901-1905	—	5.5
1906-1910	—	5.9
1911-1915	—	8.5
1916-1920	—	5.5
1921-1925	—	6.9
1926	11	6.5
1927	19	11.0
1928	15	8.7
1929	20	12.0
1930	13	7.8
1931	24	13.6
1932	19	10.7
1933	18	10.2

TABLE XXIV.

INFLUENZA.

Deaths in which Influenza was given as a cause each month
January 1924—December 1933.

MONTH.	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
January ...	0	5	1	6	1	6	2	0	1	67
February ...	2	2	0	14	0	55	1	4	6	31
March ...	7	3	0	27	3	4	3	20	7	3
April ...	8	3	14	3	1	1	3	11	1	0
May ...	2	0	8	0	0	0	0	2	3	2
June ...	1	0	1	2	0	1	1	1	0	1
July ...	0	0	0	0	0	2	1	0	0	0
August ...	0	0	2	0	0	0	0	0	2	2
September ...	3	3	1	3	1	0	1	2	0	1
October ...	0	1	2	6	2	0	1	0	0	1
November ...	10	1	5	4	3	2	1	1	2	0
December ...	6	2	2	4	7	1	2	3	2	4
Totals ...	39	20	36	69	18	72	16	44	24	112

TABLE XXV.

Deaths in which Influenza appears as a cause in death certificate
1924-1933 classified in age periods.

AGE PERIODS.	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Under 1 year	1	0	1	3	1	6	0	1	1	3
1-5 years	1	2	2	4	0	3	0	0	0	4
5-15 "	1	0	1	3	0	2	1	0	1	1
15-25 "	1	0	3	3	1	2	0	0	0	2
25-45 "	8	3	4	11	4	12	1	5	4	21
45-65 "	12	7	8	21	4	14	6	17	6	30
65 and upwards	15	8	17	24	8	33	8	21	12	51
Totals	39	20	36	69	18	72	16	44	24	112

During 1933, 9 deaths were certified as due to Influenza alone,
while in 103 cases it was associated with :—

Bronchitis	...	...	...	20
Pneumonia	...	...	...	59
Other Respiratory Disease	...	...	...	7
Other causes	...	...	...	17

TABLE XXVI.

INFECTIOUS DISEASES.—Number of Cases of each disease notified and reported in Dundee during the Year 1933. Also number removed and number not removed to Hospital.

DISEASE	At all ages	At Ages—Years							Cases removed to Hospital	Cases not removed to Hospital
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards		
Typhoid or Enteric Fever	29	...	1	5	12	10	1	...	23	6
Scarlet Fever or Scarlatina ...	1901	11	572	1109	99	95	14	1	1153	748
Diphtheria and Membranous Croup	368	16	112	191	25	22	2	...	341	27
Erysipelas ...	252	2	4	18	25	74	88	41	130	122
Puerperal Fever	29	...	...	...	9	20	...	...	23	1
Ophthalmia Neonatorum ...	53	53	...	...	...	...	...	...	15	38
Dysentery ...	14	...	3	8	...	1	2	...	6	8
Acute Poliomyelitis	3	...	2	1	...	...	...	...	2	1
Encephalitis Lethargica ...	2	...	...	2	...	...	...	...	0	2
Acute Primary Pneumonia ...	791	153	320	159	39	64	27	29	567	224
Acute Influenzal Pneumonia ...	117	4	5	11	13	40	22	22	29	88
Puerperal Pyrexia	42	...	...	...	16	24	2	...	36	6
Cerebro-Spinal Fever ...	13	7	1	3	1	1	...	...	13	...
Pulmonary Tuberculosis ...	255	1	6	69	56	90	30	3	203	52
Non-Pulmonary Tuberculosis ...	88	6	23	26	18	13	2	...	49	39
*Chickenpox ...	1061	20	178	859	3	1	...	...	20	1041
*Measles ...	564	6	70	484	2	2	...	...	17	547
*Whooping Cough	893	79	331	482	...	1	...	...	137	756
Totals ...	6475	358	1628	3427	318	458	190	96	2769	3706

*Not notifiable in Dundee during 1933.

Tuberculosis—cases notified in a previous year and removed to Hospital for the first time during 1933—

Pulmonary, 12 ; Non-Pulmonary. 2 ; Total, 14.

TABLE XXVII.
Monthly Notifications and Intimations of Infectious Disease,
Dundee, 1933.

DISEASE	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Typhoid Fever ...	...	...	...	...	2	...	16	3	2	2	1	1	29
Scarlet Fever ...	67	64	69	63	62	53	54	116	290	438	372	253	1901
Diphtheria ...	35	30	30	31	25	31	23	28	31	30	43	31	368
Erysipelas ...	26	19	25	34	18	10	6	10	14	36	32	22	252
Puerperal Fever ...	2	2	1	3	1	1	2	4	2	4	2	5	29
Puerperal Pyrexia ...	3	4	2	5	3	...	3	3	5	6	4	4	42
Ophthalmia Neonatorum ...	4	7	8	2	3	4	1	4	6	7	4	3	53
Dysentery ...	1	...	...	...	...	3	1	1	...	5	2	1	14
Acute Poliomyelitis ...	...	...	...	...	...	1	...	1	1	...	...	...	3
Encephalitis Lethargica ...	...	...	...	...	1	...	...	...	...	...	1	...	2
Acute Primary Pneumonia ...	169	46	53	42	32	37	33	43	41	82	113	100	791
Acute Influenzal Pneumonia ...	71	34	3	1	1	1	...	...	...	1	1	4	117
Pulmonary Tuberculosis ...	21	27	25	22	25	24	25	17	23	15	18	13	255
Non-Pulmonary Tuberculosis ...	5	9	4	6	13	15	9	6	6	4	5	6	88
Cerebro-Spinal Fever ...	3	6	...	...	1	...	...	1	...	...	2	...	13
*Chickenpox ...	140	85	188	191	193	127	5	11	34	39	31	17	1061
*Measles ...	111	107	155	92	61	23	1	1	7	4	...	2	564
*Whooping Cough ...	70	75	137	160	207	109	16	33	29	16	18	23	893
Totals ...	730	515	700	652	648	439	195	282	491	689	649	485	6475

* Not notifiable in Dundee during 1933.

TABLE XXVIII.

TUBERCULOSIS.—Notifications and Deaths, with corresponding rates per 1,000 population at various age-periods each year since 1917.

Year.	PULMONARY TUBERCULOSIS.										NON-PULMONARY TUBERCULOSIS.									
	0-5.		5-15.		15-25.		25-45.		45-65.		65 & over.		0-5.		5-15.		15-25.		25-45.	
	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.
1917	Notifications 16	.81	56	1.52	114	3.27	190	3.19	79	2.58	7	.71	54	2.75	46	1.25	34	.97	30	.60
	Deaths 4	.20	14	.38	39	1.12	95	1.89	58	1.90	8	.81	53	2.70	29	.79	21	.60	22	.44
1918	Notifications 25	1.27	57	1.55	99	2.84	131	2.61	77	2.52	4	.40	50	2.54	56	1.52	54	1.55	23	.46
	Deaths 11	.56	23	.63	63	1.81	76	1.51	74	2.42	9	.92	25	1.27	29	.79	15	.43	10	.20
1919	Notifications 13	.64	72	1.92	102	2.91	180	3.38	63	2.02	12	1.19	36	1.79	38	1.01	33	.94	17	.32
	Deaths 4	.19	8	.21	38	1.11	71	1.35	37	1.19	7	.69	24	1.19	19	.50	13	.35	11	.21
1920	Notifications 13	.67	74	2.05	94	2.62	159	3.07	75	2.40	8	.84	45	2.30	39	1.05	31	.86	12	.23
	Deaths 1	.05	7	.19	38	1.20	73	1.29	56	1.81	8	.84	31	1.61	16	.43	9	.28	8	.14
1921	Notifications 21	1.43	57	1.81	105	3.30	128	2.77	54	1.62	8	.77	24	1.50	47	1.46	15	.47	8	.17
	Deaths 3	.20	5	.15	38	1.19	76	1.64	38	1.12	8	.77	17	1.15	16	.50	11	.34	8	.17
1922	Notifications 15	.99	66	2.05	109	3.34	130	2.75	73	2.10	8	.76	49	3.26	54	1.68	40	1.23	12	.25
	Deaths 0	—	10	.31	36	1.10	64	1.35	53	1.53	5	.47	26	1.73	15	.46	19	.58	7	.06
1923	Notifications 20	1.34	50	1.55	72	2.23	97	2.07	60	1.74	10	.95	50	3.35	70	2.19	52	1.61	27	.58
	Deaths 6	.40	11	.34	45	1.39	64	1.36	35	1.01	6	.57	35	2.34	16	.50	13	.40	6	.12
1924	Notifications 14	.93	48	1.50	73	2.25	101	2.15	51	1.47	8	.76	50	3.34	37	1.15	26	.80	20	.43
	Deaths 1	.06	8	.25	44	1.36	55	1.17	33	.96	5	.47	28	1.87	14	.44	9	.28	6	.13
1925	Notifications 8	.54	49	1.55	72	2.25	100	2.15	42	1.23	9	.88	36	2.44	32	1.01	27	.84	17	.37
	Deaths 4	.27	6	.19	39	1.22	57	1.23	36	1.05	6	.58	18	1.22	9	.28	15	.47	10	.22
1926	Notifications 3	.20	67	2.10	72	2.24	107	2.29	53	1.55	6	.58	37	2.49	41	1.29	22	.68	13	.28
	Deaths 0	—	4	.13	34	1.06	60	1.29	35	1.02	5	.48	20	1.35	12	.38	8	.25	7	.15
1927	Notifications 7	.47	80	2.48	76	2.33	80	1.69	40	1.15	5	.48	38	2.53	28	.87	13	.40	23	.49
	Deaths 3	.20	6	.19	45	1.38	70	1.48	26	.75	3	.29	21	1.40	5	.15	6	.18	8	.17
1928	Notifications 11	.73	82	2.54	62	1.90	109	2.31	47	1.35	7	.67	30	2.00	49	1.52	20	.61	20	.42
	Deaths 3	.20	5	.16	34	1.04	59	1.25	33	.95	4	.38	15	1.00	12	.37	7	.21	4	.08
1929	Notifications 5	.34	63	2.01	65	2.06	88	1.92	33	.98	6	.59	30	2.06	23	.74	19	.60	14	.31
	Deaths 3	.21	3	.10	27	.85	64	1.40	27	.80	6	.59	18	1.24	5	.16	10	.32	9	.20
1930	Notifications 7	.48	80	2.57	59	1.87	81	1.77	35	1.04	5	.49	35	2.41	31	.99	17	.54	15	.33
	Deaths 1	.07	3	.10	30	.95	54	1.18	33	.98	5	.49	22	1.52	5	.16	9	.29	7	.16
1931	Notifications 5	.33	65	2.14	62	2.00	85	1.72	25	.68	3	.23	21	1.39	28	.92	19	.61	16	.32
	Deaths 0	—	0	—	29	.94	66	1.33	29	.79	4	.30	12	.79	7	.23	8	.26	8	.16
1932	Notifications 4	.26	55	1.80	46	1.48	80	1.61	37	1.00	7	.53	29	1.91	49	1.60	30	.96	17	.34
	Deaths 2	.13	8	.26	28	.90	45	.92	24	.65	2	.15	11	.72	11	.33	5	.16	6	.12
1933	Notifications 7	.46	69	2.25	56	1.80	90	1.80	30	.81	3	.33	29	1.90	26	.85	18	.58	13	.26
	Deaths 1	.07	7	.23	22	.73	41	.82	27	.73	4	.30	21	1.38	4	.26	7	.22	5	.14

TABLE XXIX.

TUBERCULOSIS.—Notifications and Deaths, with corresponding rates per 1,000 population, for each year since 1913 (since notification became compulsory).

YEAR.	Estimated Population.	NOTIFICATIONS AND CASE RATES.				DEATHS AND DEATH - RATES.			
		Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Tuberculosis (all forms).	Tuberculosis (all forms).	Pulmonary Tuberculosis.	Non-Pulmonary Tuberculosis.	Tuberculosis (all forms).	Tuberculosis (all forms).
		No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.
1913	164,975	400	2.42	Non-Pulmonary Tuberculosis		191	1.16	128	.77
1914	176,584	590	3.34	Notifiable in March, 1914.		249	1.41	126	.71
1915	177,300	485	2.73	377	2.12	275	1.55	113	.64
1916	181,437	522	2.87	213	1.17	259	1.42	95	.52
1917	181,773	432	2.37	171	.94	218	1.20	140	.77
1918	181,777	393	2.16	201	1.11	256	1.40	90	.49
1919	185,388	442	2.38	137	.73	165	.89	83	.44
1920	184,084	423	2.29	132	.71	183	.99	69	.38
1921	168,217	375	2.23	99	.58	168	.99	59	.35
1922	172,061	401	2.33	162	.94	168	.98	67	.39
1923	170,901	309	1.80	216	1.26	167	.98	78	.45
1924	171,295	295	1.72	142	.83	146	.85	65	.38
1925	169,361	280	1.65	121	.72	148	.87	59	.35
1926	170,060	308	1.81	123	.72	138	.81	52	.31
1927	172,444	288	1.67	112	.65	153	.89	47	.27
1928	172,214	318	1.85	131	.76	138	.80	42	.25
1929	167,109	260	1.56	90	.54	130	.78	45	.27
1930	166,495	267	1.60	105	.63	126	.76	49	.29
1931	176,006	245	1.39	87	.49	128	.73	39	.22
1932	176,833	229	1.30	129	.73	107	.61	31	.18
1933	177,177	255	1.44	88	.50	102	.58	46	.26

TABLE XXX.

TUBERCULOSIS.—Notifications and Deaths with corresponding rates per 1,000 population in various wards, 1933.

WARD.	NOTIFICATIONS AND CASE RATES.				DEATHS AND DEATH-RATES.							
	Pulmonary Tuberculosis.	Per 1000.	Non-Pulmonary Tuberculosis.	Per 1000.	Pulmonary Tuberculosis (all forms).	Per 1000.	Non-Pulmonary Tuberculosis.	Per 1000. (all forms).	Per 1000.			
I. ...	21	1.23	10	.59	31	1.82	5	.29	4	.24	9	.53
II. ...	17	1.43	5	.42	22	1.85	7	.59	—	—	7	.59
III. ...	27	1.62	11	.66	38	2.28	8	.48	6	.36	14	.84
IV. ...	20	1.14	5	.29	25	1.43	11	.63	5	.29	16	.91
V. ...	36	1.44	9	.36	45	1.80	15	.60	4	.16	19	.76
VI. ...	26	1.49	11	.63	37	2.13	11	.63	6	.35	17	.98
VII. ...	24	1.07	12	.53	36	1.60	8	.36	7	.31	15	.67
VIII. ...	40	2.09	11	.57	51	2.67	21	1.10	9	.47	30	1.57
IX. ...	36	1.86	9	.47	45	2.33	10	.52	3	.15	13	.67
X. and XI. ...	8	.74	5	.46	13	1.20	5	.46	2	.19	7	.65
No fixed abode	—	—	—	—	—	—	1	—	—	—	1	—
Totals ...	255	1.44	88	.45	343	1.94	102	.58	46	.26	148	.84

TABLE XXXI.

PULMONARY TUBERCULOSIS—Notifications and Deaths with corresponding rates per 1,000 population for each sex each year since 1915.

Year.	NOTIFICATIONS.				DEATHS.			
	Males.		Females.		Males.		Females.	
	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.	No.	Per 1000.
1915	216	2.75	269	2.72	106	1.35	169	1.71
1916	227	2.83	295	2.92	99	1.23	160	1.58
1917	181	2.25	251	2.48	100	1.24	118	1.16
1918	198	2.46	195	1.92	117	1.45	139	1.37
1919	238	2.90	204	1.97	90	1.09	75	.72
1920	223	2.74	200	1.95	95	1.16	88	.85
1921	197	2.64	178	1.90	81	1.08	87	.92
1922	170	2.23	231	2.41	75	.98	93	.97
1923	149	1.97	160	1.68	73	.96	94	.98
1924	135	1.78	160	1.68	75	.98	71	.74
1925	125	1.66	155	1.65	61	.81	87	.93
1926	135	1.79	173	1.83	67	.89	71	.75
1927	147	1.92	141	1.47	76	.99	77	.80
1928	159	2.08	159	1.66	67	.88	71	.74
1929	126	1.70	134	1.44	61	.82	69	.74
1930	131	1.77	136	1.47	64	.87	62	.67
1931	121	1.53	124	1.28	58	.73	70	.72
1932	112	1.41	117	1.20	55	.69	52	.53
1933	143	1.80	112	1.15	52	.65	50	.51

TABLE XXXII.

Pulmonary Tuberculosis—Deaths in Institutions each year since 1924.

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Total Deaths from Pulmon. T.B. -	147	148	138	153	138	130	126	128	107	102
No. of Deaths from Pulmon. T.B. in Institutions -	62	66	77	70	74	70	64	71	58	49
Percentage of Total Deaths from Pul. T. B. dying in Institutions	42.1	44.6	55.8	45.8	53.6	53.8	50.8	55.5	54.2	48.0

TABLE XXXIII.

MATERNAL MORTALITY.

Certified causes of deaths of women from diseases and accidents connected with pregnancy and child-birth during 1933

Accidents of pregnancy	...	...	...	3
Puerperal hæmorrhage	...	...	...	1
Puerperal septicæmia, including post-abortive sepsis	...	...	...	9
Toxæmias of pregnancy, albuminuria, convulsions	...	...	...	7
Other puerperal diseases	...	...	...	4
				—
				24

TABLE XXXIV.

Maternal Mortality Rates—number of deaths per 1,000 registered births each year, 1924-1933.

1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
3.88	4.60	8.86	7.96	6.86	6.88	4.28	5.25	4.58	7.74

TABLE XXXV.

Number of births per 1,000 population, illegitimate births per 100 registered births, and marriages per 1,000 population, each year since 1914.

Year.	Birth-rate.	Illegitimate-rate.	Marriage-rate.
1914	25.2	9.1	8.3
1915	22.1	8.0	9.5
1916	20.5	8.0	7.1
1917	15.6	11.2	7.0
1918	16.0	10.6	7.5
1919	18.7	11.1	10.6
1920	27.4	8.5	11.4
1921	26.5	7.7	10.0
1922	24.6	7.0	8.8
1923	24.6	7.9	8.3
1924	22.6	7.2	7.6
1925	21.8	6.4	7.6
1926	21.9	6.9	7.7
1927	20.4	7.6	7.4
1928	20.3	7.8	7.8
1929	20.9	7.6	7.7
1930	21.1	7.9	8.1
1931	19.5	7.4	7.2
1932	18.5	6.9	7.3
1933	17.5	8.2	7.9

TABLE XXXVI.

VACCINATION—1921–1932.

YEAR	Total Births (excluding Transcripts received)	Successfully Vaccinated		Insusceptible to Vaccination		Died before Vaccination		Conscientious Objections		Postponement or unaccounted for	
		No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
1921	4509	1191	26.4	27	.6	379	8.4	2682	59.5	230	5.1
1922	4288	1193	27.8	12	.3	323	7.5	2556	59.6	204	4.8
1923	4275	1240	29.0	11	.2	284	6.6	2567	60.1	173	4.1
1924	3921	1077	27.5	16	.4	352	9.0	2271	57.9	205	5.2
1925	3750	978	26.1	17	.4	306	8.2	2270	60.5	179	4.8
1926	3822	1087	28.4	25	.7	309	8.1	2252	58.9	149	3.9
1927	3591	1228	34.2	49	1.4	307	8.5	1933	53.8	74	2.1
1928	3585	1198	33.4	43	1.2	253	7.1	2037	56.8	54	1.5
1929	3598	1118	31.1	63	1.7	240	6.7	2124	59.0	53	1.5
1930	3625	1111	30.6	32	.9	260	7.2	2186	60.3	36	1.0
1931	3531	972	27.5	64	1.8	188	5.3	2247	63.7	60	1.7
1932	3411	904	26.5	47	1.4	171	5.0	2236	65.5	53	1.6

TABLE XXXVII

Port Sanitation.

DETAILS OF VESSELS ENTERING THE PORT DURING 1933.

	No. of Arrivals.	Tonnage.	No. Inspected by Medical Officer.	No. Inspected by Sanitary Inspector.	No. Reported Defective.	No. of Orders Issued.
From Foreign—						
Steamers	314	581,197	70	314	181	273
Motor Ships ...	12	30,644	...	12	...	...
Coastwise ...	693	267,209	...	...	...	...
	1019	879,050	70	326	181	273

TABLE XXXVIII.

Port Sanitation.

Principal Foreign Places from which ships arrived and notes of cargoes.

PORT OR COUNTRY.	No.	CARGOES
India (Calcutta, Chittagong, Colombo, etc.)	84	Jute, Gunnies, Linseed, Desiccated Coconut.
Hamburg	48	Sugar, Potatoes, Farina Phosphates, Fancy Goods.
Rotterdam, Ghent and Dunkirk	37	Sugar, Milk, Cheese, Fruit, Vegetables, Moss Litter, Steel Plates and Tubing.
Antwerp	18	Vegetables, Iron, and Steel.
Sweden	18	Paper, Paper Pulp, Box Boarding.
U.S.A. and Canada	26	Flour, Sugar, Pitch, Ochre.
Baltic Ports, ...	28	Timber, and Flax.
Norway	20	Paper and Paper Pulp.
Algeria and Tunis	11	Esparto Grass and Phosphates
West Indies, etc.	8	Sugar and Oil.
Soviet Russia	18	Timber and Flax.
Other European Ports	9	Timber, Cork, Pyrites, Phosphates, Oilcake, Grain and Vegetables.
Australia	1	Sugar.

TABLE XXXIX.

Port Sanitation.

Details of Action taken:—

Total Number of verbal intimations	195
Total Number of rat notices issued	131
Total Number of visits to ships	642
Total Number of ships from infected or suspected ports	100
Do. (direct)	13
Do. (Indirect)	87
Nuisances and defects attended to:—282	
Forecastles cleaned out	39
Messrooms cleaned	19
Galleys and store-rooms cleaned	30
Accumulation of food refuse	13
Choked or defective W.C.'s	21
Dirty W.C.'s	38
Discharge of foul water on quay	53
Ventilators obstructed	69
	282

In addition the following work was carried out while the vessels were in Port :—

Fresh water tanks cleaned out	37
Forecastles Washed or painted	19
Bathroom or wash-places painted	24
Galleys washed or painted	25
W.C.'s painted	29

TABLE XL.

BACTERIOLOGICAL LABORATORY.

Examinations carried out on behalf of the Department by Professor Tulloch, in the Laboratory, University College, Dundee.

	1925	1926	1927	1928	1929	1930	1931	1932	1933
Wassermann Tests	3513	3660	3619	4107	4177	4588	4419	4053	4179
Microscopical and other examinations under V.D. Scheme for—									
Syphilis	33	35	42	31	36	109	51	56	49
Gonorrhœa	1690	1863	2227	2933	3301	3019	2779	3714	3725
Swabs for diphtheria	2027	1980	2560	1898	1500	1197	962	823	857
Widal tests for enteric fever	140	220	236	106	228	206	212	150	228
Sputum examinations	385	320	299	310	302	261	291	300	329
Examination of fæces, blood cultures, etc., for—									
Enteric fever	80	91	47	26	131	100	214	63	240
Dysentery	13	6	2	11	37	70	50	112	78
Infantile Diarrhœa	8	4	5	7	—	—	—	—	—
Puerperal Fever	—	—	—	—	90	166	180	210	180
Milk examinations	97	101	97	75	74	105	†1220	†481	78
Food Poisoning—									
No. of outbreaks	(2)	(3)	(2)	(2)	(1)	(2)	(0)	(0)	(2)
No. of examinations	7	71	44	27	14	11	0	0	2
Cerebro spinal meningitis	0	8	10	16	13	23	12	15	25
Other examinations	*78	*60	45	35	19	105	303	367	417
Totals	8071	8419	9231	9582	9922	9960	10693	10350	10387

*Includes 50 Rats examined for *Leptospira Icterohæmorrhagica*.

†Includes 1130 and 370 respectively for T.B. and for Epizootic Abortion of cattle, in collaboration with the Empire Marketing Board and the Department of Health for Scotland.

TABLE XI.I.

DISINFECTION, 1933.

The table submitted below details the year's work in regard to disinfection.

MONTH	Bed Ticks	Beds	Mattresses	Bed Covers	Blankets	Sheets	Bolster Ticks	Bolster Cases	Pillow Ticks	Pillow Cases	Bed Panes	Aprons	H'dkerchiefs	Table Cloths	Towels	Wearing Apparel	Miscellaneous Articles	Total No. of Articles	No. of Homes from which clothes were removed
January	1	...	5	261	209	218	1	46	9	154	3	...	19	...	37	895	609	2467	251
February	1	...	16	237	189	204	1	62	13	190	3	2	60	4	71	642	559	2254	165
March	...	...	11	209	179	204	...	41	6	175	3	1	150	1	51	672	492	2195	179
April	1	...	13	217	149	220	6	43	17	165	...	...	169	2	51	757	508	2318	177
May	1	...	17	234	154	198	...	44	13	149	6	1	95	10	87	563	342	1914	145
June	3	...	5	226	144	163	...	31	5	129	1	...	6	...	34	329	120	1196	112
July	...	...	23	187	152	156	1	33	19	124	3	...	11	...	36	281	87	1113	129
August	279	...	8	593	198	245	...	62	5	216	3	1	20	...	50	448	170	2298	175
September	2	...	18	391	297	383	1	88	25	283	...	...	54	...	55	739	306	2642	260
October	...	...	14	456	402	449	...	91	14	364	3	...	136	8	46	1149	473	3605	345
November	5	...	24	476	477	446	2	104	13	373	...	1	185	1	37	1239	530	3913	342
December	2	...	20	319	355	327	2	81	20	264	...	1	144	1	40	857	366	2799	235
Totals	295	...	174	3806	2905	3213	14	726	159	2586	25	7	1049	27	595	8571	4562	28714	2515

The following figures relate to the articles disinfected and the houses concerned each year since 1922:—

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Articles	17,480	20,074	26,763	32,978	29,430	22,721	16,642	20,976	19,994	15,892	20,265	28,714
Houses concerned	1,025	1,322	1,535	2,234	2,042	1,709	1,276	1,718	1,748	1,477	1,981	2,515

TABLE XLII.

FACTORIES, WORKSHOPS AND WORKPLACES.

YEAR 1933.

1. Inspection of Factories, Workshops and Workplaces, including Inspections made by Sanitary Inspectors.

PREMISES	NUMBER OF		
	Inspections	Written Notices	Occupiers Prosecuted
Factories (including factory laundries) ...	459	1	0
Workshops (including workshop laundries) ...	820	0	0
Workplaces (other than outworkers' premises) ...	427	0	0
	1,706	1	0

2. Defects found in Factories, Workshops and Workplaces

PARTICULARS	NUMBER OF DEFECTS			No. of Offences in respect to which Prosecutions were Instituted
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts†—				
Want of cleanliness ...	66	66	...	...
Want of ventilation ...	1	...	...	...
Overcrowding ...	...	...	...	...
Want of drainage of floors ...	...	...	...	...
Other nuisances ...	...	...	...	...
Sanitary accommodation—				
Insufficient ...	...	...	...	...
Unsuitable or defective ...	...	...	...	...
Not separate for sexes ...	...	...	...	...
Offences under the Factory and Workshop Acts—				
Illegal occupation of underground bakehouse (S. 101) ...	...	...	...	...
Other offences ...	...	...	...	...
excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921)				
Total ...	67	66	...	...

†Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901 as remediable under the Public Health Acts.

TABLE XLIII.

DUNDEE INFANT HOSPITAL.

Year to 31st December, 1933.

In Hospital, 1st January, 1933	...	...	...	34
Admitted in 1933	...	...	...	134
				<hr/> 168
DISCHARGED—				
Relieved	...	...	101	
Unrelieved	...	...	5	
Taken home against advice	...	...	10	
Transferred to Royal Infirmary	...	...	4	
Transferred to Ashludie Sanatorium	...	...	2	
Transferred to King's Cross Hospital	...	...	1	123
			<hr/>	<hr/> 45
DIED—				
Marasmus	...	...	4	
Broncho-pneumonia	...	...	4	
Gastro-enteritis	...	...	2	
Abdominal Tuberculosis	...	...	1	
Acute Nephritis	...	...	1	12
			<hr/>	<hr/>
In Hospital, 31st December, 1933	...	...	...	33
Death Rate ... 8.9 per cent.				
THE CASES TREATED WERE—				
Marasmus	...	...	67	
Debility	...	...	20	
Broncho-Pneumonia	...	...	10	
Fits	...	...	1	
Rickets	...	...	4	
Gastro-Enteritis	...	...	12	
Bronchitis	...	...	4	
Mentally Deficient	...	...	2	
Abdominal Tuberculosis	...	...	3	
Tuberculosis Dactylitis	...	...	1	
Pyloric Stenosis	...	...	3	
Hydrocephalus	...	...	1	
Congenital Heart	...	...	2	
Rheumatic Fever	...	...	1	
Acute Nephritis	...	...	1	
Chloride Retention	...	...	1	
Miliary Tuberculosis, Lung	...	...	1	134
			<hr/>	
Total Patient Days	...	...	12,033	
Highest Daily Number	...	...	...	34
Lowest Daily Number	...	...	...	28
Average	...	...	...	32.9

TABLE XLIV.

VENEREAL DISEASES SCHEME, 1923-24 to 1933.

Patients suffering from Venereal Diseases, attending the V.D. Centres, who :—

Year.	Left before completing a course of treatment.						Left after completing a course of treatment, but before final tests as to cure.						Were transferred to other centres.						Were discharged from centre after completion of treatment.						Totals.					
	Both Sexes.			Males.			Females.			Both Sexes.			Males.			Females.			Both Sexes.			Males.			Females.			Both Sexes.	Males.	Females.
	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	Per	No.	Cent.	No.				Cent.
1923-4	193	38	122	33	71	52	126	25	73	20	53	39	66	13	60	17	6	4	118	24	111	30	7	5	503	306	187	503	306	187
1924-5	179	28	73	20	106	39	119	19	42	11	77	29	79	12	57	15	22	8	263	41	198	54	65	24	640	370	270	640	370	270
1925-6	238	36	114	29	124	46	93	14	61	16	32	11	72	11	52	13	20	7	263	39	162	42	101	36	666	389	277	666	389	277
1926-7	216	32	88	24	128	41	104	15	38	10	66	21	88	13	64	18	24	8	268	40	174	48	94	30	676	364	312	676	364	312
1927-8	160	24	53	15	102	38	86	13	48	12	38	14	109	17	77	20	32	12	306	46	209	53	97	36	661	392	269	661	392	269
1928-9	163	27	77	19	86	39	87	14	50	13	37	17	88	14	70	18	18	8	278	45	200	50	78	36	616	397	219	616	397	219
1929-30	139	18	49	11	90	28	76	10	34	8	42	13	116	15	69	15	47	14	447	57	300	66	147	45	778	452	326	778	452	326
1930-31	152	19	55	11	97	32	111	14	57	11	54	18	140	17	96	19	44	15	406	50	303	59	103	35	809	511	298	809	511	298
1931	150	19	56	11	94	32	118	15	57	11	61	21	141	17	94	19	47	16	389	49	300	59	89	31	798	507	291	798	507	291
1932	160	18	57	12	103	27	161	19	59	12	102	27	121	14	62	13	59	15	424	49	307	63	117	31	866	485	381	866	485	381
1933	131	16	60	13	71	19	150	18	61	14	89	23	130	16	79	18	51	13	410	50	240	55	170	45	821	440	381	821	440	381

TABLE XLV.

Number of New Cases attending the V.D. Treatment Centre each year since 1922.

DISEASE.	1922.		1923.		1924.		1925.		1926.		1927.		1928.		1929.		1930.		1931.		1932.		1933.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
syphilis	203	171	177	137	135	150	128	203	115	264	102	140	92	133	127	151	189	209	137	138	116	164	104	131
gonorrhoea	236	35	159	94	226	63	240	58	254	44	243	65	247	53	291	95	335	64	288	106	283	205	225	163
mixed Infections	—	—	8	8	13	24	15	40	14	22	19	16	16	21	20	37	36	43	26	24	—	—	—	—
other V.D.	34	64	47	52	25	1	57	—	99	—	56	—	66	1	65	—	69	—	49	—	47	—	55	—
not suffering from V.D.	151	102	16	36	56	72	85	107	115	92	91	70	157	104	165	124	124	118	223	177	178	117	138	155
Totals	624	372	407	327	455	310	525	408	597	422	511	291	578	312	668	407	773	434	723	445	624	486	522	449
Totals (both sexes)	996		734		765		933		1,019		802		890		1,075		1,207		1,168		1,110		971	

TABLE XLVI.

Number of Attendances at V.D. Treatment Centre each year since 1922.

	1922.		1923.		1924.		1925.		1926.		1927.		1928.		1929.		1930.		1931.		1932.		1933.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	9,418	6,381	4,250	5,375	3,254	5,402	2,972	6,668	2,665	5,137	2,574	6,056	2,665	5,137	4,081	5,281	6,477	6,506	7,109	5,085	5,589	6,493	5,304	6,018
...	10,006	1,078	9,458	3,522	9,178	3,949	9,169	3,813	10,782	9,541	10,782	5,502	9,541	5,330	11,717	5,639	18,243	5,751	17,877	5,944	18,072	7,729	16,740	7,568
...	—	—	874	2,879	832	3,145	580	2,557	942	1,726	674	2,273	942	1,726	1,263	2,309	2,226	2,805	1,566	1,327	—	—	—	—
...	213	178	148	2	433	—	701	—	422	6	453	—	422	6	331	—	565	—	569	—	778	—	682	—
...	216	155	46	137	111	205	250	416	324	683	317	441	426	580	517	857	406	956	1,049	911	854	949	746	757
...	19,853	7,792	12,343	9,736	14,841	11,983	13,927	12,912	13,746	15,721	14,800	14,272	13,996	12,779	17,909	14,086	27,917	16,018	28,170	13,267	25,293	15,171	23,472	14,345
Totals (both sexes)	27,645		22,079		26,824		26,839		27,467		29,072		26,775		31,995		43,935		41,437		40,464		37,815	

TABLE XLVII.

Doses of Arseno-Benzol Compounds Issued.

		Treatment Centre.	Other Institutions.	Medical Practitioners.	Total.
1919	...	1,958	13	141	2,112
1920	...	6,362	18	472	6,852
1921	...	6,280	239	358	6,877
1922	...	5,135	239	239	5,613
1923	...	5,224	198	123	5,545
1924	...	3,887	275	504	4,666
1925	...	2,836	341	398	3,575
1926	...	2,286	264	423	2,973
1927	...	2,826	18	272	3,116
1928	...	2,997	154	253	3,404
1929	...	3,673	235	342	4,250
1930	...	6,884	380	388	7,652
1931	...	3,362	113	327	3,802
1932	...	3,582	126	182	3,890
1933	...	3,594	118	216	3,928

TABLE XLVIII.

LABORATORY WORK—The following examinations were carried out under the V.D. scheme during each of the last ten years :—

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Wassermann Tests	5,261	3,513	3,660	3 619	4,107	4,177	4,588	4,419	4,053	4,179
Microscopical and other Examinations	1,657	1,723	1,898	2,269	2,964	3,537	5,128	2,830	3,770	3,774
	4,918	5,236	5,558	5,888	7,071	7,514	7,716	7,249	7,823	7,953

TABLE XLIX.

Unsound Food. All Seized at the Public Slaughter-Houses.

Number of Seizures, Weight (in lbs.) of Meat Seized, and Reasons for Seizure.
FOR YEAR ENDING 31st DECEMBER, 1933.

DISEASE	BEEF		MUTTON		PORK		TOTAL	
	Number	Weight	Number	Weight	Number	Weight	Number	Weight
(a) Tuberculosis	93	4,086	2,642	189,943
(b) Other Diseases :—								
Abscesses, Tumours, and Cysts	55	43	453	1,174
Actinomycosis	154	215
Asphyxiation	3	1,799
Blackleg	1	364
Decomposition	30	2,957
Dropsical Conditions	94	2,154
Fevered Conditions	87	286	245	11,133
Fractures and Bruises	16	252	119	4,814
Inflammation of Abdominal Organs	5	160	192	2,879
Melanosis	2	49
Pneumonia	19	210	106	2,361
Rheumatism	8	119	32	1,226
Septic Conditions	2	396	23	3,865
Wasted Conditions	5	...	51	773
Totals	299	5,686	4,147	225,706

TABLE L.

Shows the number of the different kinds of Animals Slaughtered at the Public Slaughter-houses each month during 1933, also the numbers of their carcasses found to be Diseased or Unsound, and the weight of each class seized and destroyed.

MONTH	Animals Slaughtered				Numbers of their Carcasses Diseased or Unsound				Weight (in lbs.) condemned from Carcasses of Animals Slaughtered on the Premises				
	Cattle	Calves	Sheep	Pigs	Cattle	Calves	Sheep	Pigs	Beef	Veal	Mutton	Pork	Total
1933													
January ...	1,117	14	2,345	424	418	4	230	11	8,685	11	212	381	9,289
February ...	1,038	7	1,970	378	376	...	270	17	17,421	...	220	518	18,159
March ...	1,116	9	2,103	367	433	...	247	20	22,358	...	212	404	22,974
April ...	1,065	4	1,892	304	417	...	202	15	13,402	...	237	257	13,896
May ...	1,196	7	2,183	308	478	...	219	18	14,487	...	159	320	14,966
June ...	1,050	5	2,083	195	413	2	107	16	11,556	...	170	343	12,069
July ...	1,006	7	1,946	133	347	1	132	9	15,542	...	196	69	15,807
August ...	1,191	18	2,402	191	421	2	136	16	13,634	5	72	289	14,000
September ...	1,161	13	2,455	246	408	4	150	25	20,142	167	131	937	21,377
October ...	1,239	10	2,519	407	417	1	187	19	20,799	49	75	113	21,036
November ...	1,178	10	2,451	549	434	2	245	96	20,993	...	166	1,413	22,572
December ...	1,243	10	2,320	491	382	2	258	47	20,941	80	190	367	21,578
Totals ...	13,600	114	26,669	3,993	4,944	18	2,383	307	199,960	312	2,040	5,411	207,723

TABLE LI.

Shews the number of the different kinds of Carcases, dressed and undressed, brought to the Slaughter-houses, each month during 1933, with the numbers found to be diseased or unsound, and the weight of each class seized and destroyed on that account.

MONTH	Carcases brought in				Numbers of them Diseased or Unsound				Weight (in lbs.) Seized and Condemned from Carcases brought in				
	Cattle	Calves	Sheep	Pigs	Cattle	Calves	Sheep	Pigs	Beef	Veal	Mutton	Pork	Total
1933													
January ...	130	...	632	13	9	...	11	...	1,928	...	189	...	2,117
February ...	110	...	612	17	11	...	19	1	997	...	375	60	1,432
March ...	96	...	808	12	9	...	14	2	986	...	372	11	1,369
April ...	181	...	813	18	15	...	8	...	2,836	...	61	...	2,897
May ...	130	2	761	10	10	1	...	...	1,262	96	...	...	1,358
June ...	185	...	841	9	10	...	2	...	1,280	...	10	...	1,290
July ...	196	...	624	7	3	...	...	1	699	...	...	24	723
August ...	152	...	615	6	2	...	2	...	484	...	...	...	484
September ...	165	...	642	16	5	...	4	1	1,804	...	146	180	2,130
October ...	123	...	552	30	6	...	4	...	2,350	...	137	...	2,487
November ...	143	...	592	25	3	...	12	...	43	...	298	...	341
December ...	183	...	593	33	4	...	9	...	1,159	...	196	...	1,355
Totals ...	1,794	2	8,085	196	87	1	85	5	15,828	96	1,784	275	17,983
Table L.	13,600	114	26,669	3,993	4,944	18	2,383	307	199,960	312	2,040	5,411	207,723
Total of Tables L. and LI.	15,394	116	34,754	4,189	5,031	19	2,468	312	215,788	408	3,824	5,686	225,706

TABLE LII.

The following is a synopsis of the organs seized and condemned in addition to the foregoing at the Slaughter-houses for the full year :—

CATTLE ORGANS		SHEEP ORGANS		PIGS' ORGANS	
Cows' Udders ...	966	Livers ...	29	Udders ...	20
Livers ...	3,127	Plucks ...	854	Plucks ...	106
Lungs ...	3,025	Kidneys ...	506	Kidneys ...	148
Hearts ...	925	Lungs ...	1,461	Livers ...	58
Kidneys ...	2,129			Lungs ...	84
Heads ...	894	Total ...	2,850	Total ...	416
Tongues ...	925				
Skirts ...	2,118				
Total ...	14,109				

TINNED AND FROZEN MEAT SEIZED FOR DECOMPOSITION.

Tinned Meat ...	20 lbs.
Frozen Ox Livers ...	26 „
Frozen Ox Kidneys ...	4 „
Total ...	50 lbs.

The number of Carcases wholly or partially condemned for Tuberculosis during each year for the last five years were as follows :—

YEAR	Bulls	Bullocks	Heifers	Cows	Calves	Sheep	Pigs	Total
1929	168	1,198	31	678	2	...	92	2,169
1930	156	1,186	19	609	1	...	60	2,031
1931	190	1,239	16	618	...	...	88	2,151
1932	263	1,223	22	746	1	...	92	2,347
1933	236	1,399	17	895	2	...	93	2,642

Statement shewing number of Animals Slaughtered, Wholly Condemned, Partially Condemned, and Weight (in lbs.) of Meat Condemned during the year 1933 :—

Class of Animal.	NUMBER OF ANIMALS.			Weight (in lbs.) of Condemned Meat.
	Slaughtered.	Wholly Condemned.	Partially Condemned.	
Cattle ...	13,714	184	4,778	200,272
Sheep ...	26,669	31	2,352	2,040
Pigs ...	3,993	22	285	5,411

TABLE. LIII.

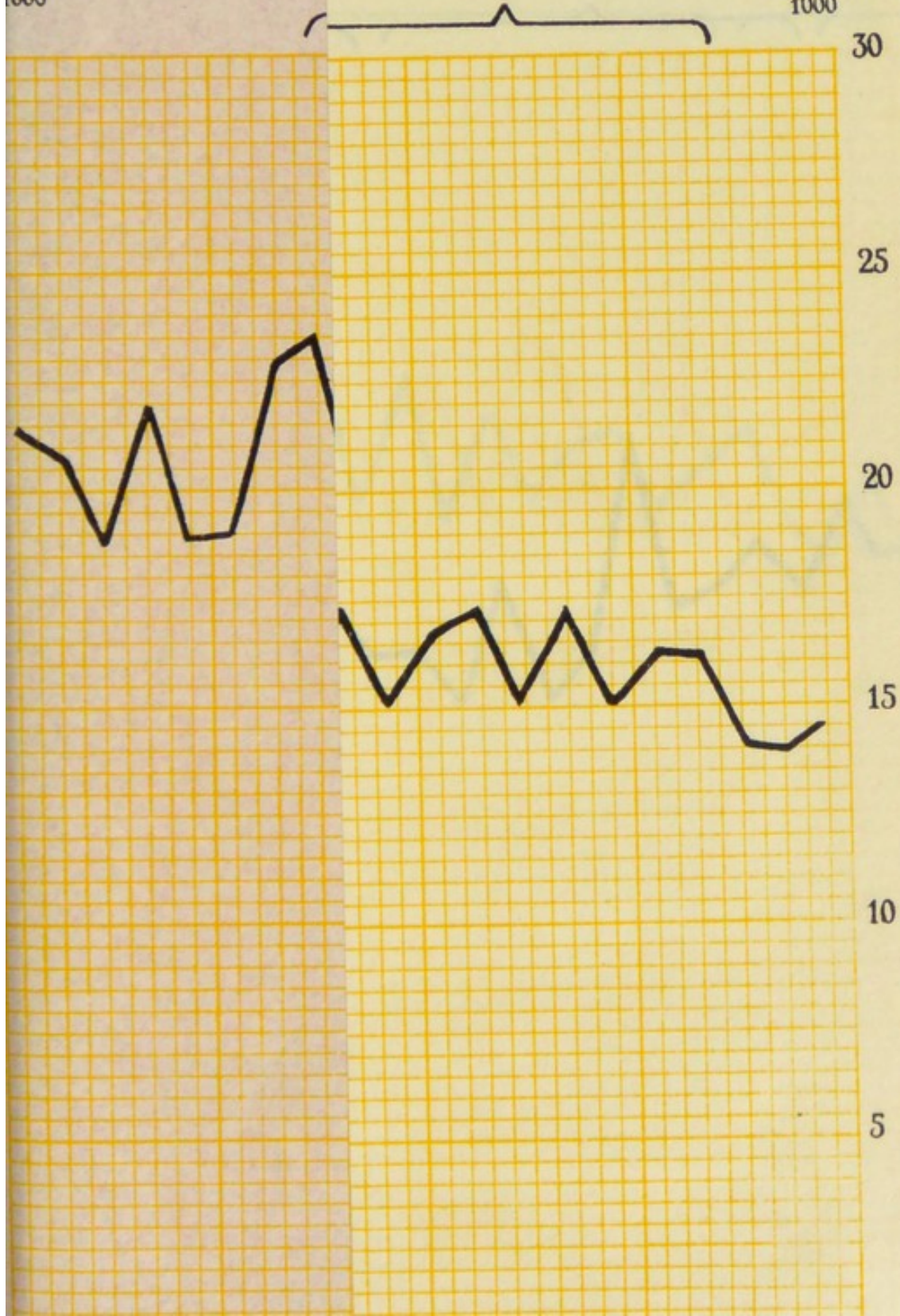
The totals for the years 1913 to 1932 (excluding 1915 to 1918) were:—

Year.	Carcasses Examined.				Numbers Diseased or Unsound.				Weight (in lbs.) of Meat Seized and Condemned.				
	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	Total.
1913	19,206	515	34,929	2,744	633	45	131	24	155,996	2,115	5,807	2,086	166,004
1914	18,664	427	34,672	3,401	549	38	156	52	134,341	1,811	6,595	3,624	146,371
1919	19,743	268	38,156	4,381	463	45	228	95	135,692	2,328	8,281	1,494	147,795
1920	20,933	250	29,795	2,386	627	51	170	58	174,715	2,955	6,707	5,931	190,308
1921	17,914	182	26,357	2,717	633	32	214	52	144,858	2,278	9,353	4,572	161,061
1922	18,825	207	31,139	4,199	879	38	350	120	188,971	1,762	13,537	6,974	211,244
1923	18,756	138	26,286	3,570	958	33	318	113	219,803	2,022	12,319	8,362	242,506
1924	18,276	184	25,691	4,037	1,382	18	485	242	209,771	714	13,219	9,875	233,579
1925	18,139	198	25,831	3,669	1,561	11	344	141	165,533	578	8,321	5,449	179,881
1926	17,469	145	28,416	2,586	3,161	22	523	127	203,663	1,043	8,491	5,605	218,802
1927	18,224	147	33,983	3,058	3,263	28	778	182	184,577	949	8,191	3,943	197,660
1928	19,328	126	31,697	4,171	2,801	19	1,262	298	163,617	1,115	6,920	6,741	178,393
1929	18,244	126	31,971	3,443	3,482	29	1,682	179	160,319	639	7,099	3,404	171,461
1930	18,689	88	31,590	2,996	3,653	19	1,133	299	170,738	328	9,144	4,510	184,720
1931	18,255	90	31,915	3,640	3,831	10	1,321	229	194,921	311	8,541	5,396	209,169
1932	15,847	134	36,484	4,158	4,723	14	2,522	253	205,963	447	6,033	4,383	216,826

VERAGE DEATH-RATE
1921-1930
15.91

TE PER
1000

RATE PER
1000

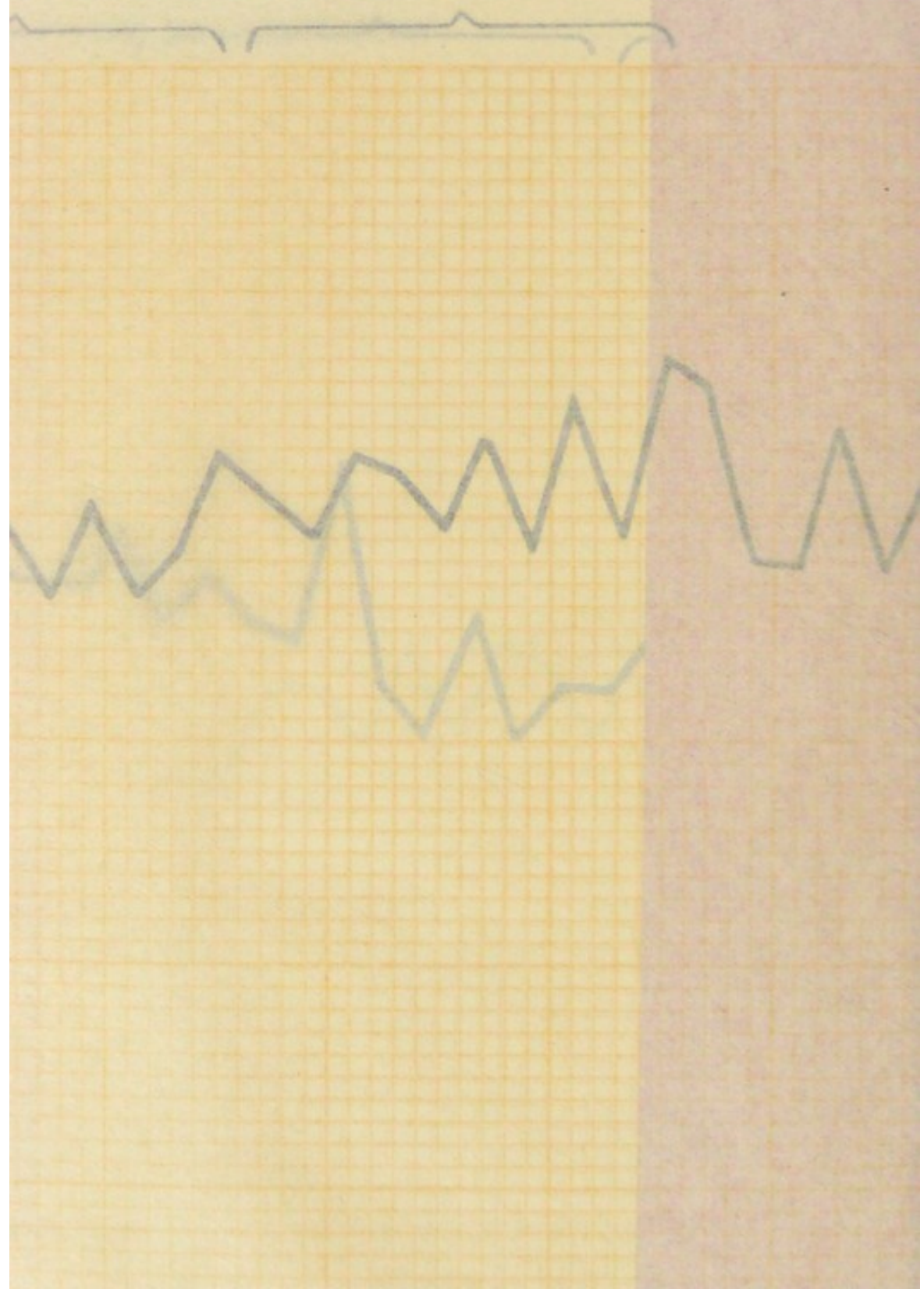


CITY INDEX

DEATH RATE

(at all ages)

AVERAGE DEATH-RATE
1891-1900
20.45
1901-1905
19.15

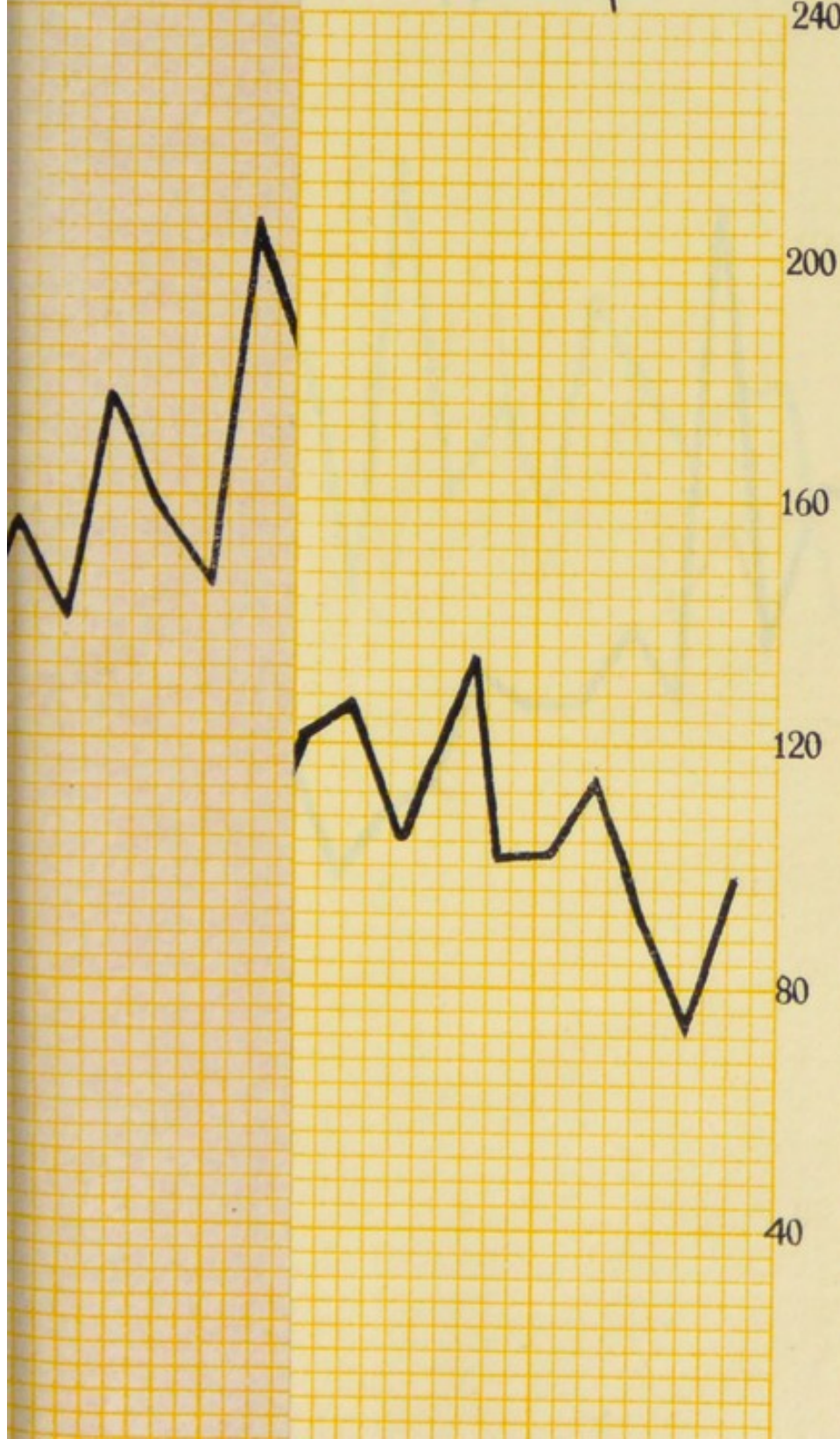


Infant-Death-Rate
1921-1930

PER
BIRTHS

113

RATE PER
1000 BIRTHS
240



INFANT

INFANT DEATHS (a)

18

Average Infant Death Rate
1891-1900 1901-1910



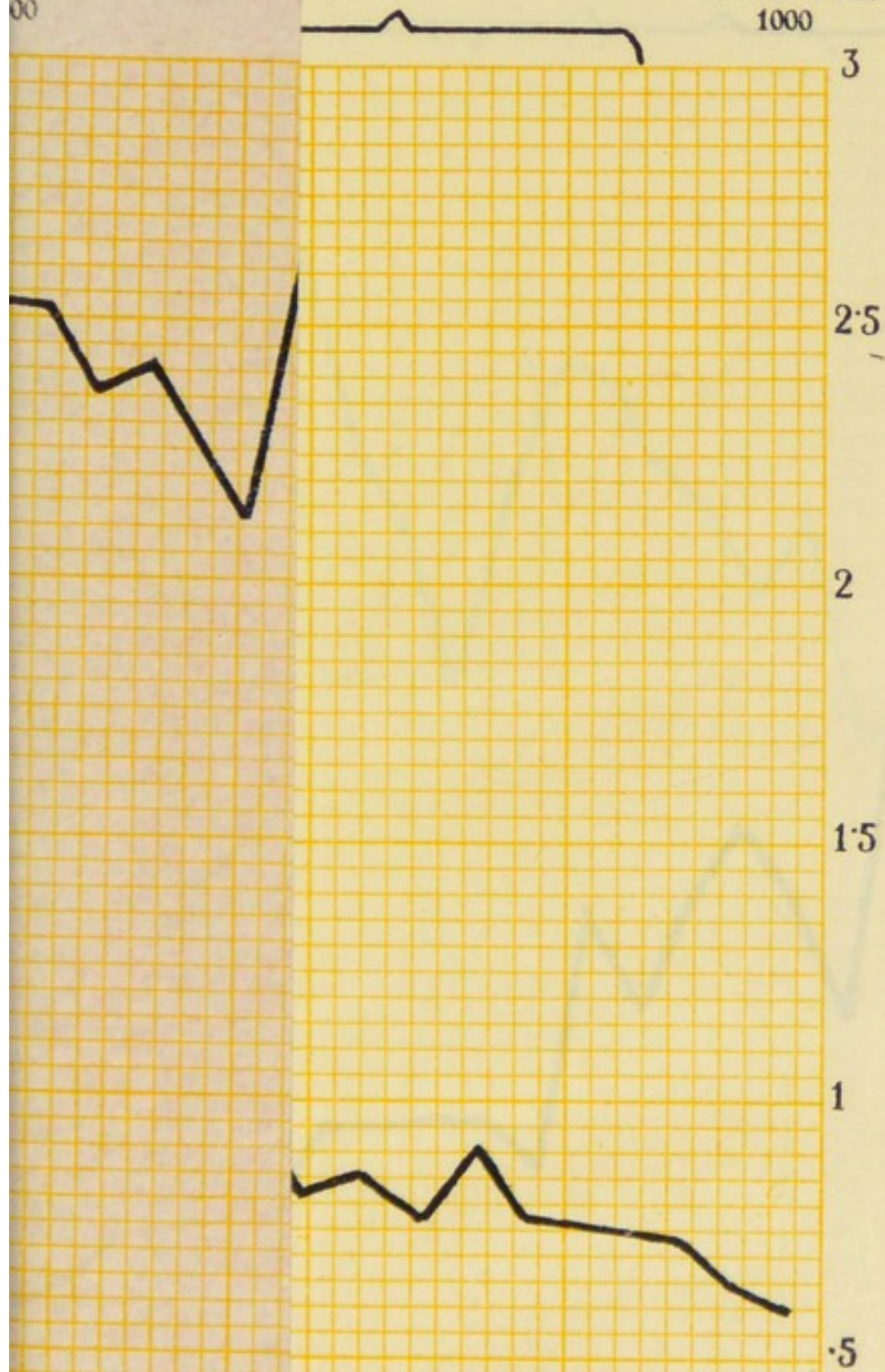
ER
HS

GE DEATH-RATE
1921-1930

E PER
00

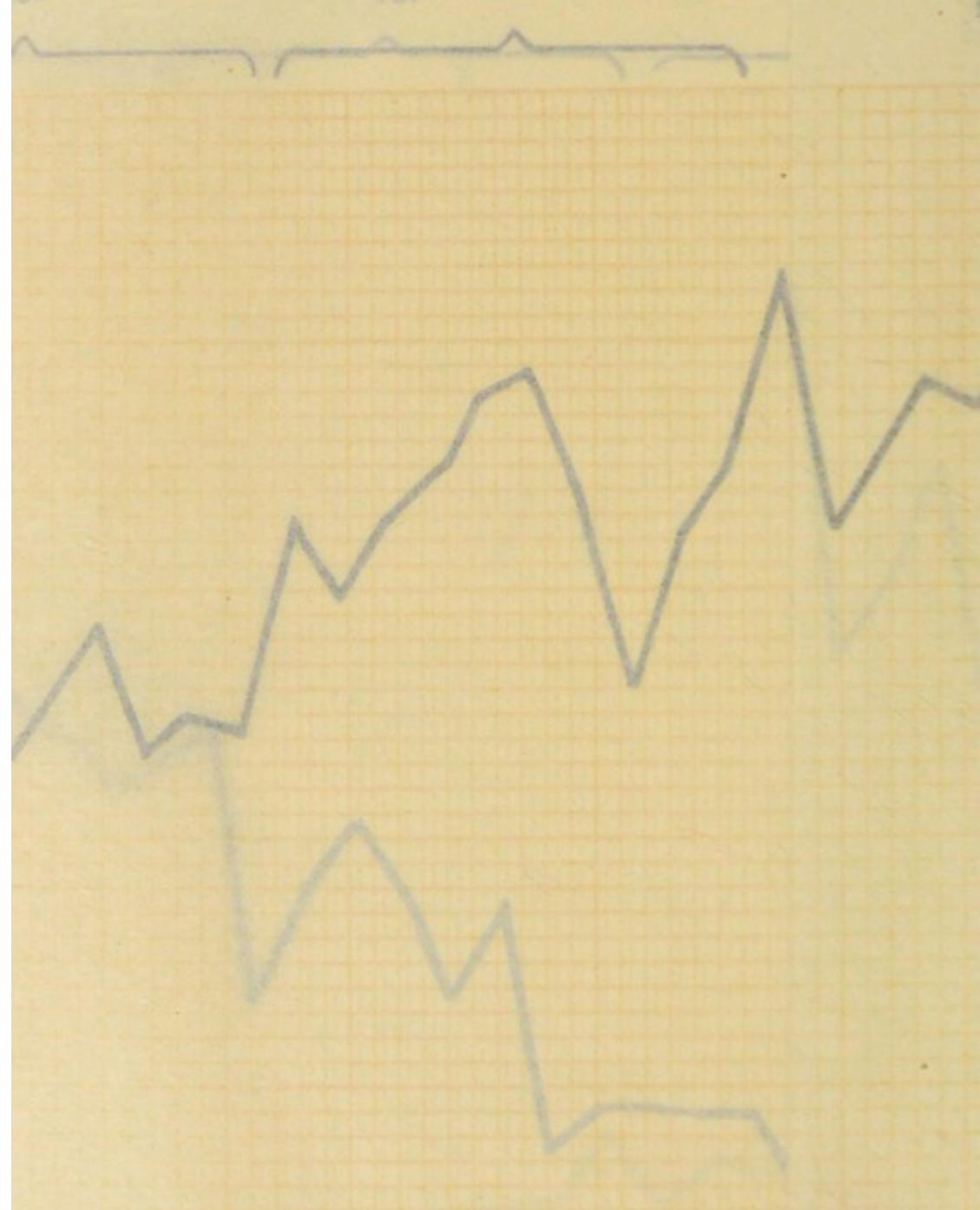
87

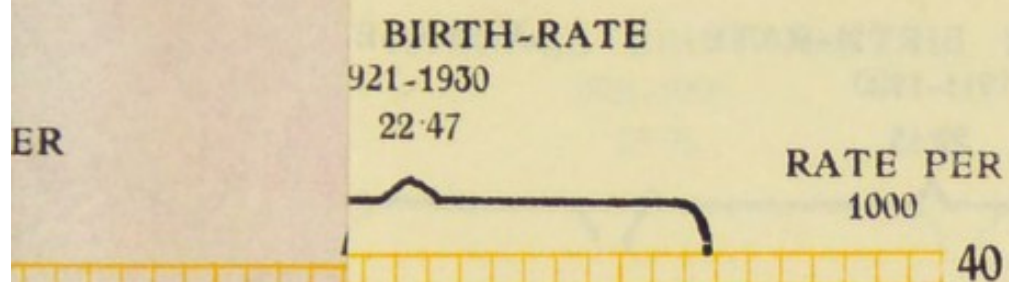
RATE PER
1000



CITY
 SISOL PULMONA
 DEATH R

AVERAGE DEATH-RATE
 1891-1900 2.56
 1901-1910 1.81
 1911-1920 1.54



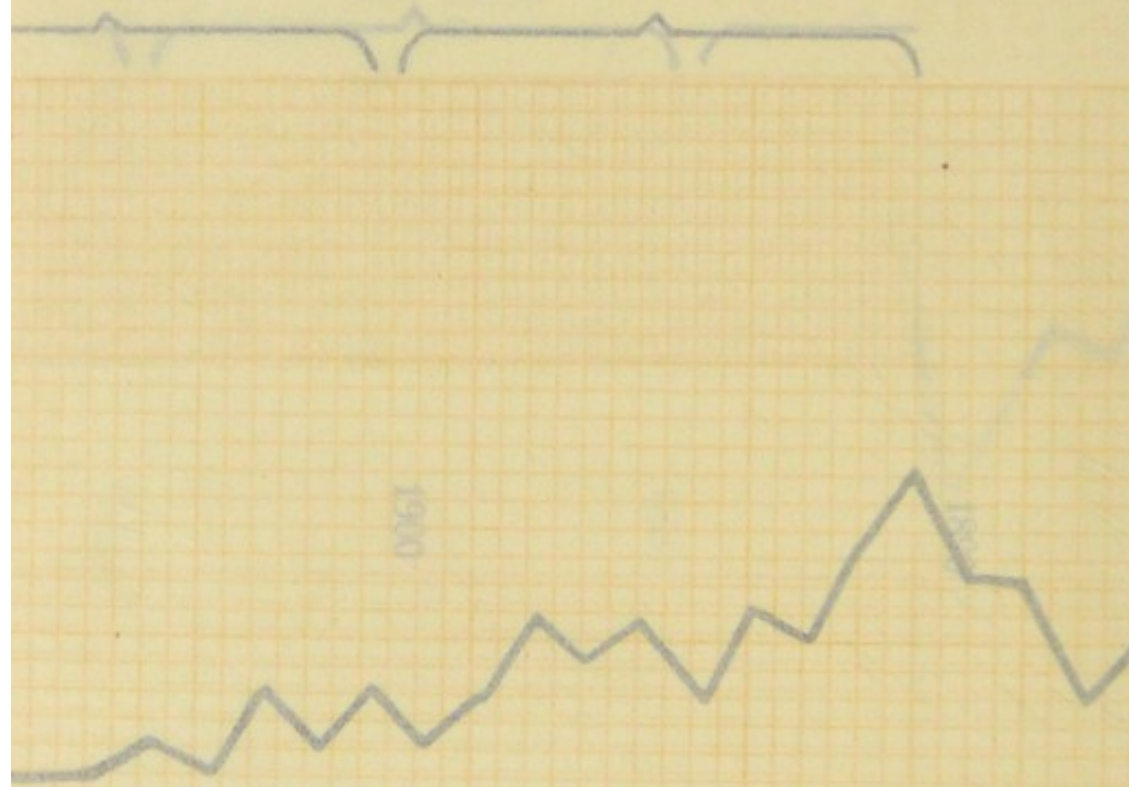


not BIRTH RATE

33188

AVERAGE BIRTH RATE

Period	Average Birth Rate
1891-1900	29.96
1901-1910	27.25
1911-1920	27.25



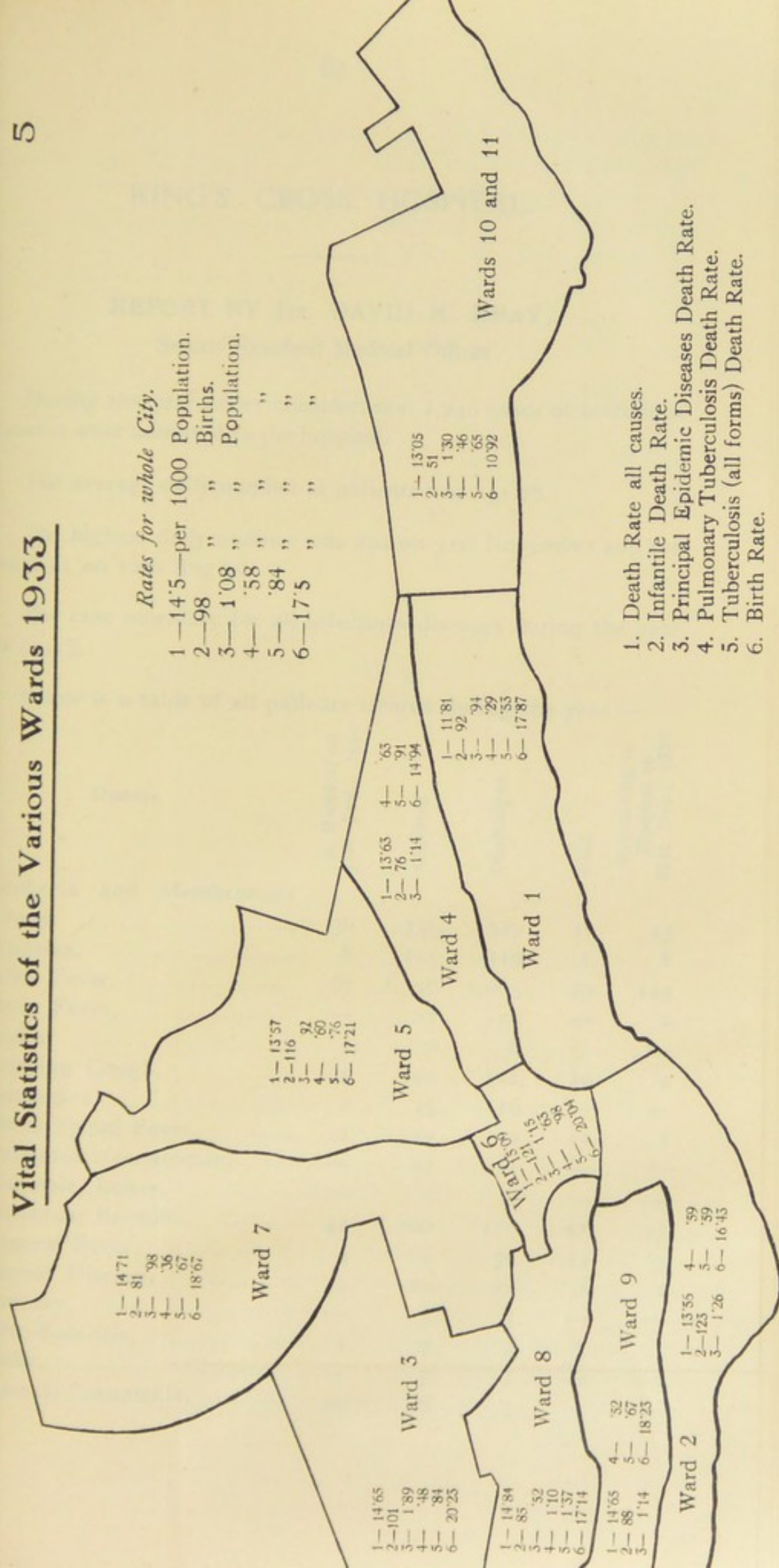
CITY OF DUNDEE.

Vital Statistics of the Various Wards 1933

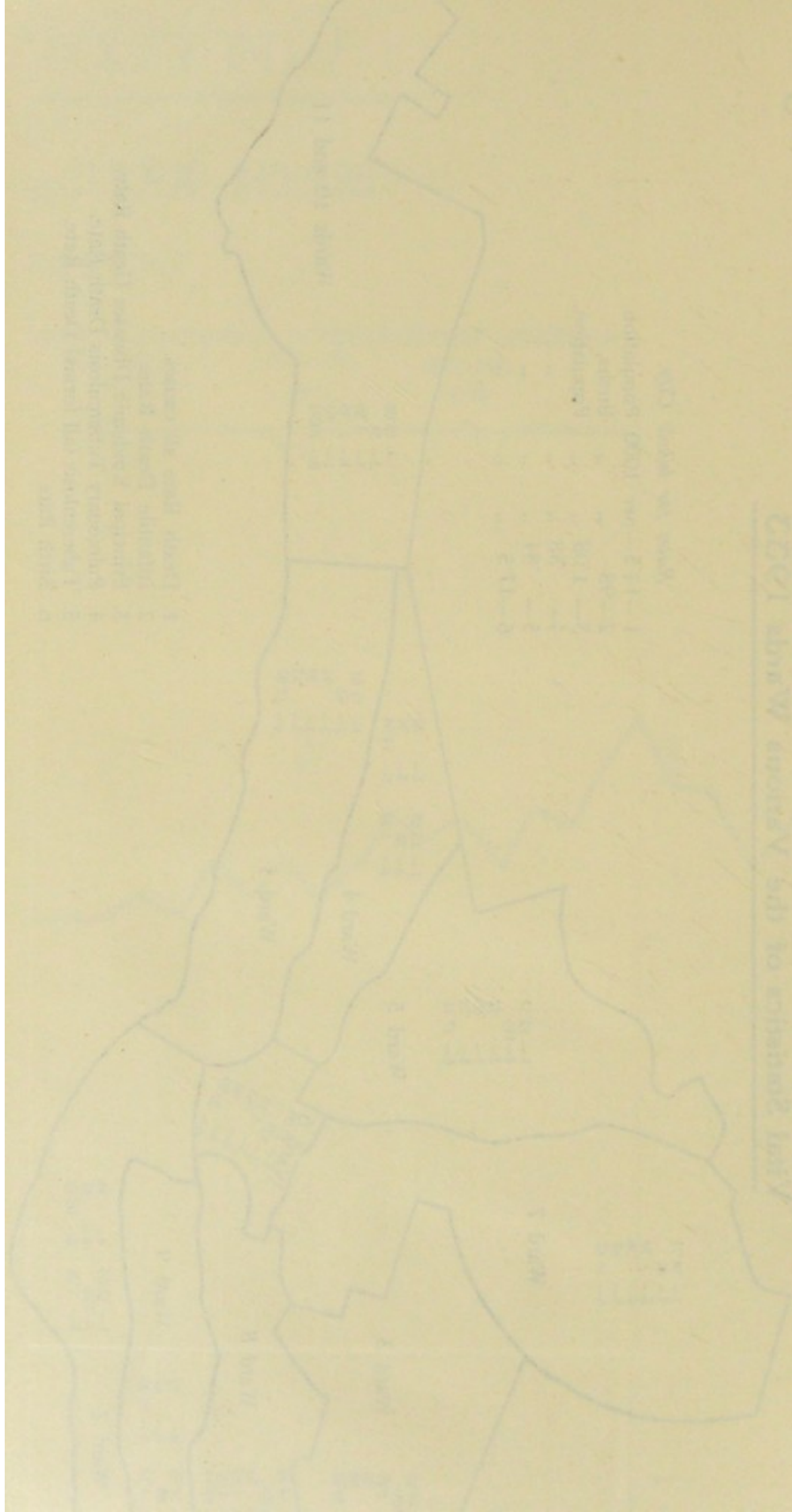
5

Rates for whole City.

1—14'5	—per 1000	Population.
2—98	"	" Births.
3—1'08	"	" Population.
4—'58	"	"
5—'84	"	"
6—17'5	"	"



1. Death Rate all causes.
2. Infantile Death Rate.
3. Principal Epidemic Diseases Death Rate.
4. Pulmonary Tuberculosis Death Rate.
5. Tuberculosis (all forms) Death Rate.
6. Birth Rate.



Hand-drawn map of the Republic of China (Taiwan) showing administrative divisions.

KING'S CROSS HOSPITAL.

REPORT BY DR. DAVID M. KEAY,
Senior Resident Medical Officer.

During the year under consideration 2,246 cases of Infectious Diseases were admitted to the hospital.

The average daily number of patients was 151.78.

The highest daily number was 294 on 31st November and the lowest 51 on 12th August.

The case mortality for all infectious diseases during the year was 6.32%.

Below is a table of all patients treated during the year:—

Disease	In Hospital on 31st Dec., 1932	Admitted	Discharged	Died	Remaining in Hospital on 31st Dec., 1933
Diphtheria and Membranous Croup,	30	336	329	12	25
Erysipelas,	8	125	119	6	8
Scarlet Fever,	67	1,136	1,065	13	125
Enteric Fever,	—	22	20	—	2
Measles,	1	7	8	—	—
Whooping Cough,	5	140	112	29	4
Chicken-pox,	1	15	16	—	—
Cerebro Spinal Fever,	1	13	2	11	1
Ophthalmia Neonatorum,	—	11	11	—	—
Pneumonia, Lobar,	—	5	5	—	—
Pneumonia, Broncho,	42	300	270	47	25
Puerperal Fever,	4	62	50	13	3
Venereal Disease,	4	20	21	2	1
Dysentery,	—	5	5	—	—
Gastro-Enteritis,	1	7	4	3	1
Rubella,	—	7	7	—	—
Influenzal Pneumonia,	—	6	5	1	—

Scarlet Fever—Diphtheria, ...	—	14	13	—	1
Parotitis,	—	7	7	—	—
Whooping Cough—Chicken Pox	—	1	1	—	—
Scarlet Fever — Chicken Pox,	—	2	2	—	—
Diphtheria—Rubella,	—	1	1	—	—
Enteritis,	—	2	—	2	—
Pneumonia—Chicken Pox, ...	—	1	1	—	—
Scarlet Fever—Pneumonia, ...	—	1	—	1	—
Totals,	164	2,246	2,074	140	196

Average Daily Number of Patients,	151.78
Highest Daily Number of Patients,	294.00 Nov. 31
Lowest Daily Number of Patients,	51.00 Aug. 12

Number of Patient Days, 55,402.

Scarlet Fever.

During the year 1,078 patients admitted with a diagnosis of Scarlet Fever were discharged, but in 50 cases the provisional diagnosis was not confirmed, the final diagnosis proving to be as follows :—

Septic Rash,	11 cases
No apparent disease,	9 „
Tonsillitis,	6 „
Rubella,	3 „
Acute Otitis Media,	3 „
Teething Rash,	2 „
Urine Rash,	2 „

and one of each of the following :—

Broncho pneumonia, Intestinal Rash, Bronchitis, Influenza, Chicken Pox, Furunculosis, Food Rash, Septicaemia, Urticaria, Stomatitis, Puerperal Infection, Acute Mastoiditis, Otitis Media with Chicken Pox, and Pyrexia of unknown origin.

Ten cases of Scarlet Fever were admitted with a provisional diagnosis of Diphtheria.

Thirteen deaths occurred, but one of these appears on the list of unconfirmed cases, namely, Broncho Pneumonia. In the other case the actual cause of death was compound fracture of the skull,

Of the remainder, five were due to Toxic Scarlet Fever, one to Septic Scarlet Fever, four to Broncho Pneumonia complicating simple Scarlet Fever, and one as a result of Fulminating Purpura Haemorrhagica arising during convalescence.

This gives a case mortality of 1.06%.

Epidemic

During the latter six months of the year just completed, Scarlet Fever was prevalent in the City in epidemic form. The "admission wave" rose from 39 patients in July to a maximum of 225 in October, and fell to 146 in December. When the epidemic was at its height the hospital accommodation was taxed to its utmost, yet no deserving case was refused admission. The number of cases admitted depended, in some measure, on the prevalence of other infections such as Diphtheria — which takes precedence — and Broncho Pneumonia. Fortunately, these diseases were rare during Autumn and early Winter, so that the extra Wards usually occupied by them were available for the treatment of Scarlet Fever patients. Additional accommodation was obtained by the diversion of a number of Broncho Pneumonia cases to Maryfield Hospital.

When the admission rate was at its highest we were obliged to discharge our uncomplicated convalescents on the 21st day of illness; that is, three days earlier than has been our custom.

On discharge, all these patients were advised to report to their own doctor or at the Hospital on the 28th day, when a routine examination was made for Albuminuria, Rhinitis, Cervical Adenitis, or Otorrhoea, and we are pleased to state that no case required re-admission.

Types of Disease

Of the patients admitted to hospital during the year, six were suffering from Toxic Scarlet, while one was of the Septic Type. The rest were of a simple or average nature but, as stated in our last annual report, although the Scarlet Fever that occurs in Dundee is of a simplex type, yet it was not quite so simple as it has been for the past number of years. Generally speaking, there was a slight yet appreciable increase in severity of type with complications far more numerous and of a more varied nature,

The epidemic afforded an excellent opportunity for testing the efficacy of antitoxin as a specific curative serum in the treatment of Scarlet Fever. Its use was recommended in all the severe cases and omitted only in those of the mildest nature.

There seemed to be sufficient evidence to prove that, given early in the disease, serum treatment was definitely beneficial. Beneficial results were shown by a more rapid fall in temperature and pulse rate, a quicker disappearance of the rash, and subsidence of the inflammation of the fauces. Yet when one considers the number and variety of complications that arose even with its use in large doses one might be justified in suggesting that its efficacy is overestimated. Certainly, once the complication had arisen serum appears to have little or no effect in preventing that complication becoming more serious, and it was valueless in the treatment of the late septic conditions.

The following is a list of the complications:—

Rhinitis,	80 cases
Cervical Adenitis,	60 „
Acute Otitis Media,	45 „
Acute Mastoiditis,	11 „
Acute Arthritis,	9 „
Broncho Pneumonia,	7 „
Nephritis,	6 „
Myocarditis,	5 „

and one of each of the following:—

Erythema Nodosum, Facial Paresis, and Fulminating Purpura Haemorrhagica.

The only complication which calls for special mention was Fulminating Purpura Haemorrhagica. The details were as follows:—

Ross ———, age 7 years, was admitted to hospital on 28th October as a case of simple Scarlet Fever. The patient had been ill for three days with sickness, headache and sore throat. The rash appeared the day before admission.

On examination, the tongue was typical of the third day's illness—furred, peeling round the edges and the papillae prominent. The fauces were congested, tonsils enlarged and septic, and there was definite left sided cervical adenitis. The face was flushed and showed well-marked circum-oral pallor,

A typical scarlatiniform eruption was present on the trunk and limbs.

The boy was generally healthy and well nourished, and no abnormality was discovered in any of the special systems. The temperature was 100.6 F., Pulse 124, and Respirations 26 per minute. Ten c.c.s of Scarlet Fever Antitoxin were given intramuscularly on admission, and the temperature returned to normal in 24 hours with a pulse rate 84. Convalescence was straightforward and uneventful until the morning of 13th November—the 19th day of illness—when a change was noticed in the patient's general condition. He was now dull, apathetic and very pale, and was bleeding from the gums. The pulse was slow—60 per minute, soft and irregular. There was persistent oozing from the gums and tooth sockets throughout the day, and towards evening large, irregular, non-tender purpuric haemorrhages appeared on the feet and round the ankles and elbows with small petechial haemorrhages on the back, chest and abdomen.

The following day he had repeated sharp attacks of epistaxis and haematemesis, while the cutaneous ecchymosis became more marked. There was no haemorrhage from the bowel and no haematuria. The condition progressed rapidly, and the prognosis was obviously hopeless. The pulse rate increased to 160 but was still irregular—the temperature remaining normal. The patient was now deadly pale and anaemic, but no further haemorrhages occurred. He became restless and delirious on the 21st day (November 15th) and remained so until the following day when he died.

The total duration of illness was slightly less than four days.

Unfortunately permission for a post-mortem examination was not obtained.

The above case is worthy of record because of its rarity especially occurring after a case of **simple** Scarlet Fever. A few cases, varying in minor details from the foregoing are mentioned in literature, but the majority have occurred after cases of **Septic** Scarlet Fever. The condition has been included in our list of complications because it is accepted in the text books as such. Yet it may be a coincidence only, for it has still to be determined whether purpura arising during convalescence from a specific fever has any direct relation to that fever.

Return Cases

A "return case" is a patient who has been infected or who is suspected of having been infected by another patient recently discharged from the hospital.

For statistical purposes an arbitrary time limit of four weeks was adopted.

Return cases occur in connection with all fever hospitals and in the present state of our knowledge appear likely to continue to do so. Every effort was made to ensure that patients discharged from hospital were clinically free from infection. No bacteriological tests were carried out, but we presumed that our convalescent patients could be discharged with safety provided the nasal and pharyngeal mucous membranes were healthy and that there was no aural discharge and no cervical adenitis. Forty-two cases occurred—a figure which constituted 4% of our total discharges. This rate compares favourably with the result of other fever hospitals, and it seems reasonable to presume, that, owing to the epidemic and the chances of infection from other sources thereby much increased, a number of these so-called return cases were not actually infected by recently discharged convalescents.

When a case did occur the supposed infecting patient was examined and the result of that examination reported to the Medical Officer of Health together with an exact copy of the notes of the medical examination made on the day of discharge and any relevant events that arose during the course of illness.

Six cases showed late cervical adenitis of varying degree, one rhinitis, and one otorrhoea. The others were clinically well.

Relapse

Relapse in Scarlet Fever occurred in seven cases. The attacks were of a mild nature, and were marked by recovery in each case. All showed the usual symptoms of invasion and eruption as present in the initial attack. The earliest date of onset was the 16th day of illness, and the latest the 27th day.

It might be a point of interest that all seven cases had been given antitoxin on admission, and it is possible that the serum had prevented the development of active immunity, and once its "protective" effect had worn off the patients were again susceptible to Scarlet Fever and might have been re-infected by cross infection or even auto-infection.

Diphtheria.

During the year 341 patients admitted with a provisional diagnosis of Diphtheria were discharged. In 113 cases the provisional diagnosis was not confirmed, the ultimate diagnosis being as follows :—

Tonsillitis,	57 cases
Scarlet Fever,	10 „
No apparent Disease,	9 „
Bronchitis,	5 „
Stomatitis,	5 „
Non-Diphtheric Laryngitis,	3 „
Broncho Pneumonia,	3 „
Coryza,	3 „
Acute Rhinitis,	2 „
Gastro Enteritis,	2 „
Dysentery,	2 „

and one of each of the following :—

Rubella, Peritonsillar Abscess, Cerebro Spinal Meningitis, Paratyphoid B, Erysipelas, infection of the tonsillar beds, Post Influenzal Debility, Streptococcal infection of the nose and throat, Teething, Chicken Pox, Papular Rash, and Pyrexia of unknown origin. One case admitted as pneumonia was ultimately diagnosed as diphtheria. Of the accepted cases of diphtheria nine died, giving a case mortality of 3.93%.

Type of Disease

In the following table the cases are classified according to the type of disease.

Type	No. of Cases	No. of Deaths	Case Mortality
Faucial,	202	4	1.98%
Faucial and Laryngeal,	11	3	27.27%
Laryngeal only,	11	2	17.27%
Faucial and Nasal,	2	...	.....
Nasal only,	3	...	.....
Totals,	229	9	3.93%

Laryngeal Diphtheria.

The operation of tracheotomy was performed for laryngeal obstruction in 3 cases of which one died, giving a case mortality of 33.3%.

Dosage of Antitoxin

The dosage of antitoxin and its methods of administration remain the same, and are detailed below :—

Under 6,000 units,	.....	46 cases
6-10,000 ,,	.....	98 ,,
10-20,000 ,,	.....	57 ,,
20-30,000 ,,	.....	16 ,,
30-50,000 ,,	.....	8 ,,
Over 50,000 ,,	.....	4 ,,
		<hr/>
		229 ,,

Thus once again about 60% of the patients received less than 10,000 units and 90% less than 30,000. These percentages are identical with our last year's figures, although there is an increase of over 50% in the "under 6,000 units class." Further, of the 229 accepted cases of diphtheria only 12 patients received over 30,000 units. Of these, four received over 50,000 units and all four died. This also conforms with our last year's observations that anything over this dosage is wasted. It is possible that the highest effective dose was about 30,000 units, but naturally we tended to err well on the side of safety.

Post-Partum and Post-Abortum Infection.

This part of the report is presented in the usual fashion so that continuity of arrangement may be maintained.

During the year 50 patients admitted with a provisional diagnosis of post-partum or post-abortum infection were discharged from the hospital and 13 died.

The diagnosis was not confirmed in 12 cases, and of these 2 died—one from lobar pneumonia and the other from acute pulmonary tuberculosis. Of the other unaccepted cases, five were of incomplete abortion and one each of the following:—Cystitis, Scarlet Fever, Dental Abscess, Erysipelas, and no apparent disease.

One case admitted as Scarlet Fever was ultimately diagnosed as post-partum infection. Of the 52 cases in which the diagnosis was confirmed, 11 died—a case mortality of 21.5%.

Sources of Infection.

The cases may be classified according to the place of confinement or abortion as follows:—

In the patient's home in Dundee,	25 cases
In Institutions in Dundee,	15 „
In the patient's home outside Dundee,	10 „
In Institutions outside Dundee,	2 „

Post-Partum Infection.

There were 42 cases of post-partum infection with 9 deaths. A case mortality of 21.42%.

Age of the mother:—

Under	20	20 +	25 +	30 +	35 +	40 +
	2	16	13	9	5	7

as usual more than 50% occurred within the decade 20—30 years.

Number of Confinements.

1st Confinement,	17 cases or 32.7%
2nd, 3rd or 4th Confinement, ...	26 cases or 50%
5th Confinement or over, ...	9 cases or 17.3%

State of the mother—Five cases occurred amongst unmarried mothers.

Stay in Hospital.

Of those who recovered the average stay in hospital was 33 days. The longest being 92 days—the shortest 12 days.

Of those who died the average stay was 15 days, with 86 days the longest residence and 1 day the shortest.

Nature of the Confinement.

In 13 cases the confinement was abnormal or the delivery instrumental. The details are as follows:—

1.—Instrumental Delivery,	10 cases
2.—Abnormal presentation requiring internal manipulation,	2 „
3.—Post-partum haemorrhage,	1 case

Damage to Soft Parts.

In 27 cases there was damage to soft parts of varying degree. Cervical laceration occurred in 8 cases, perineal tears in 6 cases, while combined perineal and cervical lacerations occurred in 13 cases.

Clinical Types of Infection

Group 1.—Cases in which the infective process was localised to the uterus and/or external genitalia. There were 34 cases of these with 3 deaths.

The bacterial results of uterine cultures are summarised as follows :—

1.—Haemolytic Streptococci,	12 cases
2.—Non Haemolytic Streptococci,	1 „
3.—Non Haemolytic Streptococci + other organisms (colon bacilli, staphs, etc),	8 „
4.—Staphylococci, colon bacilli, etc.,	13 „

Group 2.—Cases where the infection had spread through or beyond the uterus to the appendages, cellular tissues or peritoneum, but which remained non-septicaemic. There were five of these cases with two deaths.

The bacteriological results of uterine cultures were as follows :—

1.—Haemolytic Streptococci,	4 cases
2.—Non Haemolytic Streptococci,	1 case

Group 3.—Cases (septicaemic) where the infecting organisms were recovered from the blood stream—3 in number and all died. In each case the blood culture was positive to the haemolytic streptococcus.

Summary of the bacteriological findings in the three groups :—

Haemolytic Streptococci,	19 cases
Non Haemolytic Streptococci,	2 „
Non Haemolytic Streptococci + other organism,	8 „
Staphylococci, Colon Bacilli, etc.,	13 „

Post-Abortal Infection.

There were 15 cases of post-abortal infection admitted during the year. The diagnosis was confirmed in 10 of these and two died. The unaccepted cases were of simple incomplete abortion.

Bacteriological findings were as follows :—

Case	Blood Culture	Uterine Culture	Result
1.	Sterile	Haemolytic Streptococci	Died
2.	do.	No growth	Died
3.	do.	Haemolytic Streptococci	Recovered
4.	do.	Staphylococci	do.
5.	do.	Streptococci + Staphylococci	do.
6.	do.	Staphylococci	do.
7.	do.	Staphylococci	do.
8.	do.	Streptococci + Colon Bacilli	do.
9.	do.	Staphylococci + Colon Bacilli	do.
10.	do.	Staphylococci + Colon Bacilli	do.

Comments

The high mortality amongst cases of Post-Partum infection calls for comment.

Naturally, the death rate, depending as it does, on the type of case admitted, must vary from year to year. A number of patients, although admitted in the very early stages of illness had such a virulent infection that no treatment was, or could have been of any avail. Unfortunately inquiry into the history of others showed that they had been ill for some time, and on admission were found to be suffering from peritonitis and were moribund.

Along with septicaemia, peritonitis was the most fatal complication.

It is an accepted fact that delay of operation in any form of acute peritonitis is dangerous, and in no type is this more evident than in the Post-Partum variety. Cases of Haemolytic Streptococcal Peritonitis do not present the classical sign or subjective phenomena of the ordinary acute surgical abdomen, and diagnosis is often difficult. Although the prognosis is always grave, yet it is by no means hopeless provided simple laparotomy with drainage is carried out within 24 hours of the onset. If later than this we can hold out very little if any hope of recovery.

Puerperal Sepsis as a notifiable disease is not defined, but Puerperal Pyrexia is accepted as a clinical entity. It would be wrong to suggest that all cases showing the clinical symptoms or signs necessary for the notification of the latter condition should be admitted to hospital. The rise in temperature may be due to some simple and easily explained condition, but in the absence of this explanation or where the graver type of illness is suspect we would suggest that the patient be regarded as an "Emergency" case and admitted forthwith.

In conclusion, we would like to state that a case of Puerperal Infection is admitted, on request, at any hour of the day or night, that accommodation is ample, and our nursing staff specially trained in the care and after treatment of these patients, and we hope our plea will meet with a response on the part of the General Practitioners.

MARYFIELD HOSPITAL.

REPORT BY Dr J. B. MACDONALD,
Medical Officer.

During the year 1933, Maryfield Hospital has been gradually rising to its new status as a general hospital under the Public Health Department, and there has been harmonious co-operation with increase of work.

On January 1st there were in Hospital 124 men, 158 women, 22 boys, and 17 girls; and there were admitted during the year 651 men, 651 women, 160 boys and 180 girls. The total number of patients treated during the year was 1963.

The Hospital accommodation consists of 328 beds, and the average daily number of patients was 293. The smallest number on any one day was 237 and the largest 361.

An analysis of the discharges for the year shows the following diseases treated and the number of cases of each :—

Bone and Joint,	19
Circulatory,	164
Ductless Glands,	1
Infancy and Malformation,	22
Digestive,	133
Genito-Urinary,	39
General,	54
Infectious,	38
Malignant,	44
Nervous,	145
Senile Debility,	126
Pregnancy and Parturition,	44
Respiratory,	267
Mental,	221
Skin,	161
Tuberculosis,	50
Injuries,	34

There were 31 infants born in Hospital, and 119 healthy children admitted, most of the latter being subsequently transferred to Duncarse Children's Home.

During the year 336 patients died, most of these being advanced in years. One female died in her 100th year. There were 15 deaths of children under the age of 10.

Five cases of Erysipelas, 4 cases of Pulmonary Tuberculosis, 2 cases of Dysentery, and 3 cases of Acute Primary Pneumonia occurred in Hospital and were notified to the Medical Officer of Health.

There were 69 operations performed in the theatre during the year.

The operations performed by Mr F. R. Brown, F.R.C.S., Visiting Surgeon, included :—

- 3 of Appendicectomy.
- 4 of Gastro-enterostomy.
- 3 of Cystotomy.
- 2 of Salpingo-Oöphorectomy.
- 1 of Sympathectomy.
- 1 of Circumcision.
- 4 for Hernia.
- 1 for Radical Cure of Hydrocele.
- 1 Excision of Anus.
- 1 Excision of Coccyx.
- 2 Excisions of Breast.
- 1 Colostomy.
- 1 Amputation of Leg.
- 1 Amputation of Toes.
- 1 Excision of Polypus from Jaw.
- 1 Excision of Neuroma.
- 1 Lateral Anastomosis.
- 1 Laparotomy.
- 1 Reduction of Dislocation.

Mr M. J. Gibson, F.R.C.S., Aural Surgeon, performed the following operations :—

- 3 of Tonsillectomy.
- 1 for Mastoid Disease.
- 1 Incision of Abscess of Ear,

Dr A. R. Moodie, F.R.C.S., Ophthalmic Surgeon, performed the operation of Enucleation of Eyeball.

The feature of the work in the Gynaecological Department was the appreciable increase in the number of Gynaecological cases. The operations performed by Dr R. C. Buist, LL.D., M.D., C.M., M.R.C.P., Visiting Gynaecologist, included:—

- 1 Anterior and Posterior Colpo-Perineorrhaphy.
- 2 Abdominal Hysterectomies.
- 1 Cauterisation of Condylomata.
- 1 Repair of Cervix.
- 1 Salpingo-Oöphorectomy.
- Several Cases of Curettage.

Over 300 Gynaecological and Surgical examinations were made during the year by Dr R. C. Buist, Visiting Gynaecologist, and Mr F. R. Brown, F.R.C.S., Visiting Surgeon.

Excellent work was done during the year by Mr J. M. Laburn, L.D.S., Visiting Dental Surgeon, who held a weekly dental clinic and attended to the teeth and gums of patients.

The Resident Medical Officers did what minor Surgery was required, including lumbar punctures, intravenous work, and injections for varicose veins.

Ultra-violet ray treatment was given to 31 patients.

During the year contact was established with the panel and private doctors of patients. On the discharge of a patient a note was sent to the doctor with information regarding the patient's condition and treatment. Results of clinical and bacteriological investigations were also communicated.

I wish to put on record the valuable and faithful work done by the Resident Medical Officers.

Routine clinical work, including gastric fractional analysis, and blood sugar and urea estimations, was done in Hospital; and special tests and investigations were carried out by the Bacteriological Department of Dundee Medical School,

Patients requiring X-Ray examination were sent to Dundee Royal Infirmary or to the Public Health Institute.

At the Preliminary Examinations of the General Nursing Council for Scotland, junior nurses from Maryfield Hospital secured 43 passes out of a total of 52 subjects; and in the Final Examinations our senior nurses had 13 passes out of 14 subjects.

The following list shows the subjects taught during the year and the number of lectures given in each :—

Anatomy and Physiology,	72
Hygiene,	36
Practical Part I.,	37
Bandaging,	6
Poultices,	3
Medical Nursing,	38
Surgical Nursing,	37
Gynaecology,	37
Practical Part II.,	34
Cooking,	8
Dietetics,	10
Bacteriology,	6
Venereal Disease,	6

Each probationer received individual tuition from the Sister Tutor. Each nurse in training had an opportunity to be present at 36 ante-natal examinations and 30 operations.

The appointment of a trained Kitchen Superintendent has paved the way for the scientific dieting of patients suffering from certain diseases; and a system of classified dietaries is under consideration.

There were 261 patients with mental trouble under treatment in the Observation Wards during the year. Of these 106 were transferred to the Asylum for further treatment, and most of the others were discharged recovered to their homes or transferred to medical wards.

The large number of cases sent to Westgreen from Maryfield may be partly due to the unwillingness or unpreparedness of practitioners to certify their patients. Friends of mental patients frequently experience difficulty in appreciating asylums as hospitals for curative treatment, and certification continues to be regarded by some as a stigma from which there is no recovery.

A Psychiatric Block at Maryfield with 40 or 50 beds would ease this situation so far as Dundee is concerned.

At present a mental patient who is noisy cannot be kept for any length of time at Maryfield, as the other patients who need rest and quiet for their recovery are cooped up in the same ward.

The present Observation Wards are two in number—one for males and one for females—and each has ten beds.

If we had two wards for the men and two for the women, we could treat the quiet cases apart from the violent and noisy cases, and do more creative work at Maryfield without certification.

J. B. MACDONALD, M.A., M.B., L.R.C.P.

WESTGREEN MENTAL HOSPITAL.

REPORT by Dr W. TUACH MACKENZIE,
Medical Superintendent.

The number of patients on the Hospital Registers was, on 15th May, 1933, 596 (302 men and 294 women), and on 15th May, 1934, 597 (302 men and 295 women). Besides the above certified cases, two females were admitted as Voluntary Boarders, one of whom was discharged at the end of three months to her friends, the other died at the end of three weeks from post-operative exhaustion.

During the year there were 108 Admissions, 76 Discharges, and 31 Deaths. The total number under treatment was 704 (357 men and 347 women), and the average daily number 595 (296 men and 299 women).

At the end of the statistical year the 597 patients were chargeable as follows :—

	Male	Female	Total
Dundee,	296	285	581
Angus,	2	5	7
Other Districts,	4	5	9
	302	295	597

The " Service " patients, maintained as Private Patients, numbered 23 at the commencement and 22 at the close of the year, during the course of which 2 were admitted, 1 was discharged recovered, and 2 died.

Admissions.

In co-operation with the usual underlying and predisposing factor of a nervous constitution inherited or acquired, the exciting factors or stresses which, operating singly or conjointly in the individual cases, brought on the mental attack among those admitted were mainly the following :—

(1) Pathologic stresses or bodily ill-health occurring most frequently in such forms as general debility, disordered metabolism and exhaustion, but also in such forms as syphilis, sepsis and other microbic infections in 10%.

(2) Biologic stresses in 50%, comprising the critical periods of life in both sexes—the climacteric in 10%, adolescence in 17%, and senility in 23%.

(3) Psychis stresses in the form of mental perturbations, such as worry and shock and want of occupation in 36%; and

(4) Toxic stresses in the form of alcoholic and drug excesses in 4%.

The types of mental illness among the admissions comprised mainly the constitutional psychoses, e.g., melancholia in 22 cases, in 16 of these active suicidal tendencies were manifested, Schizophrenia 12, delusional psychoses 31, confusion and delirium 21. The psychoneurosis included epilepsy in 5, neurasthenia in 4, and hysteria in 2. The organic psychoses comprised those of general paralysis 7 cases and cerebral arterio-sclerosis in 1 case, and the congenital psychoses or amentias were represented by 3 morons and imbeciles with active psychotic manifestations.

During the past few years a number of mental defectives have been admitted. In most of these, there was also present some mild form of mental disease. The terms "mental disease" and "mental deficiency" are frequently used, in error, to denote the same condition. They are two entirely different conditions. Mental illness or disease is a disorder affecting a mind which previously was in a healthy state, and is in the main an eminently curable condition. Mental defectives on the other hand are persons who suffer from arrested development of the mind and is a permanent condition. Mental defectives are not capable of competing in life with normal persons, they are lacking in self-control and commonsense. Many have no sense of responsibility and of social obligation. They often have antisocial propensities, so as to be a potential menace to the public.

Discharges.

The cases discharged during the year numbered 76 (42 men and 34 women). Of these 45 were discharged as recovered, 30 as improved and 1 not improved, the recovery rate being 41.6 per

cent. of the number admitted, in addition those improved being 28.2 gives a total of 69.8 per cent. of cases who have more or less completely regained their health. Of those relieved and not improved, 1 was boarded out, 21 transferred to other Mental Hospitals, and 9 to the Lunatic Wards, East Poorhouse.

Of the patients discharged as recovered, 13 were resident less than three months, 14 less than six months, 12 less than nine months, and 6 for periods up to three years.

Deaths.

Thirty-one patients (13 men and 18 women) died during the year. Based on the average daily numbers the death rate was 5.2 per cent. The deaths were all due to natural causes, and the causes which were verified by autopsy in 58 per cent., that is in all cases where consent was given by the relatives, were chiefly the following :—

Valvular Heart Disease in 9 cases; Acute Lobar Pneumonia, 4; General Paralysis, 2; Pulmonary Tuberculosis, 3; Epilepsy, 4; Chronic Bronchitis, 2; Exhaustion from Acute Mental Excitement, 2; and one each to the following :—Paralysis Agitans, Huntingdon's Chorea, Chronic Nephritis, Cerebral Tumour and Cerebral Thrombosis.

The ages at death were as follows :—

Between 25 and 35, three cases; 35 to 45, six; 45 to 55, five; 55 to 65, nine; 65 to 75, seven; and between 75 and 80 years, one case.

It is to be remembered that there is in the community at all times far more mental disease than is represented by the population of our mental hospitals. Especially is this true in the case of epilepsy and feeble-mindedness, only the extreme cases of these conditions, or those cases which represent definite social problems, reach the hospitals. Furthermore, no account at all is taken of the enormous amount of minor mental disease, a term I am here applying to those conditions called nervousness, neurasthenia, hysteria and the like. It will perhaps shock some that a case of "nervous breakdown" should be classed with the mentally sick, but I want to emphasise that insanity and mental sickness are not

at all equal terms, and that neurasthenia and the like conditions represent minor but often very intractable forms of mental disease, though they do not contribute to the officially recognised insane population. Mental diseases, in short, consists of a collection of widely differing diseases and conditions. Insanity implies a mental irresponsibility which the bulk of the mentally sick never reach.

The study of the signs of mental derangement therefore is of immense importance to mankind, inasmuch as it leads to the prevention of a disease which robs man of all his highest attainments. Mental illness seldom comes like a thunderbolt out of a clear sky. The study of mental illness clearly shows that it practically never develops in a day; but that, on the contrary, often weeks and months elapse before the deviation or change from normal mental health is observed, often some accidental circumstance, some apparently trivial event may be the determining cause of the outbreak; but the conditions have been there before, and as in the old saying, the new event was but as "the last straw" that made the burden intolerable. If the early history of the patient be only patiently and carefully investigated, it will be found that eccentric acts were performed long before the outbreak of the disease.

Mental illness exists long before the certifiable stage, but unfortunately no notice is usually taken of it so long as the person does not seriously interfere with the social current. But when, for various reasons, he becomes troublesome or commits an indiscretion which affect his own existence or which brings discredit on his family and friends he may be declared "legally" insane and deprived of his liberty. What the law takes notice of is not whether the person is unsound in mind—in the medical sense—but whether the person is insane in conduct or likely to become so. Whatever the person believes, or thinks or feels matters only in the medical estimation of mental illness. In the legal sense it is of no consequence, so long as his conduct is not affected thereby. It is for what he says and the way he behaves that a person is certified insane. It is the patient's lack of self-control and inability to adapt himself to his environment which is the criterion of admission in the legal sense to a Mental Hospital.

Thus, what was before medically true, though legally denied, is admitted only when the preliminary and most curable stage of the illness has passed.

There is no sharp line of separation between the medically mentally ill and the legally insane. There are indeed no hard and fast lines separating sanity and insanity, soundness and unsoundness of mind; further there is no sharp line between health and disease in general, disease being nothing more than an exaggeration or lack of proportion of normal phenomena.

Whereas the general diagnosis of mental illness, when once so pronounced as to require certification, is in many cases so easy that it can be made by any layman, the early stages of mental unsoundness often demand all the science and skill of the most experienced observers. Even in the realm of bodily disease, where exact physical means for diagnosis are at hand, it is often difficult to decide where health changes to disease. It is still more difficult in mental disease, where a standard of mental health can only be thought of as ideal, where no individual is exactly like another.

In reference to the body, "feeling well" is the chief mark of health; most people who are sick know it. With the mind it is otherwise; here there is no connection between health and feeling well, and the patient is not in a condition to say whether he is well or not. Consciousness of derangement occurs, as a rule, only at the very beginning of mental illness, and that only in some patients, and it occurs again just before recovery, when the knowledge of being mentally ill is one of the most marked symptoms of convalescence.

At the approach of mental illness the unfortunate sufferer is often conscious of a gradual loss of control over his thoughts, feelings and fears, but he conceals with the utmost jealousy from his relatives and friends the agony that is eating into his very soul, and there is no doubt that innumerable acts which puzzle and appear totally unaccountable to friends and strangers are the results of mental conflict hidden in the depths of the patient's mind. Persistent introspection, excessive sensitiveness, a feeling of unsettledness, a want of power of continuous application to the usual occupation, are all characteristics not to be lightly regarded. A prolonged condition of want of conscious energy, when work ceases to be a pleasure, where there is "no go" in the man, is a symptom to be taken notice of.

Of course, none of us reach the ideal in mind and conduct, and some of us have marked peculiarities. Nearly all the world is cracked, but some succeed in concealing the crack better than others.

In the incipient stage of mental illness the patient is sometimes fully sensible of entertaining exaggerated and unnatural impressions, he is acutely conscious of the mind dwelling morbidly and sometimes against his will irresistibly upon certain trains of absurd, unhealthy, and it may be very impure thoughts, he painfully recognises the fact that insane ideas are struggling to master his reason and obtain an ascendancy over his judgment.

The difference between sanity and insanity consist in the degree of self-control exercised. We all have, at some time or other, thoughts passing through our minds and feelings agitating us which, if they were expressed and indulged in, would be as wild and perhaps as frightful in their consequences as those of any madman. But the person of normal mind represses them and seeks fresh impressions from without if he find that aid needful. The man of weak mind, on the other hand, yields to them, meditates on them, indulges in them, and thus they acquire fresh force, until he is totally unable to free himself from the thought or subject that haunts him, and he is then insane.

The standard of sanity depends (a) partly on the environment, which varies not only with every stage of civilisation and barbarism, but also with each social station and each grade or phase of education; what would be natural and commonplace in one state of society or in one community would be altogether unusual and peculiar in another.

(b) The standard of sanity depends also on the standard of the individual. Everyone thinks and acts in his own way, and thus there is formed a special standard of what may be called normality, which is made up of habits, social instincts, education, training and more especially of those moral traits that constitute what we call character. In these respects the individual must be measured by the standard of his own personality—he must be tested by what he ought to be and by what he was in his normal condition—before any accurate decision can be arrived at in any case of suspected mental disorder.

No two persons think, feel or act in the same way; no two take the same view of any question; no two can be said to observe the same object in an identical manner or from the same standpoint, and this is so because the intellect of each works on different lines according to inherited proclivities, individual experience and education. It is this diversity which forms the basis of distinct indi-

vidual personality. It is our possible, not necessarily our actual personalities that are pre-determined in the germ cells.

Much has been said about the differences observed between the various offspring of the same parents, but we must not forget, just as two elements in chemistry, each of them harmless, can combine to form a virulent poison, so two harmless elements, one derived from one parent and one from the other, can be inherited by the child and form a combination, which, if not checked early may be detrimental to its future. It has to be remembered, however, that diseases are not inherited in the identical manner, but what is inherited is a vitiated constitution.

According to my own experience, there is one mental disorder which certainly seems to run in families, that is melancholia. A great deal of discussion has taken place regarding the transmission of acquired characteristics, and it is now generally believed that acquired characters which do not affect the brain directly are not transmitted, but those which do are transmitted as tendencies.

It is a matter of common observation that mutilations are not inherited, wooden legs do not run in families, although wooden heads often do.

Little incidents typical of many happenings could be told, little and insignificant perhaps in themselves and in ordinary circumstances, but far from being so in a mental hospital, where a little lack of observation, or a little carelessness and thoughtlessness, or a little want of forethought, may lead to very serious consequences. In mental hospital work it is "active service" conditions all the time, unceasing vigilance when on duty is an essential and vital requirement for every worthy member of the nursing and medical staff.

General and Administrative.

The work in the Occupational Therapy Department has been carried through with interest and enthusiasm, and has met with exceedingly gratifying results. To most of the patients employed there it is a place of decided interest, there is nothing worse for a mental patient than idleness. The usefulness of this department—in helping to relieve many of the patients of their difficulties, to bring back their self-confidence and thus assist in their improvement—is very apparent.

The general health of the patients and staff throughout the year was better than average, and there were no epidemics or zymotic disease.

The treatment of the patients has been carried out along the usual lines.

The systematic training of the Nursing Staff has been carried on as in former years. Lectures are given by the Assistant Medical Officers twice weekly, and practical Ward Demonstrations are given by the Matron and her Assistants. During the year four Nurses and two Male Nurses passed the Final Examination of the Medico-Psychological Association, obtaining certificates for proficiency in Mental Nursing, and three Nurses and one Male Nurse passed the Preliminary Examination required for the certificate.

I much regret to record the death last October of William Aitchison after an illness of three months. Aitchison had been in the service of the Hospital for 29 years, and latterly acted as Deputy Head Attendant. He was a highly esteemed member of our Staff, he was a most conscientious official, full of loyalty to his superiors and to the Hospital, and his unexpected loss has been greatly felt by all at Westgreen.

The Artisan Staff has been fully occupied by their various trades, and a suitable amount of work has been done in keeping the Hospital in good repair.

The usual dances, concerts and cinema entertainments for the patients were held throughout the winter months. The supply of suitable silent films is now nearly exhausted, and I have had great difficulty in procuring a supply for the coming season. I am afraid, if the difficulty in obtaining supplies continues, this form of entertainment will have to cease. This will be unfortunate because there are patients who will not come to any other entertainment, yet take an interest in the cinema and look forward to its fortnightly appearance. Meantime both the cost and the labour of installing a sound-reproduction system appears prohibitive.

I have to express my appreciation and thanks to friends in Dundee and to the British Red Cross for donations of books to the Hospital.

Dentist's Report.

I have much pleasure in submitting to you my report of Dental Treatment carried out by me at Westgreen Mental Hospital for year to 31st December, 1933.

I made 50 visits to the institution during the year, and carried out the following treatment:—

Extractions:—

With Local Anaesthetic,	234	Teeth
With General Anaesthetic,	5	Teeth
Fillings,	15	Teeth
Scaling and Cleanings,	246	Cases
Gum Treatments,	10	Cases
Silver Nitrate Treatment (to arrest dental caries), ...	84	Teeth Treated

One female patient had an upper and lower denture inserted, at the relations' request and expense, and by the permission of the Medical Superintendent.

The health of the mouths is fair.

A definite routine method of dental examination is carried out, each patient's mouth is examined on admission, and placed into a group according to the state of the mouth, and has the necessary dental attention as soon as the Medical Superintendent certifies the patient fit for treatment.

Every patient's mouth was examined twice during the year."

(Signed) FRANK BERRY WHYTE,
L.D.S., St Ands.

Chaplain's Report.

I have the honour to present my report for the year 1933-34.

The service in Church on Sunday afternoon has been held regularly throughout the past year without any interruption caused by inclement weather. The conduct of the patients is excellent, and their demeanour is reverent. The general arrangements for the service are very good; but I should like to call attention to the harmonium, which is in an unsatisfactory condition. I wish to record my thanks to Mr Adams and Mr Chalmers for their help in the conduct of the praise.

Weekly visits to the wards have been carried out for the benefit of those who cannot attend the services in Church, with, it would appear, acceptance to the patients.

I should like again to acknowledge the help and courtesy I have experienced from every member of the Staff.

J. MACLEAN,
Chaplain.

Farms and Gardens.

The dairy herd of 52 tubercle free Ayrshire cows continues to maintain a good milk record—both in quality and quantity. The herd gave 100 per cent. pass on being tested for tuberculosis.

The total quantity of milk produced was 55,375 gallons, or 553,750 lbs., this gives an average of 1,064 gallons per cow.

An official record of the milk produced by each cow is taken at regular intervals by the Milk Records Association, and it may be of interest to note that all of our cows yielded over 1000 gallons of milk during their lactational period, the two highest records being 1,342 and 1,308 gallons respectively; 14 heifers reared from cows having the best milk records have been added to the herd, and this has enabled us to replace some of the faulty and poorer milkers.

Besides the 52 milking cows we have 60 heifers in calf, 30 yearling heifers and 30 calves, all of these have been bred and reared on the farms.

The quantity and quality of the farm crops have both been very good. The potato crop was excellent, but prices poor. Owing to the dry season, oats yielded less than previous year. Pigs were a better trade.

It may be of interest to record that the championship cup of the Royal Northern Agricultural Society was won by one of our Ayrshire cows. Carter's 100 guinea challenge cup for the best 4 acres of Swedes grown in Scotland was also won by our Farm Manager.

The garden kept the Hospital well supplied with vegetables, etc., during the year.

WM. TUACH MACKENZIE,
Medical Superintendent.

TUBERCULOSIS.

REPORT by Dr J. H. HUNTER,
Chief Tuberculosis Medical Officer.

During the year 1933, the routine work of the Tuberculosis Section proceeded on the same lines as in previous years. Again I desire to acknowledge the very valuable assistance rendered by all members of the staffs of this Section of the Public Health Institute and Ashludie Sanatorium, the health visitors, the medical officers and staffs of the various Public Health Services, the Public Assistance Department, the Royal Infirmary and other Institutions interested in this work, whose co-operation has materially assisted the furtherance of our work.

The total notifications of all forms of tuberculosis for 1933 were 343 against 358 for 1932. The pulmonary notifications were 255 for 1933, an increase of 26 over the corresponding figure for 1932. This increase was in males, in the three age groups between 5—45, the total increase of these groups being 37, of which 16 occurred in the age group 25—45. Other male age groups and all female age groups showed a decrease. The non-pulmonary notifications were 88 for 1933, a decrease of 41 on the figure for 1932. This great decrease practically corresponds with the decrease of notifications—37—received from the Royal Infirmary and occurs in the types—glands and joints—which would be found attending the Out-patient Department, and in age groups, 5-15 in males, and 15-25 in females. The other types and age groups show smaller decreases.

Attendances at all clinics, except the Artificial Sunlight Clinic, have increased and the work has been carried out satisfactorily. The number of contacts examined has increased considerably, a satisfactory state of affairs.

I visited Sidlaw Sanatorium on several occasions during the year and found the children there well cared for and happy and much benefited by their stay in that very delightful Institution. I appreciate very much the work done for children here, and would tender my thanks to the Medical Officer, Matron and Staff for their most helpful co-operation and consideration.

In the year 1933, 343 cases of tuberculosis were notified. 255 cases of pulmonary tuberculosis and 88 cases of non-pulmonary tuberculosis. Of these :—

- 151 cases were discovered at the Tuberculosis Section.
- 74 cases were notified by private practitioners.
- 13 cases were notified from Maryfield Hospital.
- 61 notifications came from Royal Infirmary.
- 3 notifications came from Convalescent Home, Barnhill.
- 2 notifications came from Infant Hospital, Broughty Ferry.
- 7 notifications came from Medical Officers outside the City.
- 32 cases came under the notice of the Department through the Registrar after death had taken place.

Pulmonary Tuberculosis.

During the year 255 cases of pulmonary tuberculosis were notified. The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	1	—	1
1- 5 years	...	5	1	6
5-15 „	...	32	37	69
15-25 „	...	28	28	56
25-45 „	...	58	32	90
45-65 „	...	17	13	30
65 years and upwards	...	2	1	3
Total		143	112	255

The following are the particulars as regards housing :—

No. of Rooms.	No. of Cases.	Total No. of Inmates.	No. of Inmates per Room.
1 ...	28	106	3.8
2 ...	113	571	2.5
3 ...	48	276	1.9
4 and upwards	17	98	1.4

In 49 cases home conditions were satisfactory.

Non-Pulmonary Tuberculosis.

During the year 88 cases of non-pulmonary tuberculosis were notified. The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	...	6	6
1-5 years	...	13	10	23
5-15 "	...	13	13	26
15-25 "	...	11	7	18
25-45 "	...	7	6	13
45-65 "	...	2	...	2
65 years and upwards	...	...	...	...
		46	42	88

The sites of the disease were as follows:—

	Under 1 year.		1-5 years.		5-15 years.		15-25 years.		25-45 years.		45-65 years.		65 years & upwards.		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M. F.
Meningitis	0	3	6	5	3	1	0	1	0	0	0	0	0	0	9 10
Abdomen	0	1	1	1	5	7	4	1	2	1	2	0	0	0	14 11
Glands	0	0	2	2	2	2	2	2	1	0	0	0	0	0	7 6
Joints	0	2	2	1	2	1	1	2	3	1	0	0	0	0	8 7
Spine	0	0	0	0	1	2	2	0	1	0	0	0	0	0	4 2
Other Forms	0	0	2	1	0	0	2	1	0	4	0	0	0	0	4 6
Totals	0	6	13	10	13	13	11	7	7	6	2	0	0	0	46 42

The following are the particulars as regards the housing of the non-pulmonary cases:—

No. of Rooms.	No. of Cases.	Total No. of Inmates.	No. of Inmates per Room.
1	6	23	3.8
2	29	181	3.1
3	15	92	2.0
4 and upwards	2	9	1.1

In 36 cases home conditions were satisfactory.

Tuberculosis Clinic.

During the year 468 cases were enrolled as compared with 474 in the year 1932. Of these 105 were found to be suffering from distinct phthisis (61 males and 44 females). 67 were found not to have the disease. In 275 cases the signs were somewhat indefinite, but these cases were regarded as the "pre-tuberculosis stage"; and 21 were found to be suffering from other forms of tuberculosis.

There were 343 contacts examined; 4 were found to be suffering from pulmonary tuberculosis, 1 was found to be suffering from other forms of tuberculosis, 161 were suspicious and are being kept under observation, and the remaining 177 were found to be negative.

Of the 105 cases of definite phthisis, 27 were previously notified and 78 were notified from the clinic for the first time.

The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	—	—	—
1- 5 years	...	2	1	3
5-15	...	10	12	22
15-25	...	16	17	33
25-45	...	27	11	38
45-65	...	6	2	8
65 years and upwards		—	1	1
		—	—	—
Totals	...	61	44	105

The attendances at the tuberculosis clinic were as follows :—

			Insured.	Non-Insured.	Total.
January	...	...	452	429	881
February	...	...	409	495	904
March	...	...	526	571	1097
April	...	...	434	403	837
May	...	...	454	529	983
June	...	...	403	346	749
July	...	...	318	176	494
August	...	...	403	297	700
September	...	...	353	320	673
October	...	...	428	387	815
November	...	...	441	516	957
December	...	...	418	360	778
			—	—	—
			5039	4829	9868

Artificial Sunlight.

During 1933, 289 patients attended the artificial sunlight clinic. Of these, 142 were males and 147 were females.

			Males.	Females.	Total.
No. of Attendances	...	...	5,261	5,499	10,760
No. of Sessions	..	..	—	—	593

Laboratory Work.

During the year, 347 specimens of sputum were examined with the following results:—

	Positive	Negative
63 for general practitioners,	12	51
284 for clinic patients,	59	225

X-Ray Department.

During 1933, 442 radiograms and 688 screen examinations were carried out. Of the 442 radiograms:—

Chest	Other Parts
390	52

Artificial Pneumothorax

During the year there were 264 attendances at the artificial pneumothorax clinic. Of these 94 were males and 170 were females.

Sidlaw Sanatorium.

During the year there were altogether 65 cases from the City recommended for treatment in this Institution. 30 of these were males and 35 were females. There were 70 cases discharged (31 males and 39 females). Average stay in Institution—166 days.

The following table shows the result of the treatment in these cases:—

Improved	Slight Improvement	No Improvement
48	12	10

J. H. HUNTER, M.B., D.P.H.
Chief Tuberculosis Officer.

ASHLUDIE SANATORIUM.

Report by Dr C. H. IMRIE.

During the year the work of the sanatorium was continued on the lines of last year. There has been no structural change since the opening of the New Block in 1932, and the equipment has not been augmented except in items which were urgently needed.

Admissions and Discharges.

	Male	Female	Children (12 and under)	Total
Admissions,	93	82	11	186
Discharges,	67	77	7	151
Deaths,	24	10	2	36
Number of beds occupied on December 31st, 1932,			121	
Average residence of Discharges,			222.15 days	
Average residence of Deaths,			138.32 days	
Highest daily number of patients,			125	
Lowest daily number of patients,			114	

There were 186 admissions as compared with 223 last year. The difference between these figures is accounted for by the number transferred to the sanatorium from King's Cross Hospital in 1932.

The distribution of the admissions according to age and situation of the lesion was as follows:—

Age	Pulmo- nary T.B.	Menin- geal T.B.	Abdo- minal T.B.	Spinal T.B.	Bone & Joint T.B.	T.B. else where	Non Tuber- culous
Under 5, ...	—	—	—	—	2	—	2
5—10, ...	1	—	—	—	—	—	1
10—15, ...	13	—	—	1	—	—	2
15—20, ...	13	—	1	1	7	—	1
20—25, ...	34	—	1	—	1	1	2
25—30, ...	22	—	—	1	1	1	—
30—35, ...	27	—	—	2	—	—	1
35—40, ...	16	—	—	—	—	—	—
40—45, ...	13	—	—	—	—	—	2
45—50, ...	8	—	—	—	—	—	—
50—55, ...	3	—	—	—	—	—	—
55—60, ...	2	—	—	—	—	—	—
60 and over, ...	2	—	—	—	—	—	1
	154	—	2	5	11	2	12

Some indication of the type of case admitted is given by the following figures, which, however, are only a rough estimate of opinion, and are, therefore, to be accepted in a wide sense:—

Advanced tuberculosis,	67 cases admitted
Moderately advanced tuberculosis,	71 " "
Early tuberculosis,	35 " "
Non-tuberculous, admitted for observation or diagnosis,	13 " "

As in the previous year the proportion of advanced cases among the admissions remains high. This is unfortunate as the treatment of such, especially in the case of pulmonary tuberculosis rarely offers much hope of relief and in many cases no benefit whatever accrues from sanatorium treatment.

The accommodation of these advanced cases for which sanatorium treatment is hopeless is an important problem. If housed in the sanatorium, the facilities for relatives visiting and sitting with the patient are decreased by the distance from Dundee, and their expenses are at the same time increased. Moreover, the presence of a large number of cases in the last stages of the disease has a definitely depressing and retarding effect on the other patients.

The discharges during the year numbered 187, of which 36 died. The condition of the patients on discharge is indicated in the following table:—

Quiescent or very marked improvement,	55 cases
Improved,	70 "
Not improved,	24 "
Not tuberculous,	2 "
<hr/>	
Total,	151 "

	Males	Females	Children (12 & under)
The deaths comprised,	24	10	2

The distribution of the deaths according to the situation of the lesion was as follows:—

Pulmonary tuberculosis,	33 cases
Non-pulmonary tuberculosis,	1 case
Non-tuberculous,	2 cases

Treatment.

During the year the facilities for treatment were increased by the installation of an Ultra-Violet Ray and Radiant Heat unit in the Theatre Block. The use of Ultra-Violet Ray treatment in many forms of tuberculosis is a recognised and powerful means of promoting healing, and the installation has already proved itself of great value in a variety of cases.

In pulmonary tuberculosis rest in bed for a prolonged period forms the foundation on which all treatment is based. A certain number of cases, however, are suitable for more intensive measures whereby rest may be given to the diseased lung itself.

During the year 14 cases were considered suitable for this type of treatment, and either Artificial Pneumothorax or Evulsion of the Phrenic Nerve was performed.

Artificial Pneumothorax.

11 cases commenced. There was definite improvement in 5 while 3 did not show benefit. In 3 cases the treatment had to be abandoned from various causes.

To the cases commenced in this and in previous years, 313 refills of air were injected in 21 cases.

Phrenic Evulsion.

The phrenic nerve is one of the factors in maintaining the expansion of the lung, and removal assists materially in obtaining a satisfactory collapse in a few selected cases. This measure was carried out on 3 cases, one of which showed marked benefit, but there was little improvement in the remainder.

The injection of gold preparations has been a recognised form of treatment for a few years, but the value is still uncertain. In certain selected cases the injection into the blood of these preparations seems to have a certain beneficial effect.

In 5 cases this method was employed with marked benefit to 3. The remaining 2 cases were stopped owing to difficulties in administration. Unfortunately the benefit from such treatment is not always sustained,

The excellent provision made by the New Theatre Block for the treatment of all types of cases is now being proved.

During the year there were 63 operations performed in the Theatre with the use of an anaesthetic. Of this number 7 were under general anaesthesia and in the remaining 56, local anaesthesia was employed.

The X-Ray plant has given every satisfaction in its operation, and the results obtained have been most gratifying.

Of non-pulmonary tuberculosis there were 20 cases admitted during the year, and their treatment has been carried along the recognised lines. This type of tuberculosis frequently necessitates treatment extending into many months or even years with the result that the proportion of admissions to discharges will be large. Thus it is to be expected that in the future there will be a shortage of beds for non-pulmonary cases.

The reception of very advanced cases, which are unsuitable for sanatorium, in some institution in Dundee would confer a great boon on both the patient and his relatives and would permit of the admission of many more early and suspected cases to sanatorium.

The usefulness of the verandas of the New Block Wards is still seriously limited in unsettled weather by the absence of any screening. In stormy or wet weather only a small number of beds can be sheltered, and the remainder have to be withdrawn into the Wards.

VENEREAL DISEASES.

REPORT By DR C. AVERILL,

Special Medical Officer, Venereal Diseases Scheme.

As in previous years the treatment of Venereal Disease was carried out at the Public Health Institute, 55 Constitution Road.

The separate clinic formerly held at the Chief Child Welfare Centre has now been removed to the Public Health Institute and incorporated with the general V.D. Scheme as there carried out.

The total number of new cases for 1933 was 971, a reduction of 139 as compared with 1932. They were made up as follows:—

		Syphilis		Gonorrhoea		Other V.D.		No. V.D.	
		M.	F.	M.	F.	M.	F.	M.	F.
1932,	.....	116	164	283	205	47	—	178	117
1933,	.....	104	131	225	163	55	—	188	155
1932—Male,		.....		624		1933—Male,		.....
								522	
		Female, ...		486				Female, ...	
								449	
				<hr/>				<hr/>	
				1,110				971	

The reduction was chiefly accounted for by the male section. Much stress cannot be laid upon the decrease. The maintained higher incidence of gonorrhoea in the female is still satisfactory, although there were actually fewer new cases of female gonorrhoea reporting throughout the year. There are still, of course, too few cases of female gonorrhoea presenting themselves at the clinics for treatment. The slight reduction in the number of new cases of syphilis does not call for comment.

The following is an analysis of the sources of the new cases reporting:—

	Male	Female
Practitioners,	112	69
Dundee Royal Infirmary, ...	27	92
		47 of these are from Dr Fairlie, Gynaecologist, Dundee Royal Infirmary.
Ante-Natal Clinic,	—	46

	Male	Female
Child Welfare Centre,	—	14
School Clinic,	—	4
Other Institutions,	—	34
Ophthalmic Clinic,	37	59
Traced by M.O. Female Clinic through female patients,	21	—
Traced by M.O. Male Clinic through male patients,	—	34
With S.D. Cards,	89	—
Voluntary,	236	97
	<hr/> 522	<hr/> 449

The new cases of syphilis were made up as follows :—

	Male	Female
With "Dark Ground" positive but Wassermann reaction still negative,	10.0%	2.0%
With "Dark Ground" positive but Wassermann reaction positive,	15.6%	2.7%
Suffering from secondary syphilis,	24.2%	39.1%
In the tertiary phase of syphilis,	27.1%	33.2%
Cases showing involvement of central nervous system (Tabes Dorsalis and General Paresis included,	12.0%	8.0%
Congenital syphilis,	10.1%	15.0%
Extra-genital syphilis,	1.0%	Nil

The cases of gonorrhoea were made up as follows :—

	Male	Female
Early stage and without complications,	27.0%	29.0%
Well established,	73.0%	71.0%

Of these latter cases the female patients had well developed urethritis and cervicitis, the latter in various stages of progress.

The male patients all had posterior urethritis while many of them had further complications in the form of epididymitis, prostatitis, and vesiculitis.

The total attendances accounted for by all patients attending the clinic during the year 1933, and compared with those of 1932, were as follows :—

Syphilis				Gonorrhoea		Other V.D.		No V.D.	
M. F.				M. F.		M. F.		M. F.	
1932, ...	5,589	6,493		18,072	7,729	778	—	854	949
1933, ...	5,304	6,018		16,740	7,568	682	—	746	757
1932—Male,			25,293	1933—Male,			23,472		
Female, ...			15,171	Female, ...			14,343		
				<hr/>				<hr/>	
				40,464				37,815	

The following are the numbers of in-patient days :—

1932—Male,	1,242	1933—Male,	1,811
Female, ...	813	Female, ...	616
<hr/>		<hr/>	
2,055		2,427	

In case of male patients indoor treatment is carried out at the Public Health Institute where there are 12 beds available. Indoor treatment for female patients is carried out as before at King's Cross and Maryfield Hospitals.

I wish again to emphasise the importance to every one of patients reporting at the very earliest appearance of any form of venereal lesion. A study of the complications of the conditions treated will explain.

The number of specimens examined by Professor Tulloch and his staff on behalf of the V.D. Scheme is herewith appended. To the staff of the Bacteriological Department I am deeply indebted for much valuable advice and assistance, without which the successful working of the scheme would be well nigh impossible.

The figures of 1932 are given for the sake of comparison :—

	1932	1933
Wasserman Reaction,	2,184	1,973
Special Wassermann Reaction,	267	262
Gonococcus Complement Fixation Test,	840	642
Dark Ground Examinations,	49	44
Smears,	2,388	2,663
	<hr/>	<hr/>
	5,728	5,574

To the various members of the clinics I have to tender my sincere thanks for their assistance, without which it would have been impossible to run the various sections as satisfactorily and pleasantly as they have been throughout the past year.

NEW CASES.

DUNDEE.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total
January	8	12	1	13	34
February	6	8	1	4	19
March	11	9	0	9	29
April	12	12	4	7	35
May	3	13	1	13	30
June	5	15	1	14	35
July	7	27	2	9	45
August	11	16	7	16	50
September	4	15	4	5	28
October	3	18	11	7	39
November	5	10	2	11	28
December	3	9	4	7	23
Totals	78	164	38	115	395

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total
January	3	4	1	1	9
February	2	5	1	2	10
March	2	1	2	4	9
April	1	5	0	1	7
May	4	5	1	2	12
June	0	4	0	0	4
July	1	5	1	0	7
August	4	8	5	5	22
September	8	5	0	2	15
October	0	6	2	3	11
November	0	8	3	2	13
December	1	5	1	1	8
Totals	26	61	17	23	127
Grand Total	104	225	55	138	522

TOTAL—New Cases—Males ... 522

NEW CASES.

DUNDEE.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January	11	12	0	11	34
February	14	8	0	12	34
March	13	15	0	9	37
April	9	12	0	7	28
May	18	9	0	14	41
June	11	15	0	8	34
July	9	15	0	8	32
August	6	15	0	32	53
September	7	9	0	14	30
October	10	11	0	8	29
November	1	11	0	16	28
December	9	15	0	3	27
Totals	118	147	0	142	407

OTHER AREAS.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January	0	0	0	1	1
February	0	0	0	1	1
March	1	1	0	1	3
April	1	1	0	1	3
May	0	1	0	0	1
June	2	2	0	0	4
July	1	5	0	1	7
August	2	2	0	0	4
September	1	1	0	3	5
October	0	3	0	4	7
November	2	0	0	1	3
December	3	0	0	0	3
Totals	13	16	0	13	42
Grand Total	131	163	0	155	449

Females—449=971.

AGE PERIODS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.
Under 1 year ...	8	0	0	1
1-5 years ...	4	0	0	4
5-15 years ...	4	0	0	0
15-25 years ...	22	67	17	34
25 years and up	66	158	38	99
Totals, ...	104	225	55	138
Grand Total	...	...	522	

ATTENDANCES.

DUNDEE.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	474	1,354	49	64	1,941
February ...	421	1,260	44	54	1,779
March ...	442	1,360	38	58	1,898
April ...	369	1,185	38	44	1,636
May ...	393	1,128	48	40	1,609
June ...	330	857	21	50	1,258
July ...	349	1,054	27	37	1,467
August ...	473	1,584	46	60	2,163
September	464	1,501	56	58	2,079
October ...	365	1,697	72	69	2,203
November	341	1,667	64	68	2,140
December	416	1,603	64	52	2,135
Totals	4,837	16,250	567	654	22,308

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	37	20	1	3	61
February ...	40	28	0	6	74
March ...	44	28	0	6	78
April ...	33	19	0	9	61
May ...	26	25	12	0	63
June ...	29	13	0	2	44
July ...	28	23	6	0	57
August ...	48	24	6	3	81
September	52	51	25	34	162
October ...	35	83	25	5	148
November	34	84	8	4	130
December	61	92	32	20	205
Totals ...	467	490	115	92	1,164
Grand Total	5,304	16,740	682	746	23,472

Total Attendances—Males, 23,472.

AGE PERIODS—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.
Under 1 year ...	5	0	0	8
1-5 years ...	3	1	0	6
5-15 years ...	13	3	0	14
15-25 years ...	24	63	0	40
25 years and up	86	96	0	87
Totals ...	131	163	0	155
Grand Total	...	...	449	

ATTENDANCES.

DUNDEE.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	409	564	0	48	1,021
February ...	479	547	0	58	1,084
March ...	630	716	0	55	1,401
April ...	485	603	0	64	1,152
May ...	551	633	0	65	1,249
June ...	459	537	0	49	1,045
July ...	329	433	0	37	799
August ...	397	562	0	56	1,015
September	370	506	0	57	933
October ...	482	680	0	75	1,237
November	547	820	0	88	1,455
December	450	570	0	58	1,078
Totals ...	5,588	7,171	0	710	13,469

OTHER AREAS.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	32	30	0	1	63
February ...	37	23	0	1	61
March ...	46	34	0	0	80
April ...	43	30	0	1	74
May ...	28	13	0	0	41
June ...	33	33	0	0	66
July ...	25	26	0	0	51
August ...	34	56	0	0	90
September	23	30	0	14	67
October ...	38	46	0	10	94
November	52	39	0	12	103
December	39	37	0	8	84
Totals ...	430	397	0	47	874
Grand Total	6,018	7,568	0	757	14,343

Females, 14,343=37,815.

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given :—

Neokharsivan					Kharsulphan		
	.15	.3	.45	.6	.15	.3	.45
January ...	12	26	61	61	23	40	31
February ...	13	38	71	67	13	32	44
March ...	22	35	119	80	28	33	63
April ...	11	39	100	72	25	66	42
May ...	13	39	93	68	39	49	34
June ...	12	36	103	74	14	16	67
July ...	0	23	91	72	13	16	31
August ...	10	18	98	90	19	28	20
September	9	18	90	96	26	35	34
October ...	8	33	69	67	18	36	36
November	7	26	83	61	8	32	57
December ...	6	25	64	63	9	26	54
	123	356	1,042	871	235	409	513
Totals ...	2,392				1,157		

Bismuth.				Other Drugs.
	.2	.3	.4gm.	
January ...	39	39	121	65
February ...	42	61	114	50
March ...	73	92	114	62
April ...	53	21	135	69
May ...	64	24	172	63
June ...	29	99	101	68
July ...	36	86	76	59
August ...	50	63	136	61
September ...	61	87	103	64
October ...	57	72	105	66
November ...	51	95	80	107
December ...	50	78	88	103
	605	817	1,345	837
Totals... ..	2,767			837

GRAND TOTAL—7,153

PATHOLOGICAL WORK.

Number of Specimens examined :—

		Wassermann Test	Special Wassermann Test	Gonococcus Complement Fixation Test
January ...	...	130	16	53
February ...	...	208	17	59
March ...	...	163	27	44
April ...	...	126	12	45
May ...	...	207	25	65
June ...	...	163	27	51
July ...	...	134	11	51
August ...	...	237	29	73
September ...	...	130	20	41
October ...	...	164	25	57
November ...	...	183	22	59
December ...	...	128	21	44
Totals ...	...	1,973	252	642

			Dark Ground Tests.	Microscopic Smears.
January ...	...	...	4	202
February ...	...	...	9	203
March ...	...	...	1	198
April ...	...	...	1	227
May ...	...	...	3	282
June ...	...	...	0	217
July ...	...	...	2	200
August ...	...	...	8	323
September ...	...	...	1	181
October...	...	...	6	197
November ...	...	...	2	277
December ...	...	...	7	156
Totals ...	...	...	44	2,663

BACTERIOLOGICAL LABORATORY.

REPORT By PROFESSOR W. J. TULLOCH.
Director, Bacteriological Department, University College.

REPORT OF WORK CARRIED OUT IN THE DEPARTMENT
OF BACTERIOLOGY, UNIVERSITY COLLEGE, DUNDEE,
ON BEHALF OF THE DUNDEE PUBLIC HEALTH
AUTHORITIES, FROM 1ST JANUARY, 1933, TO 31ST DECEMBER, 1933.

The Report is presented in the same fashion as in previous years so that continuity of arrangement may be maintained.

I. CONTROL OF VENEREAL DISEASES.

(a) Control of Syphilis.

1. Dark Ground Examinations.
2. Wassermann Reactions (Routine).
3. Special Wassermann Reactions.
4. Examinations of cerebro-spinal fluids.

(b) Control of Gonorrhoea.

1. Microscopical examination of discharges and urines.
2. Gonococcus Complement Fixation tests.
3. Supply of vaccine.

II. CONTROL OF OTHER COMMUNICABLE DISEASES.

(a) Diphtheria.

1. Throat swabs from cases and contacts.
2. Virulence tests.

(b) Enteric Fever.

1. Widal Reactions.
2. Blood cultures.
3. Examinations of faeces in convalescents.

(c) Tuberculosis.

(d) Puerperal Sepsis.

III. SPECIAL INVESTIGATIONS.

- (a) Examination of Milk for contamination.
- (b) Examination of Milk for grading.
- (c) Examination of Milk for tuberculosis.
- (d) Examination of Milks for tuberculosis under the Tuberculosis Order.
- (e) Food-poisoning.
- (f) Primary meningitis.
- (g) Secondary meningitis.
- (h) Cases of meningismus.
- (i) Faeces for amoebic dysentery.
- (j) Bacillary Dysentery.
- (k) Examination of crusts for smallpox.
- (l) Leptospirochaetosis.
- (m) Blood infections in pneumonia and pyrexia of unknown origin.
- (n) Miscellaneous investigations.

I. CONTROL OF VENEREAL DISEASES.

(a) Control of Syphilis.

1. Microscopical examinations of material to demonstrate the presence of *Treponema Pallidum*.

During 1933, 49 examinations were made for the presence of *T. Pallidum* in suspected syphilitic sores. This number shows a slight increase as compared with that of the previous year, but is too small. It appears probable, therefore, that there is a large number of cases of this disease whose diagnosis is unnecessarily delayed. The success of preventive and therapeutic measures in this, as in most other communicable diseases, is largely dependent upon early and accurate diagnosis. Delay in diagnosis and treatment means greater danger of spread of the disease, for, with modern methods of treatment, the infectivity of a case of syphilis can be markedly reduced in a very short time.

It is repeated and it cannot be sufficiently emphasised that the Wassermann Test, reliable though it be, cannot give the same unequivocal evidence of syphilitic infection as does the demonstration of *T. Pallidum* in morbid exudates.

Moreover, postponement of treatment means prolonged treatment which is more costly, and the end results of which are much less satisfactory than when active treatment is commenced in the primary stage of the disease.

To call upon the venereal diseases officers to treat late cases of syphilis in which the diagnosis could have been established with certainty during the early phases of the infection is to place upon these officers a burden of work and a responsibility which is quite unnecessary, and defeats, to a large extent, the object of the scheme for the control of Venereal Diseases.

Of the 49 cases examined, 44 were sent by the venereal diseases officers, and only 5 by private practitioners.

2. Wassermann Reactions.

The improvements in the technique for conducting the Wasserman Reaction, elaborated during 1926-27, continue to form the basis of the routine method of conducting that test in this laboratory, and the experience now obtained shows definitely that these improvements have greatly enhanced its reliability, and it may be said that the test now is as reliable as it is possible to make it.

The number of routine tests carried out was 3,715, of which 2,005 were from the clinic, 383 from other Public Health Institutions, 209 from private practitioners, and 1,118 from institutions other than those connected with the Department of Public Health.

To the total number there must be added 211 tests in which the material examined was cerebro-spinal fluid, and in such cases a reinforced method is always employed so that the total of Qualitative Wassermann Reactions conducted is 3,926 for 1933.

3. Special (Quantitative) Wassermann Tests.

The special quantitative Wassermann reaction, elaborated in 1925, continued in use during 1933 in order to control the treatment of cases attending the clinics.

It has proved extremely useful in determining the value of treatment, in determining the progress of treatment, and in the continued observation of Wassermann-fast cases. The number of investigations of that nature carried out during the year was 253, all but two being from the clinic, so that the grand total of Wassermann Reactions for the year under consideration was 4,179.

4. Examination of Cerebro-spinal Fluids.

During 1933 the complete investigation of cerebro-spinal fluids from cases of suspected Neuro-syphilis was continued, the examination in each instance being as complete as possible. In addition to the ordinary Wassermann test and re-inforced Wassermann test, a complete chemical and cytological examination was performed, while the Lange gold test was employed as a routine. Of the 211 investigations, 11 were carried out on material from patients at the clinic, and 5 from Maryfield Hospital, while the remainder of the specimens were sent by consultant physicians.

(b) Control of Gonorrhoea.

One is pleased to note that the interest in this disease is being maintained, for the fact must not be lost sight of that Gonorrhoea may be even a more serious malady than Syphilis.

1. Microscopical examination of discharges for the diagnosis of, and control of treatment in Gonorrhoea.

During 1933, 2,958 microscopical examinations of material for the diagnosis and control of Gonorrhoea were carried out. These are distributed thus:—

	Discharges, including urine after prostatic massage.
From other Public Health Institutions,	123
From the Clinic,	2,697
From Institutions other than those controlled by the Public Health Department,	89
From Private Practitioners,	49

2. Investigation of cases of Gonorrhoea by the Complement Fixation Reaction.

During 1933, 767 Complement Fixations Tests have been carried out with a view to the control of treatment or diagnosis of Gonorrhoea. They were distributed thus:—

From the Clinic,	642
From other Public Health Institutions,	79
From Private Practitioners,	15
From Institutions other than those controlled by the Public Health Department,	31

The grand total, then, of examinations conducted for the diagnosis and control of Venereal Diseases is as follows :—

Dark Ground Examinations,	49
Wassermann Reactions (Ordinary),	3,715
Special Quantitative Wasserman Reactions,	253
Special examinations of Cerebro-spinal Fluids,	211
Microscopical examination of discharges and urines,	2,958
Gonococcus Complement Fixation Tests,	767
	<hr/>
	7,953
	<hr/>

3. Gonococcal Vaccine.

During 1933 the laboratory has continued to supply both male and female clinics with gonococcus vaccine upon a large scale.

II.—EXAMINATIONS FOR THE CONTROL OF OTHER COMMUNICABLE DISEASES.

(a) Diphtheria.

1. Cultural examination of throat swabs.

Although during 1933 there has been no notably serious outbreak of diphtheria in Dundee, nevertheless a considerable number of cases have occurred, and the total number of routine swabs examined was 833.

In connection with the examination of throat swabs, two points call for comment, viz.:—(1) The result of the bacteriological examination of the throat is of great importance to the public health officer, and its value to the practitioner is no less great when he is dealing with doubtful cases, but when the clinical features suggest diphtheria, it is unwise to delay the administration of anti-toxin until the result of the bacteriological examination is available. A case which is clinically diphtheria should be treated as diphtheria. If complete investigation negatives the diagnosis no harm is done, but harm is liable to be done to cases of diphtheria when the administration of serum is delayed. (2) In cases which are clinically diphtheria it is well to have the diagnosis verified by bacteriological examination, but it is especially important that treatment be initiated forthwith, and in order that no misunderstanding should arise from this cause, every report on the examination of a throat swab which is negative is sent on a form on which the following is printed in red :—

" IMPORTANT.—Please note that a negative swab result does not exclude diphtheria. The laboratory findings pre-suppose that the suspicious lesion has been touched with the swab—NOT ALWAYS POSSIBLE IN CERTAIN TYPES OF DIPHTHERIA, ESPECIALLY LARYNGEAL DIPHTHERIA. CLINICALLY SUGGESTIVE cases should be treated without awaiting result of swab. DELAY IS DANGEROUS."

2. Virulence Test.

In two previous reports attention was called to recent observations on the bacteriology of diphtheria, which showed that the micro-organism could be sub-divided into varieties according to its behaviour in culture.

From the publications of Professor McLeod, F.R.S., and his associates, it appeared that one of these varieties exerted a peculiarly lethal action upon humans, and that cases infected with this variety of the bacillus were less amenable to serum treatment than were those in which the infecting bacillus was of another type.

In view of this, every case of diphtheria admitted to King's Cross Hospital during the greater part of 1932 and the whole of 1933, has been made the subject of very extended investigation.

This work has been carried out in the laboratory by Dr James Murray, now lecturer in this department.

As Dr Murray's observations will later be presented as a thesis for the degree of Doctor of Medicine, they cannot be given *in extenso* in this report. He has, however, kindly furnished the following notes which make clear the nature of the investigation which is being conducted by him.

During 1933, Dr Murray continued this investigation of diphtheria, and in the course of his work made an exhaustive examination of 158 different strains of diphtheria bacilli recovered from cases in Dundee.

The examination of each strain involved a study of its cultural, fermentative and serological characters while, in addition, the virulence test was performed as a routine.

The findings are of some interest and may be set forth thus.

I.—The total number of so called "Gravis" cultures was 7. Of these 3 were serologically identical with the organism shown by McLeod to give rise to clinically severe cases in Leeds, 3 exhibited minor differences therefrom, and the remaining single culture corresponded to a strain that has been recovered from a number of cases in Glasgow.

No explanation of the relative absence of Gravis infection in Dundee can be offered. It is merely further evidence that the different varieties of *b. diphtheriae* show a peculiarly haphazard distribution in different centres.

II.—The total number of isolations classed as Intermediates was 87, and of these 71 have been so far completely investigated. They fall into one of three serological sub-groups. The first of these comprising 47—constituting a predominant type for this area—the second 20 and the third 4.

III.—Of cultures possessing the characters of the type designated "Mitis" by McLeod, there were 64, and of these 48 have so far been placed serologically, 36 being comprised in one sub-group, 8 in a second and 4 in a third. There is evidence that among the remaining strains of the Mitis cultural type so many serological races exist that investigation of them from this point of view will give little if any useful information.

The work is still proceeding, and new lines of investigation essayed.

These findings indicate that our knowledge of the disease processes which result from infection with the diphtheria bacillus is not yet by any means complete. Since notice was first called to the lethal quality of the growth product of *b. diphtheriae* attention has been focussed almost exclusively thereon so that unconsciously we have come to regard the disease solely as an intoxication.

Such observations as those cited herein are especially useful in that they serve to widen our view concerning the pathogenic action of the bacillus in question.

Although research of this kind increases the labour of the laboratory staff it is welcome in that it leads to closer co-operation between the laboratory and the hospitals, to the benefit of both.

In addition to these research observations, 24 routine tests have been carried out to determine the virulence of diphtheroid bacilli present in pharyngeal secretions or ear discharges of convalescents and suspected carriers.

(b) Control of Enteric Fever.

During 1933, there was a definite outbreak of enteric fever in the City, the majority of cases occurring in the four months period July to October. This coincided with a long period of warm weather, and it may have been associated with the consumption of special articles of diet, or the partaking of meals under conditions that resulted from the unusual climatic conditions.

One special foodstuff that fell under suspicion was shellfish—notably periwinkles—but although indirect evidence in some cases did suggest these as a probable infecting agent, direct evidence was lacking.

In view of the importance of this Dr Leask, Assistant Medical Officer of Health of the City, is now engaged in conducting a research in the laboratory on the bacterial flora of these molluscs, collected from different parts of the beach in the Tay estuary. It is also proposed to obtain definite information concerning the survival in them of bacilli of the enteric group and also to determine the conditions of cooking which will render them safe in this regard.

1. Widal Reactions.

In all, 228 tests were carried out on 114 specimens of blood from suspected cases of enteric fever. The duplicate test against both typhoid and paratyphoid Beta continues to be employed as a routine.

In 35 instances a positive result was obtained, 11 being from cases of typhoid, and 24 from paratyphoid beta infections.

The distribution of the cases in point of time was interesting, being as follows:—

	Typhoid	Paratyphoid B.
January—March,	2	1
April—June,	2	1
July—September,	4	18
October—December,	3	4
	—	—
	11	24
	<u>11</u>	<u>24</u>

This indicates that a small but definite epidemic of enteric fever due to infection with *b. paratyphosus* beta occurred during the autumnal period which was not, however, accompanied by a correspondingly marked rise in cases due to *b. typhosus*. This suggests that apart from an autumnal rise in the incidence of endemic infection as a whole there was in addition a definite epidemic.

During the year under review we continued to test all bloods submitted for the Widal reaction against the bacillus abortus of Bang.

Among the 114 specimens so tested, five agglutinated the bacillus abortus in such low concentration that the reaction was diagnostic.

Of the five patients, two were permanent residents of the City, two were residents of the County of Angus, and were under observation in hospital as cases of pyrexia of unknown origin, while the fifth apparently acquired the infection while on holiday.

It would seem then that there is a small, but an appreciable, incidence of undulant fever in our City, the causal agent of which is the bacillus abortus of Bang.

2. Blood Culture.

The most satisfactory of all methods for diagnosing enteric fever is blood culture, as by this means an early and accurate diagnosis can be established. In the past, this method has not found much favour among the practitioners of the City.

The method was, however, employed in 31 suspected cases. In five of these an early diagnosis was made possible. In two the infecting organism proved to be the typhoid bacillus, and in the remaining three bacillus paratyphosus beta.

In this connection it cannot be sufficiently emphasised that BLOOD CULTURE IS THE ONLY METHOD WHEREBY AN EARLY AND ACCURATE DIAGNOSIS OF ENTERIC CAN BE MADE.

The significance of this, from the standpoint of public health, is not only that early diagnosis leads to the necessary precautions

being taken to prevent further spread of the infection, but, in this instance, the diagnosis may be made at a period when the infectivity of the case is still minimal.

3. Examinations of Faeces, Urines, etc., from Enteric Convalescents.

(i.) Faeces.

During 1933, 125 specimens of faeces from convalescents of enteric fever or from possible carriers of the disease were examined, the typhoid bacillus found in none, and bacillus paratyphosus beta in 16.

(ii.) Urines.

During 1933, 84 specimens of urine from convalescents of enteric fever were made the subject of cultural investigation. Of these, 20 were positive, the infecting micro-organism in all being bacillus paratyphosus beta.

None of these became chronic carriers, but the large percentage of positive findings is worthy of note, as patients with infective urine are always a greater danger to others than are those whose intestinal contents alone are infected. The reason for this is that frequently less care is exercised in the disposal of urine than of faeces.

Indeed, chronic urinary carriers are in a special sense a menace to those around them, and one is glad to note that this is now adequately appreciated.

(c) Control of Tuberculosis.

329 specimens of sputum were examined from cases in Dundee during 1933, a figure showing no significant change from that of previous years. The percentage of positive findings was 16%, which is much the same as in previous years.

In addition to the investigations conducted on behalf of the City Health Authority to assist in the control of tuberculosis, numerous specimens of morbid material submitted from patients in institutions are of such a nature that it is necessary to exclude tuberculosis. During 1933, 328 such specimens have been investigated, comprising :—

Urines,	136	specimens
Cerebro-spinal fluids,	85	"
Pus, including pus from glands	51	"
Pleural fluids,	38	"
Fluid from Joints,	3	"
Miscellaneous,	15	"
	<hr/>	
	328	
	<hr/>	

(d) Puerperal Sepsis.

During 1933, the investigation of material from puerperal sepsis has been continued. The improvements in technique introduced in 1932 with a view, if possible, further to elucidate the question of the relative importance of different varieties of streptococci, as casual agents of the condition, have been used throughout the year, and the following are the results obtained.

In all, 174 examinations from 68 patients have been carried out during the year under review, and these comprise :—

(a) Examination of uterine cultures,	123
(b) Blood Cultures,	51

As puerperal sepsis is, in the main, associated with streptococcal infections, and as the severer forms of the disease appear usually to be caused by streptococcus haemolyticus, the following figures dealing with the recovery of streptococci from puerperal cases may be of some interest.

In 45 patients, both blood culture and full investigation of uterine discharge was carried out, the following results being obtained.

(i.) In 2 cases, streptococcus haemolyticus was recovered both from the blood and from the discharge.

(ii.) In 17, streptococcus haemolyticus was shown to be present in the uterine discharge, but not in the blood.

(iii.) In 1, streptococcus viridans was recovered both from the blood and from the uterine discharge.

(iv.) In 12, streptococcus viridans was found in the discharge but not in the blood.

(v.) In the remainder of the cases, streptococci were recovered neither from the blood nor the uterine discharge.

(vi.) In 7 patients, examination by blood culture alone was carried out, of which none gave growth of micro-organisms of any kind.

(vii.) In 24 patients, examination of the uterine discharge was made without blood culture being performed. In this series of cases there were six of infection with streptococcus haemolyticus, nine with streptococcus viridans, and the remaining nine gave no growth of any variety of streptococcus.

These results may be summarised thus :—

	Uterine Culture	Blood Culture
Patients,	74	52
Streptococcus haemolyticus,	25	2
Streptococcus viridans,	22	1
No streptococci,	27	49

In addition, complete bacteriological examination of the urine was called for in six cases of puerperal sepsis, making the grand total of such investigations 180.

III.—SPECIAL INVESTIGATIONS.

During 1933, 78 specimens of milk were examined to determine the degree of bacterial contamination, and the presence of organisms of faecal origin. Included in this figure are 15 which were specially examined for grading.

The results of these examinations are as follows :—

1. Test for presence of B. Coli.

B. Coli test positive in .001 c.c. or less—unsatisfactory,	11
B. Coli test positive in .01 c.c., negative in .001—doubtful, ...	5
B. Coli test positive in 0.1 c.c., negative in .01—good,	14
B. Coli test positive in 1 c.c., negative in 0.1—very good, ...	8
B. Coli test negative in 1 c.c.—excellent,	40
	—
	78

So far, then, as the B. Coli test is concerned, 62 of these milks are up to the standard of Grade A Milk, while 48 pass the more severe test for certified milk.

2. Total Number of Micro-organisms.

(a) Over 5,000,000 per c.c.,	2
(b) Over 3,000,000 but less than 5,000,000 per c.c.,	0
(c) Over 1,000,000 but less than 3,000,000 per c.c.,	3
(d) Over 700,000 but less than 1,000,000 per c.c.,	4
(e) Over 500,000 but less than 700,000 per c.c.,	1
(f) Over 300,000 but less than 500,000 per c.c.,	2
(g) Over 200,000 but less than 300,000 per c.c.,	6
(h) Over 100,000 but less than 200,000 per c.c.,	8
(i) Over 50,000 but less than 100,000 per c.c.,	7
(j) Over 30,000 but less than 50,000 per c.c.,	5
(k) Over 10,000 but less than 30,000 per c.c.,	11
(l) Over 5,000 but less than 10,000 per c.c.,	6
(m) Less than 5,000 per c.c.,	23
	—
	78

(b) Examination of Milks for Grading.

Included in the above were 15 specimens in which the special examinations for grading and certification were carried out. The investigation in such circumstances is conducted according to a standard method advised by the Department of Health for Scotland, these milks being submitted by dairies in Dundee for grading under the Milks (Special Designation) Order, 1928, and Amendment Order (Scotland), 1928. Of the 15 milks, 13 were remarkably clean, in that bacillus coli could not be demonstrated even in 1 c.c., while a total bacterial count of each is as follows:—

Colon Test.	Total Count.
Negative in 1 c.c.	1,000 per c.c.—February
Negative in 1 c.c.	3,500 per c.c.
Negative in 1 c.c.	3,600 per c.c.
<hr/>	
Negative in 1 c.c.	1,500 per c.c.—May
Negative in 1 c.c.	3,900 per c.c.
Negative in 1 c.c.	700 per c.c.
Negative in 1 c.c.	1,400 per c.c.
Negative in 1 c.c.	3,900 per c.c.

Negative in 1 c.c.	650 per c.c.—August
Negative in 1 c.c.	2,700 per c.c.
Negative in 1 c.c.	32,000 per c.c.

Negative in 1 c.c.	6,900 per c.c.—November
Negative in 1 c.c.	87,000 per c.c.
Positive in 1 c.c.	9,800 per c.c.
Positive in .01 c.c.	3,900 per c.c.

It will be observed that in one instance the content of bacillus coli was too high, although the total count of micro-organisms was low—fourth specimen November, 1933. There was also one instance in which, although the content of colon bacilli was satisfactory—less than 1 c.c.—the total count was somewhat high—second specimen November, 1933.

(c) Examination of Milk for the Presence of Tubercle Bacilli.

During 1933, 28 samples of milk were tested for the presence of tubercle bacilli by the inoculation method. Of these two proved to be tuberculous—a finding that is very similar to those of previous years.

(d) Examination of Milks for Tuberculosis under the Tuberculosis Order.

During 1933, no specimens of milk, or tissue from the udder were investigated for the presence of tubercle bacilli under the Tuberculosis Order.

(e) Food Poisoning.

During the year under consideration no extensive outbreak of food poisoning occurred in Dundee. There were, however, two suspected sporadic cases, and one of them proved to be that condition, the causal organism being the Aertrycke bacillus.

The source of this infection could not be traced and even the peccant article of diet remained undetermined.

It is remarkable that this City escaped sporadic cases of this condition during 1933 as, while the weather remained warm, a considerable number of small outbreaks occurred in other centres of population in Scotland.

(f) Primary Meningitis.

During 1933, 25 cases of such nature that they might have been primary meningococcal meningitis occurred in Dundee, and all were made the subject of extensive bacteriological examination. Of these, 11 proved to be cases of true cerebro-spinal (meningococcal) meningitis, each of which was examined several times during the progress of the illness.

The number of cases of meningococcal meningitis is the same as in the previous year, and although the number is small it should be noted that sporadic cases continue to occur. In view of this, especially at present when cases are occurring elsewhere, it would be well to bear in mind the possibility of the reappearance of this malady in our population.

In addition to these suspected cases of meningococcal meningitis, there were 18 in which primary meningitis, other than that due to infection with the meningococcus, was suspected.

Of these 7 proved to be due to the pneumococcus, one to the streptococcus, and one to infection with bacillus faecalis alkaligenes.

There were, therefore, 23 cases in which, although primary meningitis was suspected upon clinical grounds, that diagnosis was not established when complete investigation was undertaken.

These cases of "meningismus" where the clinical findings suggest, but examination fails to reveal, infection, are interesting in that the condition is often associated with pneumococcal invasion in other parts of the body.

(g) Secondary Meningitis.

During 1933 there were investigated 3 cases of meningitis occurring as a sequel to injury, or arising as a complication in other conditions.

The organism responsible for the infection in each case was streptococcus haemolyticus.

(h) Cases of Subacute Meningismus.

During the year under consideration no cases of this kind were encountered.

(i) Amoebic Dysentery.

Only 1 case of suspected amoebic dysentery occurred in the City; complete investigation negated this diagnosis.

(j) Bacillary Dysentery.

During 1933, as in previous years, cases of bacillary dysentery, due to the mannite fermenting bacilli, have occurred in Dundee, and as before, these have been regarded as "food poisoning" until laboratory investigation revealed the true character of the illness.

In the year under consideration I am glad to report that no institutional outbreak of this condition has occurred. On the other hand four outbreaks each limited to one family have demanded investigation.

In all, 77 examinations were carried out in cases of suspected bacillary dysentery during 1933. Of these, 71 were examination of faeces and 6 were agglutination tests with the serum of convalescents or contacts.

The cases may be categorised as follows:—

(a) Cases in which the infecting organism belonged to one of the recognised serological subgroups of the mannite fermenting dysentery bacilli.

(i.) Two cases in one family in which the causal organism belonged to the Y subgroup of the Flexneroid bacilli.

(ii.) Three cases in one family in which the causal organism belonged to the Z subgroup.

(iii.) Five single sporadic cases, the infecting bacilli being of the following types, V., Z., V.Y., V.Y.Z., V.W.Y.Z.

(b) Cases in which the infecting organism had the morphological, cultural and fermentative, characters of a Flexner bacillus but failed to react with any of the antisera to the various subgroups of the organism.

(i.) 3 in one family.

(ii.) 2 in another family.

(iii.) 2 sporadic.

In these subsequent examination of the patients' blood during convalescence furnished evidence that the bacilli isolated had been responsible for the illness.

(c) Cases in which the infecting organism was Sonne III.

(i.) Four cases all of them being sporadic.

(d) Cases in which the infecting organism was not a true dysentery bacillus, viz., bacillus Morgan I.

This micro-organism under certain circumstances gives rise to gastro-intestinal disturbance and is of special significance in children.

(i.) Two cases with probably a common source of infection.

(ii.) Three sporadic cases.

(e) Cases of acute gastro intestinal upset characterised by the presence of pus, blood and mucus in the stools but from which we failed to obtain cultures of any dysentery bacilli or other recognised disease producing organism.

(i.) Four sporadic cases of this type were encountered.

(f) There were 41 cases in which examination for dysentery was requested by the medical attendant, but no evidence, direct or indirect, of that condition was present.

(g) Of the six agglutination tests performed there were three in which a diagnosis of infection with the Z type of the bacillus was established. The stools were also positive. Of the remaining three one reacted with both the V. and the Y. type of the bacillus, examination of the faeces being negative, while one proved to be due to infection with the Sonne III. bacillus, the stool in this instance also giving a negative result. In one both blood and stool were negative.

Attention is called to the fact that one of the Sonne III. cases proved fatal. The view is held that this micro-organism does not give rise to severe illness; occasionally, however, its virulence is high and bacillus Sonne III. cannot be ignored as a pathogenic agent.

(k) Variola Vaccinia Flocculation Reaction.

During 1933 no cases of smallpox occurred in the City, and we were not called upon to perform this reaction.

It may be noted, however, that the help of the laboratory has been requested by other public health authorities to assist in the investigation of doubtful cases of smallpox. Fortunately only negative findings were obtained in cases from this part of the country. Subsequent events proved the cases to have been Vari-cella.

(l) Leptospirochaetosis.

There were no suspected cases of infection with leptospira icterohaemorrhagiae during 1933.

(m) Blood Culture in Pyrexia of Unknown Origin.

During 1933 there has been a considerable increase in the number of blood cultures that have been made to assist in the diagnosis of pyrexia of unknown origin. The value of the procedure both from the standpoint of diagnosis and of prognosis is considerable. One is glad to note that it is being used more frequently.

In the period under consideration, in addition to examinations for the specific organisms of enteric fever and of puerperal sepsis the procedure of blood culture has been used to investigate 62 cases of illness.

Of these 38 failed to show the presence of bacteria in the circulation, while the organisms present in those which proved positive were as follows :—

(i.) Streptococci,	14
(ii.) Pneumococci,	4
(iii.) Staphylococci,	2
(iv.) <i>b. faecalis alkaligenes</i> ,	3
(v.) <i>b. typhosus</i> ,	1

The last of them was interesting in that enteric fever was not suspected, the blood culture was made very early in the illness, and what was virtually a preclinical diagnosis was thus established,

(n) Miscellaneous Investigations.

In addition to the work categorised under the above headings, a number of miscellaneous tests, etc., have been undertaken on behalf of the Public Health Authority of the City of Dundee.

Among these miscellaneous investigations were the following:—

(i.) Vincent's Angina.

Material from 3 cases of suspected Vincent's Angina was investigated during the year under consideration.

(ii.) Investigations for King's Cross Hospital.

1. Complete examination of pus from abscesses,	3
2. Complete examination of cerebro-spinal fluids,	2
3. Preparation of vaccine,	2
4. Examination of brain in case of suspected post vaccinal encephalitis,	1
5. Agglutination in case of suspected pasteurella infection, ...	1

(iii.) Maryfield Hospital.

1. Complete examination of pus from abscesses,	5
2. Complete examination of cerebro-spinal fluid,	1
3. General examination of faeces,	4
4. Pus from tuberculous osteomyelitis,	1

(iv.) Ashludie Sanatorium and Tuberculosis Clinic.

1. Complete examination of urine,	2
2. Complete examination of sputum,	1
3. Complete examination of cerebro-spinal fluids,	3
4. Preparation of vaccine,	1

In addition to these investigations performed on behalf of patients under treatment in hospitals or clinics administered by the Public Health Authority of the City a number of investigations dealing with communicable disease were made at the request of practitioners of medicine.

These comprise:—

1. Investigations of cases where undulant fever was suspected. The cases were three in number and one proved to be positive, examination by blood culture, culture from urine and agglutination with the patient's serum being carried out. The other two cases were negative.

2. Investigation of two cases of suspected anthrax. One of these proved to be negative and the other positive.

3. Three cases of suspected malaria were investigated during 1933.

4. Material from one case of poliomyelitis was examined.

5. Two cases of infection with the tapeworm *taenia medio-canellata* were diagnosed.

6. A suspected case of intestinal myiasis proved of considerable interest.

7. In two instances we were called upon to examine the throat and nose of persons attending surgical patients. This was done because of the occurrence of one or two cases of sepsis whose origin could not be traced.

8. In several instances we were asked to determine the serological type of the pneumococcus responsible for pleuritis, pneumonia, etc.

It affords special pleasure to report that Dr Leask, Assistant M.O.H. of the City, is now engaged in conducting research in this department during his spare time.

The work of the laboratory on behalf of the Public Health Authority of the City during 1933 has been very similar to that in previous years, excepting 1931 and 1932, when, owing to the survey of market milk, the volume of work done was in excess of average years.

It has been a very pleasant duty indeed to conduct the work herein reported, and the success which has attended it is due in no small measure to the ready, willing and helpful co-operation of the staff of the Public Health Department, and the hospitals and clinics attached thereto.

This co-operation does much to lighten the work, makes it more interesting, increases efficiency, and offers educational facilities to the department and its ancillary clinics,

MATERNITY SERVICES.

REPORTS BY DR. MARGARET SCOTT-DICKSON,
Maternity Services Medical Officer.

DR. MARGARET FAIRLIE.

DR. H. GORDON CAMPBELL.

DR. DORA W. GERRARD.

The only material change in the general working of the Scheme during 1933 was the closure in July of the special Clinic held at the Child Welfare Centre for babies and mothers suffering from Venereal Diseases. For some considerable time it has been found that the majority of the adults who attended for daily treatment were not suffering from active Venereal Diseases but were only Gynecological cases. As treatment was available for them elsewhere, it was unnecessary to continue this Clinic.

The attendances at all the ordinary Clinics have again definitely increased.

There was also an increase in the number of infants brought for examination before the age of 2 months—61.5%, as compared with 55% in 1932, which is highly satisfactory.

The attendances at the Ante-Natal Clinics have decreased somewhat. This is accounted for by the fact that the majority of the mothers attending the Ante-Natal Clinics are Midwives' cases, and these have numbered only 1,093 in 1933 as against 1,236 in 1932—a decrease of almost 12%.

There has also been a decrease in the attendances at the Ultra Violet Light Clinics, which is due to the fact that a number of the children between 2 and 5 years old were treated along with the School children, and are included in their numbers.

The thanks of the Department are again due to the members of the Dundee Voluntary Health Workers' Association for their continued valuable assistance at the Clinics, Sewing Classes and Day Nurseries, as well as to all the members of the Staff.

The detailed reports of the work, including those of the Medical Officers in charge of the Special Clinics is appended.

Infantile Mortality.

- (a) Number of deaths 304
- (b) Rate per 1,000 births 98
- (c) For classification of deaths in age groups and causes of death—See Table XII., in the Statistical section of the Report.

304 deaths of children under one year were noted by the Maternity Services Scheme, distributed as follows :—

1st week	2nd week	3rd week	4th week	1-3 months	3-6 months	6-9 months	9-12 months	Total
100	11	10	18	45	57	41	22	304

Of these 111 were breast fed.

18 were partly breast fed.

23 were mixed feeding (breast and artificial feeding).

75 were artificially fed.

In 50 cases feeding was not commenced due to prematurity.

23 cases were not visited.

4 cases no particulars were obtained.

Regarding the feeding, the ages at which those infants died were as follows :—

	1st month	2nd month	3rd month	4th month	5th month	6th month	7th month	8th month	9-12 months	Total	Feeding not commenced	N.V.	N.P.
Breast	46	14	5	8	7	5	8	7	11	111	..	..	..
Partly Breast	1	1	0	1	4	5	0	4	2	18	..	..	..
Mixed	6	1	2	4	4	0	0	1	5	23	..	..	..
Artificial	18	7	11	5	7	4	3	3	17	75	..	..	..
Totals	71	23	18	18	22	14	11	15	35	227	50	23	4

In 227 cases in which particulars were obtained, 54 mothers were engaged in work outside their own homes ; and 223 were not thus engaged.

In 2 cases the mother left work one week before confinement.

45 children who died were illegitimate.

33 children who died were twin births.

86 deaths were due to prematurity.

In addition to deaths of infants under one year of age, 122 deaths of children from 1-5 years of age were noted by the Department.

Births.

(a) Number registered (corrected)	...	...	3,099
(1) Legitimate	...	...	2,845
(2) Illegitimate	...	...	254
(b) Number notified	...	...	3,281
(c) Number classified according to nature of attendance (doctor, midwife, etc.) :—			
Doctor	...	...	286
Doctor and Midwife	...	...	163
Midwife	...	...	928
Maternity Ward, D.R.I.	...	...	1,561
Maryfield Hospital...	...	...	29
Clement Park Maternity Home	...	...	208
Parents	...	...	33
Other sources	...	...	73
(d) Number of Stillbirths (births of dead children)			171

PARTICULARS OF BIRTHS NOTIFIED AND REGISTERED IN DUNDEE DURING 1933.

Number of births taken from Registrars' Weekly Returns (including transfers out and also transfers in)	....	3258
Difference between Notification and Registration (1932-1933 and 1933-1934)	....	12
		3270
Less number transferred into Dundee	....	24
		3246
(1) Number of Live Births occurring in Dundee	...	3246
Number of Stillbirths	...	171
		3417
(2) Total number of births occurring in Dundee	...	3417
(3) Number of births notified, in accordance with the Act—i.e., 96% of total number of births (3417)	...	3281
(4) Number of live births notified—i.e. 95.8 % of live births (3246)	...	3110

CLASSIFICATION OF NOTIFICATIONS.

Attendance in relation to notification :—

By whom Notified.	Notified.	Unnotified.	Total.	Total cases attended.	Percentage of total births.
Doctors	286	141	427	533	15.6
Doctor and Midwife	163	—	163	161	4.6
Midwives	928	4	932	932	28.2
Mat. Ward D.R.I....	1,561	2	1,563	1,563	45.5
Maryfield Hospital	29	—	29	29	0.7
Clement Pk. Mat. Home	208	—	208	210	6.1
Parents	33	—	33	—	—
Other Sources ...	73	—	73	—	—
Out of Town ...	—	24	24	—	—
Found Dead ...	—	1	1	1	—
	3,281	172	3,453	3,429	

STILLBIRTHS

171 stillbirths were notified during 1933.

20 of these occurred in the practice of Midwives which were classified as follows :—

	Macerated Foetus	Complicated Labour	Congenital Deformities	Unclassified	Total
Full time Infants	6	7	1	1	15
Premature Infants	4	—	1	—	5

Maternal Mortality.

- (a) Number of deaths resulting from miscarriage or childbirth 25
- (b) Number of deaths resulting from Puerperal Sepsis 9

During 1933 an inquiry was made into 48 deaths of women occurring in childbirth or within 28 days after, or later if illness originated during pregnancy, childbirth or puerperium. 14 of the above deaths occurred in women whose homes were outwith the Dundee Boundary, but who had been brought into the City for Hospital treatment of complications arising during Pregnancy, Parturition or Puerperium, and the information regarding these cases was sent to the Medical Officers of the districts to which they belonged.

In the 34 Dundee deaths the attendants at birth were—doctor, 3; doctor and midwife, 3; Maternity Hospital I.P. 14, O.P. 4; Med. Ward. 4; midwife, 4; Maryfield Hospital, 1; Transferred in from another district (attendant unknown), 1.

CLASSIFICATION OF CERTIFIED CAUSES OF DEATH (34 cases) :—

(a) Deaths from emergencies and other causes directly due to Parturition :—

Puerperal Sepsis	...	...	...	5
Post-Abortive Sepsis	...	...	...	1
Post-Abortal Infection ; Sub-Diaphragmatic Abscess	...	...	...	1
Broncho Pneumonia ; Puerperal Sepsis	...	...	...	1
Puerperal Infection ; Acute Peritonitis	...	...	...	1
Eclampsia	...	...	...	1
Eclampsia ; Pontine Haemorrhage	...	...	...	1
Protracted Labour ; Obstetric Shock	...	...	...	1
Cardiac Failure, due to administration of an anaesthetic during delivery by forceps for Protracted Labour, Kidney insufficiency.	...	...	...	1
Fluid in serous cavities including pericardium	...	...	...	1
Specific Debility ; Obstetric Shock	...	...	...	1
Accidental Haemorrhage; Full time (undelivered)	...	...	...	1
Chorea Gravidarum, Caesarian Section	...	...	...	1
Lobar Pneumonia ; Albuminaria of Pregnancy	...	...	...	1
Placenta Praevia	...	...	...	1
				— 18

(b) Causes of Death not directly connected with Parturition :—

Influenzal Pneumonia ; Premature Labour ; Cardiac Failure	...	...	...	2
Influenza ; Pulmonary Congestion ; Cardiac Failure (undelivered)	...	...	...	1
Acute Lobar Pneumonia ; Premature Labour ; Cardiac Failure	...	...	...	1
Lobar Pneumonia	...	...	...	1
Cardiac Failure following Childbirth	...	...	...	1
Pregnancy, Cardiac Failure	...	...	...	1
Septic Pyelo Nephritis Uraemia ; Cardiac Failure	...	...	...	1
Parturition (Cerebral Embolism)	...	...	...	1
Cerebral Haemorrhage	...	...	...	1

Probably Sudden Heart Failure ; Endocarditis

and Myocarditis (indefinite)	1
Pulmonary Tuberculosis	1
Acute Pulmonary Tuberculosis	1
Septic Meningitis (undelivered)	1

— 14

(c) Causes of Death associated with Pregnancy but not with Parturition :—

Hyperemesis Gravidarum	1
Hyperemesis Gravidarum ; Myocarditis ...	1

— 2

Report Under Midwives (Scotland), Act, 1915.

The following is a list of Midwives who, during January, 1933, intimated their intention to practise Midwifery in the City of Dundee.

NAME and ADDRESS.	C.M.B. Reg. No.	REMARKS.
Arnott, Miss Jean—36 Dundonald Street	1,182	Bona fide.
Angus, Mrs. Clementina—96 King St., B.F. ...	3,057	Bona fide.
Anderson, Mrs. Isabella D.—197 Princes Street ...	2,863	Trained.
Andrews, Miss Dora B.—4 Boyd Place, Broughty Ferry	8,253	Trained.
Bowman, Mrs. Jessie—10 Hilltown	4,958	Trained.
Boyd, Miss Agnes F.—138 Hilltown	8,994	Trained.
Brodie, Miss Chrissie,—Craigie Nursing Home, ...	7,947	Trained.
Cartmill, Mrs. Ann—11 Gardner Street	3,373	Bona fide.
Craig, Mrs. Margaret—10 Albert Street	6,994	Trained.
Dobson, Mrs. Rachel H.—Elmridge, 6 Glamis Drive	4,423	Trained.
Duffus, Miss Mary C.—34 Victoria Street	2,567	Trained.
Gouk, Miss Margaret R.—10 Tofthill, Lochee ...	6,221	Trained.
Gowans, Miss Eliza—2 Erskine Street	5,925	Trained.
Gunn, Mrs. Sarah—9 Corso Street	5,404	Trained.
King, Mrs. Ellen—53½ Perth Road... ..	755	Trained.
Lowe, Mrs. Jane R.—2 Brown Street	432	Trained.
Low, Mrs. Helen—44 Ann Street	5,186	Trained.
Masson, Mrs. Jane—3 Tayview Buildings, B.F.	3,122	Bona fide.
Neill, Miss Jane Y.—12 Brown Constable St.	7,434	Trained.
Ramsay, Mrs. Ann C.—281 Hilltown	733	Trained.
Rickard, Mrs. Helen—125 Perth Road	6,453	Trained.
Smith, Mrs. Jamesina—73 Church Street	1,553	Bona fide.
Stewart, Miss Jean—77 Albert Street, c/o Macklin	7,713	Trained.
Thomson, Mrs. Mary—16 Fleming Gardens, S.	10,225	Trained.
Tulloch, Mrs. Isabella—20 Corso Street	6,231	Trained.
Bateman, Miss Ethel—Clement Park Maternity Home (S.A.H.), Lochee	8,643	Trained.
Derbyshire, Miss Ellen C. do.	8,255	Trained.
Martin, Miss Violet A. M. do.	9,999	Trained.
Peel, Miss Sarah E. do.	9,142	Trained.

(1) In January, 1933, 29 Midwives notified their intention to practise Midwifery in Dundee. During the year 2 Midwives gave notice of their intention to practise in Dundee. One Midwife died during the year, and one left town.

(2) This leaves on the Local Roll of Midwives at the end of December, 1933, 29 names. 22 of the 29 are actually practising as Midwives.

(3) The Midwives attended a total of 1093 births (including 161 cases where the Midwife acted as a Midwife though a Doctor was in attendance)—that is 26 per cent. of the total births occurring in the City, including stillbirths.

(4) The extent of the individual practice of each Midwife varies, one midwife having 141 cases, another only attended 23 cases. The average to each Midwife in practice is 49 cases.

(5) 88 visits were paid by the Inspector of Midwives and her Assistant to the Midwives' homes: 8 visits of inspection were paid to the (8) Registered Maternity Homes in Dundee.

(6) One Post-Graduate Lecture was given to the Midwives on "Toxaemias of Pregnancy" at the Maternity Hospital, Dundee Royal Infirmary.

(7) There has been one instance of infringement of rules by neglect of obtaining Medical Advice in a case of Ophthalmia Neonatorum. This case was reported to the Central Midwives Board and the Midwife was reprimanded. Otherwise the general working of the Act has been satisfactory.

The Midwives have sent 460 mothers to Ante-natal clinics or to private doctors for advice and supervision, which is an increase of 24 on the number sent in 1932.

Unfortunately there has again been a reduction in the total number of cases attended by Midwives during the year—(1,093, as compared with 1,236 in 1932), doubtless due to the stress of present economic conditions.

842 Notifications have been received from Midwives as follows :

(1) Application for Medical Assistance—	(a) Mother	...	683
	(b) Child	...	68
(2) Notification of Death—	(a) Mother	...	0
	(b) Child	...	4
(3) Notification of Stillbirth	...	...	13
(4) Notification of liability to be a source of infection	...	...	9
(5) Notification of laying out a dead body	...	...	3
(6) Notification of Artificial Feeding	...	...	4
(7) Notification of Patient's failure to follow advice	...	...	58

Ante-natal (460).

Examination	394
Varicose veins	17
Purulent discharge	11
Pain (various)	9
Albuminuria	6
Ante-partum Hæmorrhage	5
Threatened Miscarriage	4
Carious Teeth	4
Excessive Sickness	2
Swelling of Feet and Hands	2
Constipation	2
Headaches	1
Hæmorrhoids	1
Rash	1
Dimness of Vision	1

Post-natal (24).

High Temperature	10
Pain (various)	5
Post-partum Hæmorrhage (Secondary)	1
Purulent Discharge	1
Swelling Vagina	1
Rash	1
Engorged Breast	1
Facial Paralysis	1
Sickness and Abdominal Pain	1
Swelling (Leg)	1
Swelling (Breast)	1

Labour (199).

Ruptured Perinaeum	93
Prolonged Labour	68
Abnormal presentation	10
Ante-partum Hæmorrhage	10
Breech Presentation	8
Post-partum Hæmorrhage	2
Exhaustion	2
Premature Labour	1
Contracted Pelvis	1
Laceration (Labia)	1
Excessive Sickness	1
Adherent Placenta	1
Funis Presentation	1

Infants (68).

Feeble or Premature Infants	16
Stillbirths	12
Discharging Eyes	11
Icterus Neonatorum	3
Congenital Deformity	3
Sudden Death of Infant	3
Cyanosis	2
Tongue Tie	2
Inability to Swallow	2
Melæna	1
Fits	1
Oedema	1
Sprained Wrist	1
Vomiting	1
Hæmorrhage	1
Septic Blisters	1
Unclassified	7

DUNDEE, 1933.

BIRTHS IN AREA OR DISTRICT.

Total No. of Births during 1933 (uncorrected)	Total No. of Deaths of Newly-Born Children during 1933 (within 10 days)	Actual No. of Births Attended by Midwives during 1933	Actual No. of Deaths of Newly-Born Children occurring in the Practice of Midwives during 1933 (within 10 days of Birth)	Actual No. of Cases not attended at birth by a Doctor or Midwife during 1933
3258	99	1093	21	Births 1 Deaths 1

CASES OF OPHTHALMIA NEONATORUM.

Total No. of Cases during 1933	Actual No. of Cases occurring in the Practice of Midwives during 1933	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1933
53	19	0

CASES OF PUERPERAL SEPSIS.

Total No. of Cases during 1933	Total No. of Deaths during 1933	Actual No. of Cases occurring in the Practice of Midwives during 1933	Actual No. of Deaths occurring in the Practice of Midwives during 1933	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1933
29	8	5	2	Cases 0 Deaths 0
(Notifications)				

CASES OF PUERPERAL PYREXIA.

Total No. of Cases during 1933	Total No. of Deaths during 1933	Actual No. of Cases occurring in the Practice of Midwives during 1933	Actual No. of Deaths occurring in the Practice of Midwives during 1933	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1933
42	4	11	4	Cases 0 Deaths 0
			(3 Puerperal Sepsis 1 Acute Pulmonary Tuberculosis)	

CASES OF STILL-BIRTH (DEAD BORN).

Total No. of Cases during 1933	Actual No. of Cases occurring in the Practice of Midwives during 1933
171	20

CASES OF EMERGENCY.

Total No. of Cases of Emergency, in which Medical Practitioners have been called in under Section 22 of the Midwives (Scotland) Act, 1915, during 1933, distinguishing the different cases of emergency				
Ante-natal	Labour	Post-natal	Infant	Total
66	199	24	68	357

394 Ante-natal cases who were not complaining of illness, were sent for examination to the Ante-natal Clinic.

1 case notified as "Puerperal Sepsis"—Final diagnosis at death :—LOBAR PNEUMONIA.

1 case notified as "Puerperal Sepsis" died, but the death was transferred out.

3 cases notified as "Puerperal Pyrexia"—Final diagnosis at death :—PUERPERAL SEPSIS.

1 case notified as "Puerperal Pyrexia"—Final diagnosis at death :—ACUTE PULMONARY TUBERCULOSIS.

Health Visitors' Work (Maternity Services Only).

Total number of homes visited,	5,733
Total number of visits to these homes,	13,746
Average number of visits per home,	2.4
Total number of cases visited,	13,834

(a) Routine Visits :—

	1st visits.	Revisits.	Total.
Babies	2,811	10,498	13,309
Mothers, A.N. ...	2	0	2
P.N. ...	9	21	30

(b) Notifiable Diseases and Special Visits.

Ophthalmia Neonatorum	...	...	460
Infantile Diarrhoea	...	...	8
Puerperal Pyrexia	...	...	15
Puerperal Fever	...	...	6
Maternal Deaths Enquiries	...	...	3
Special Visit	...	...	1

Of the 2811 babies visited for the first time :—

126 were premature

2685 were fulltime births

Of the 2,768 homes of the newly born visited for the first time the home conditions were :—very good, 278 ; good, 1,379 ; medium 970 ; bad, 141.

Special information as to feeding of infants at birth and at 6 months :—

	Breast.	Partly Breast.	Mixed.	Artificial.	Still born.	Dead at first visit.	Total.
At first visit	2,286	80	35	192	128	90	2,811
At 6 months old	651	131	88	445	—	—	1,315

Ante-Natal Consultations.

1. Central A.N. Clinic.

REPORT BY MARGARET FAIRLIE, M.B., Ch.B.

1 Weekly Session of 2 Hours.

(a) Total number of Expectant Mothers attending	...	452
(b) Total number of attendances	... ..	799
(c) Classified summary of conditions found :—New Cases, 374.		
Advice only	... ..	324
Not Pregnant	... ..	4
Conditions due to Pregnancy	... ..	18
Ante-Partum Hæmorrhage	... ..	2
Albuminuria	... ..	8
Oedema	... ..	1
Hydramnios	... ..	2
Vomiting	... ..	1
Threatened Abortion...	... ..	2
Menorrhagia	... ..	1
Dysmenorrhoea and Sterility	... ..	1
Conditions aggravated by Pregnancy	... ..	8
Discharge	... ..	7
Varix	... ..	1
Conditions complicating Pregnancy	... ..	20
Contracted Pelvis	... ..	4
Malpresentations	... ..	11
Syphilis	... ..	1
Various	... ..	4

(d) Number of Cases :—

	New Cases.	Re-visits.
(1) Referred to Ante-natal Ward	12	10
(2) Referred to Family Doctor	4	2
(3) Treated at Clinic	358	413
	<hr/> 374	<hr/> 425

Post-Natal and Other Consultations.

Post-Natal	... ..	46
Not Pregnant	... ..	0

Classified summary of conditions found :—

Advice only	...	...	...	...	P.N.	15
Displacements	...	...	...	...	"	3
Menorrhagia	...	...	...	...	"	3
Debility	...	...	...	...	"	1
Various	...	...	...	...	"	15

				New Cases.	Re-visits.
				P.N.	P.N.
(1) Referred to D.R.I.	...	...	...	12	5
(2) Referred to Family Doctor	...	...	...	5	0
(3) Treated at Clinic	...	...	...	20	4

2. Polepark A.N. Clinic.

REPORT BY MARGARET SCOTT-DICKSON, M.B., Ch.B., D.P.H.

1 Weekly Session of 2 Hours.

(a) Total number of Expectant Mothers attending	...	187
(b) Total number of attendances	...	313
(c) Classified summary of conditions :—New Cases	...	182
Advice only	...	115

Conditions due to pregnancy	...	14
Albuminuria	...	4
Oedema	...	1
Hydramnios	...	6
Vomiting	...	2
Twins	...	1

Conditions aggravated by Pregnancy	...	31
Discharge	...	8
Varix	...	23

Conditions complicating Pregnancy	...	22
Contracted Pelvis	...	2
Malpresentations	...	11
Various	...	9

(d) Number of Cases :—

	New Cases.	Re-visits,
(1) Referred to Ante-Natal Ward	7	6
(2) Referred to Family Doctor	0	0
(3) Treated at Clinic	175	125

1 Post-Natal Mother attended and received treatment at the Clinic.

Child Welfare Consultations.

Eight weekly sessions of 2½ hours each were held in Dundee and Broughty Ferry, with five weekly sessions in Dundee and two in Lochee for special Ultra Violet Light treatment.

	Cases.	Attendances.
(1) Under 1 year of age ...	1408	14,545
(2) Over 1 year of age ...	1107	18,050
(3) Mothers—A.N. ...	2	5
P.N. ...	27	111
	<hr/>	<hr/>
	2544	32,711

Diseases recorded on admission to the Clinics :—

(1) Children under 1 year of age.

Of the 1,125 children under 1 year of age attending the 6 clinics, 138 (12.26%) showed no disease or congenital defect. The remaining 987 showed 2,244 diseases or defects, classified as follows :—

Diseases of the Digestive System ...	1,142
Diseases of the Respiratory System ...	273
Diseases of Nutrition :—	
Rickets ...	4
Other disorders of Nutrition ...	19
	— 23
Diseases of the Skin ...	243
Diseases of the Nervous System ...	0
Diseases of the Eye ...	57
Diseases of the Ear, Nose and Throat ...	15
Congenital Defects ...	435
Surgical Conditions ...	16
Various ...	40
	<hr/>
	2244

(2) Children over 1 year of age.

Of the 147 children between one and five years of age attending the clinics 9 (6.1%) showed no disease or congenital defect. The remaining 138 showed 254 diseases or defects, classified as follows:—

Diseases of digestive system	...	...	...	...	44
Diseases of respiratory system	...	...	...	...	40
Diseases of nutrition :—					
Rickets	...	...	...	...	41
Other disorders of Nutrition	...	...	...	...	20
					— 61
Diseases of the skin	...	...	...	...	27
Diseases of nervous system	...	...	...	...	4
Diseases of the eye	...	...	...	...	5
Diseases of the ear, nose, and throat	...	...	...	...	24
Congenital defects	...	...	...	...	24
Surgical conditions	...	...	...	...	10
Infectious Diseases :—					
Diphtheria	...	...	...	...	2
Mumps	...	...	...	...	4
					— 6
Various	...	...	...	...	9
					— 254

Special Treatment Centres.

A. Dental Clinic.

Report by H. Gordon Campbell, L.R.C.P. & S.E., L.D.S.

(a) Number of attendances :—

(1) Mothers	...	...	...	...	120
(2) Children	...	...	...	...	144
(3) Babies	...	...	...	...	1
					— — —
					265

(b) Classified summary of conditions recorded on admission :—

(1) Mothers—(62).

Dental Caries, 43 ; Alveolar Abscess, 7 ; Septic Roots, 5 ;
Gingivitis, 1 ; Tartar, 1 ; Periodontitis, 1 ; Septic Gums, 1 ;
Loose Teeth, 1 ; Secondary Dentine, 1 ; Denture Sore, 1.

(2) Children—(77).

Dental Caries, 38 ; Alveolar Abscess, 28 ; Tartar, 2 ; Periodontitis, 1 ; Gingivitis, 1 ; Secondary Dentine, 1 ; Stains on the Teeth, 2 ; Fractured Tooth, 1 ; Defective Enamel, 2 ; Early Eruption, 1.

(3) Babies—(1).

Defective Calcification.

(c) Number of Dentures supplied, ... 3

(d) Gross cost of Dentures supplied ... £10 0s 0d

Sums recovered from patients ... £6 15s 0d

(For Dentures supplied previously).

(e) Classified summary of treatment carried out :

Advice, 24 ; Extractions (temporary) 13 ; (permanent) 170 ; Fillings (temporary) 47 ; (permanent) 6 ; Treatment of Alveolar Abscess, 51 ; Dressings, 54 ; Aconite and Iodine treatment, 17 ; Special gum treatment, 3 ; Brushing and Scaling, 26 ; Impressions for Dentures, 4 ; Repairs to Dentures, 2.

B. V.D. Clinic.

Report by Dora W. Gerrard, M.B., Ch.B., D P.H.

Owing to the small number of genuine V.D. cases attending, this clinic was discontinued after July, 1933.

Classified summary of conditions :—

NEW CASES.						ATTENDANCES.					
	Syphilis.	Gonorrhoea.	Mixed Infections.	Not suffering from Venereal Disease.	Total.	Syphilis.	Gonorrhoea.	Mixed Infections.	Not suffering from Venereal Disease.	Total.	
Babies ...	—	—	—	13	13	—	—	—	39	39	
Children ...	—	—	—	2	2	—	28	3	16	47	
Mothers, A N. ...	—	2	—	2	4	6	17	—	35	58	
P.N.	—	—	—	9	9	—	280	10	93	383	
	0	2	0	26	28	6	325	13	183	527	

Classified according to age and sex :—

MALES.						FEMALES.					
	Syphilis.	Gonorrhoea.	Mixed Infections.	Not suffering from Venereal Disease.	Total.	Syphilis.	Gonorrhoea.	Mixed Infections.	Not suffering from Venereal Disease.	Total.	
Under 1 year ...	—	—	—	7	7	—	—	—	6	6	
1-5 years ...	—	—	—	1	1	—	—	—	—	—	
5-15 years ...	—	—	—	1	1	—	—	—	—	—	
15-25 years ...	—	—	—	—	—	—	1	—	2	3	
25 years and over	—	—	—	—	—	—	1	—	9	10	
	0	0	0	9	9	0	2	0	17	19	

Number of Injections given—Intravenous and Intramuscular :—

Novarsenobillon ...	...	...	15
Kharsulphan ...	...	...	3
Bismuth ...	...	...	5
Ametox ...	...	...	1
			— 24

Number of Specimens sent for Examination :—

Wassermann Tests ...	...	32
Gonococcal Complement Fixation Tests		7
Smears ...	...	30
		— 69

C. Ultra-Violet Light Clinics.

Number of Cases.

	New Cases.	From 1932.	Total.	Total Attend.
Babies ...	60	11	71	863
Children ...	168	45	213	3,685
	228	56	284	4,548

Babies.

		Improved	Not Improved	Not Attending	Still Attending	Total
Not thriving ...	...	1	1	3	1	6
Debility ...	...	9	1	5	2	17
Marasmus ...	...	1	1 (Died)	0	4	6
Anæmia ...	...	1	0	2	0	3
Late dentition ...	...	7	0	11	7	25
Incipient Rickets ...	...	4	0	0	1	5
Rickets ...	...	0	0	5	1	6
Bronchitis ...	...	0	1 (Died)	0	1	2
Muscular Weakness ...	...	1	0	0	0	1
		24	4	26	17	71

Children.

Not thriving ...	...	5	0	5	0	10
Debility ...	...	36	3 (1 Died)	22	15	76
Marasmus ...	...	8	1	3	6	18
Anaemia ...	...	2	0	2	0	4
Late Dentition ...	...	4	1 (Died)	8	2	15
Late Walking ...	...	1	0	0	0	1
Rickets ...	...	36	1	39	5	81
Chronic Bronchitis ...	...	0	0	1	3	4
Muscular Paralysis ...	...	0	0	1	0	1
Cervical Abscess ...	...	1	0	1	0	2
Asthma ...	...	1	0	0	0	1
		94	6	82	31	213

Day Nurseries.

(a) Number of attendances :—

(1) Under 1 year of age	...	...	...	...	2,340
(2) Over 1 year of age	...	...	...	...	10,676

(b) Charges made :—

4s. 6d. for $5\frac{1}{2}$ day week for each child, with a reduction of 1s. in the case of 2 members of 1 family, and 2s. a week if 3 members of the same family are attending at the same time.

Food and Milk.

Number of applications made for food and milk :—

Total applications	...	...	...	790
Applications granted	...	...	...	557
Applications disallowed	...	...	...	233

Number of cases who received free food or milk :—

(1) Mothers	...	...	...	...	34
(2) Children	...	...	...	...	514

All these cases were certified on medical grounds as requiring extra food or milk, and all were in necessitous circumstances.

The gross cost of the food supplied was £1368 10s. 3d.

The following milk substitutes were sold at cost price at the Clinics :—Ostermilk 276 tins ; Allen & Hanbury's 3 tins ; Benger's 1 tin. Total—280 tins—£22 7s. 10d.

Puerperal Sepsis (29 Cases)

	Notified	Primipara	Multipara	Admitted to Hospital	Nursed at Home	Recovered	Died
Doctors ...	11	1	8	8	1	8	1
Midwives ...	...	1	2	3	...	1	2
Doctor & Midwife	...	2	...	2	...	2	...
Maternity Ward—							
In-patient ...	15	5	4	9	...	5	4
Out-patient...	3	...	5	5	...	4	1
Maternity Home	...	...	...	...	...	...	...
Nursing Home	...	...	1	1	...	1	...
Maryfield							
Hospital ...	...	...	...	...	...	...	...
Registrar's							
Returns ...	...	...	...	...	...	...	...
Totals ...	29	9	20	28	1	21	8

Where delivered :—	RECOVERED		DIED	
	Primipara.	Multipara.	Primipara.	Multipara.
Home	3	9	1	3
Maternity Ward D.R.I.				
In-patients ...	3	1	2	2
Out-patients ...	...	4	...	...
Clement Pk. Mat. Home ...	...	...	...	...
Nursing Homes ... ..	...	1	...	...
	6	15	3	5

Where Treated :—

Home	1	...	...	...
D.R.I.	2	...	2	1
King's Cross Hospital	3	15	1	4
	6	15	3	5

Of the cases which recovered the home conditions were good in 12, bad in 7, and not known in 2 ; and of the cases which died, the home conditions were good in 6, bad in 1, and not known in 1.

PARTICULARS OF CASES.

Primipara.	Recovered.	Died.	Total.			
Normal Confinement ;						
Ruptured Perinaeum	...	1	1			
Instrumental delivery ;						
Episiotomy Albuminuria	...	1	1			
Instrumental delivery ;						
Episiotomy ; Laceration						
of Cervix ... ..	...	1	1			
Instrumental delivery	2	...	2			
Instrumental delivery ;						
Ruptured Perinaeum	1	...	1			
Normal Confinement ;						
Ruptured Perinaeum	1	...	1			
Normal Confinement	1	...	1			
Caesarian Section ...	1	...	1	6	3	9
Multipara.	Recovered.	Died.	Total.			
Normal Confinement ...	5	1	6			
Abortion	9	2	11			
Caesarian Section ...	...	1	1			
Abnormal Presentation ;						
(Footling) ... ..	...	1	1			
Normal Confinement ;						
Ruptured Perinaeum	1	...	1	15	5	20

Puerperal Pyrexia (42 Cases).

	Notified	Primipara	Multipara	Admitted to Hospital	Nursed at Home	Recovered	Died
Doctor	24	3	4	6	1	7	—
Doctor and Midwife	—	3	1	3	1	2	2
Midwife	—	1	6	6	1	5	2
Maternity Ward, I.P.	14	8	5	13	—	13	—
O.P.	4	—	7	5	2	7	—
Clement Park							
Maternity Home	—	1	2	3	—	3	—
Nursing Homes ...	—	—	1	1	—	1	—
	42	16	26	37	5	38	4

Where Delivered.	Recovered.		Died.	
	Primipara.	Multipara.	Primipara.	Multipara.
Home	6	8	1	3
Maternity Ward, D.R.I.				
I.P.	8	5	—	—
O.P.	—	7	—	—
Clement Park				
Maternity Home	1	2	—	—
Nursing Homes	—	1	—	—
	—	—	—	—
	15	23	1	3
	—	—	—	—
Where Treated.				
Home	2	3	—	—
Clement Park				
Maternity Home	—	1	—	—
D.R.I.	6	3	—	—
Maryfield Hospital	—	1	—	—
King's Cross Hospital	7	15	1	3
	—	—	—	—
	15	23	1	3
	—	—	—	—

Of the cases which recovered, the home conditions were good in 28; bad in 8, and not known in 2; and of the cases which died, the home conditions were good in 4.

PARTICULARS OF CASES.

Primipara.	Recovered.	Died.	Total.			
Instrumental delivery ;						
Episiotomy ... ..	...	1	1			
Instrumental delivery	2	...	2			
Instrumental delivery ;						
Ruptured Perinaeum	1	...	1			
Instrumental delivery ;						
Retained Placenta ...	1	...	1			
Craniotomy	1	...	1			
Breech ; Extended Legs ;						
Ruptured Perinaeum ;						
Chorion defective ...	1	...	1			
Normal Confinement ...	6	...	6			
Normal Confinement ;						
Ruptured Perinaeum	3	...	3	15	1	16

Multipara.	Recovered.	Died.	Total.			
Normal Confinement						
(B.B.A.) ; History of						
Excessive Sickness						
about a week before						
Confinement, with						
Haematemesis ...	...	1	1			
Normal Confinements	18	1	19			
Instrumental delivery ;						
Ruptured Perinaeum	...	1	1			
Instrumental delivery	2	...	2			
Normal Confinement with						
Ruptured Perinaeum	1	...	1			
Caesarian Section ...	1	...	1			
Incomplete Abortion ...	1	...	1	23	3	26

4 cases had been notified as Puerperal Pyrexia, in which the final causes of death were—Puerperal Sepsis, 2 ; Puerperal Sepsis with Acute Peritonitis, 1 ; Acute Pulmonary Tuberculosis, 1.

4 cases of Puerperal Fever followed instrumental delivery with 3 deaths, and 8 cases of Puerperal Pyrexia followed instrumental delivery with 2 deaths.

Number of cases of Puerperal Fever and Puerperal Pyrexia where the Local Authority provided Assistance on the request of the Medical Practitioners for :—

(i) Consultant Service	...	...	...	3
(ii) Bacteriological Examinations	...	...	...	—
(iii) Skilled Nursing at Home	...	...	...	—
(iv) Hospital Treatment	...	...	...	64

Notifications were sent promptly ; and, in the majority of cases the opportunity of removal to Hospital for treatment was taken advantage of immediately.

Ophthalmia Neonatorum.

	Doctors	Midwives	Doctor and Midwife	Mat. Hosp. In-Pat.	Hosp. Out-Pat.	Maryfield Hospital.	Maternity Home.	M. S. Dept.	Eye Institution	Found Dead.	Total.
By whom notified...	11	6	4	3	13	—	—	14	2	—	53
By whom attended	5	19	—	9	18	—	2	—	—	—	53
Total No. of Births attended in 1933	533	932	161	1563		29	210	—	—	1	3429

Treated in Institutions	In Hospital	Treated at Home	Type of Case		Result		Died during Treatment	Not Visited	Initial Visits	Re-visits
			Severe	Mild	Complete Recovery	Injury to Sight				
King's Cross H. 10 Maryfield H. — Dundee R. In. 5	15	38	1	52	53	—	—	3	50	414

1 case of severe type was attended at birth by Maternity Staff.

Smears were taken in 42 cases. In one the result was positive for gonococci ; 7 were suspicious ; and 34 were negative.

In 11 cases smears were not taken from the eyes, as 7 were in hospital ; in 2 the eyes were clear at first visit ; one was not visited ; and one refused.

In no case was there any appreciable loss of vision.

Rickets.

4 children under one year showed clinical signs of commencing Rickets.

All these cases were between the ages of 9 and 12 months ; 2 were entirely breast fed ; one was breast fed for one month, then fed on cow's milk and Grant's Oat Flour ; and one was fed on patent food.

Of the 147 children admitted between the ages of 1 and 5 years 41 (27.8%) showed some signs of clinical rickets on admission.

The ages of these children on admission were as follows :—

1-2 years	...	32	out of a total of	101
2-3 years	...	6	out of a total of	21
3-4 years	...	2	out of a total of	17
4-5 years	...	1	out of a total of	8
<hr/>				
41				147

Enquiries as to the feeding in the first year of life elicited the following information :—

Breast fed for less than 1 year	...	12	out of a total of	58
Breast fed for over one year	...	4	out of a total of	23
Partly Breast fed (for a few months only)				
			12	out of a total of 30
Mixed (Breast and other food)	...	0	out of a total of	2
Fed on fresh cow's milk	...	9	out of a total of	23
Fed on artificial food	...	4	out of a total of	11
<hr/>				
41				147

Deaths from Infantile Diarrhoea.

25 deaths occurred from infantile diarrhoea during 1933.

Of these 8 were breast fed ; 2 were partly breast fed ; 3 were mixed feeding (breast and other food) ; 10 were artificially fed ; 2 cases were not visited.

With reference to feeding, the ages at which these infants died were as follows :

	1st Mnth.	2nd Mnth.	3rd Mnth.	4th Mnth.	5th Mnth.	6th Mnth.	7th Mnth.	8th Mnth.	9-12 Mnth.	Tl.	N. V.
Breast ...	1	1	1	1	2	0	0	1	1	8	
Partly Breast	0	0	0	0	0	1	0	1	0	2	
Mixed ...	1	0	0	1	1	0	0	0	0	3	
Artificial ...	1	1	1	0	0	2	1	0	4	10	
Totals ...	3	2	2	2	3	3	1	2	5	23	2

Of the 23 deaths from infantile diarrhoea in which particulars were obtained :—

5 occurred in houses of one room, in which there were 17 occupants.

15 occurred in houses of two rooms, in which there were 83 occupants.

1 occurred in a house of three rooms, in which there were 5 occupants.

1 occurred in a house of four rooms, in which there were 5 occupants.

1 occurred in lodgings.

The family history showed that in these families :—
63 were still alive.

38 had died, of which 30 had died in the first year of life.

3 mothers had worked outside their own homes : and
20 were not thus employed.

Educational.

In addition to the usual lectures given to the probationers at the Day Nurseries, in preparation for the examination for the Certificate of the National Society of Day Nurseries, one lecture was given to Midwives by Professor McGibbon, and a lecture on Teeth was given to the clinic mothers by one of the lecturers of the Dundee Dental Health Association.

Sewing Classes were held at three of the Centres. 62 classes were held, each session lasting about two hours. There were 58 mothers enrolled and 212 garments were made or altered.

Voluntary Agencies.

DUNDEE VOLUNTARY HEALTH WORKERS' ASSOCIATION.

During the year 560 knitted garments and 561 sewn garments were made by the members of the Association for the Clinics; and 397 were provided for the Day Nurseries.

1040 garments supplied by the Association were distributed at the clinics. Of these 203 were sold at cost price, 4 at half cost price, 786 at quarter cost price, and 47 were given free on the recommendation of the Medical Officer.

The following Voluntary Institutions are also associated with the Scheme, and receive an annual grant from the Dundee Town Council.

SALVATION ARMY HOME.

Report of the Maternity Home—Florence Booth House, Clement Park, Lochee.

Number of non-paying cases in the Home on	
January 1st, 1933	27
Number of non-paying cases admitted during 1933	41
Number of cases confined in the Home during 1933	26
Number of days in the Home during 1933	8,930

LOCHEE DAY NURSERY.

The Lochee Day Nursery was re-opened in January, 1933.

New Cases :—

Under 1 year of age	9
Over 1 year of age	40
	49

Attendances :—

Under 1 year of age	97
Over 1 year of age	362
	459

NURSERY SCHOOL.

Number of children admitted in 1933	21
Re-admitted, from 1932	17
Average number on Roll	23
Total number of attendances in 1933	3,856

PRE-SCHOOL AND SCHOOL MEDICAL SERVICES.

REPORT BY DR. A. E. KIDD,
Chief School Medical Officer.

DUNDEE,
August, 1934.

I HAVE the honour to submit for information a report on the work of the Medical Department (Pre-School and School Medical Services) for the year ending 31st July, 1934.

Number of schools under inspection	....	....	....	....	43
Average number of children on roll for the past session	....	....	....	....	29,617
Percentage of average attendance for the whole year	....	....	....	....	90

Staff.

During the past session the following changes in the staff have taken place :—

Nurse Tulloch resigned her post as Health Visitor and was succeeded by Nurse Rattray who assumed duty on 15th May, 1934, after having completed the Health Visitor's Course of Instruction in Edinburgh.

Dr Darwent resigned in April, 1934, and has been succeeded on the staff by Dr Imrie, who has taken over the duties of the section formerly controlled by Dr Darwent.

Summary of Year's Work.

Attendance at Treatment Clinic	....	....	....	....	56,137
Examinations for Attendance Certificates	....	....	....	....	22,725
Routine Examinations in Schools	....	....	....	....	8,541
Special Examinations in Schools	....	....	....	....	3,733
Examination as to "Fitness" for Employment	...	...	...	...	1,293
Nurses' Visits to Schools	....	....	....	....	902
Doctors' Visits to Schools	....	....	....	....	503
Attendance at Cleansing Station	....	....	....	....	4,038
Children inspected before going to Holiday Homes	....	....	....	....	1,198

New Schools and alterations in Schools.

No new schools have been occupied during the past session.

Minor alterations as regards removal of partitions and galleries, also reflooring have been carried out where necessary.

A hygienic drinking fountain has been under test during the past few months. The pattern is new and has been designed to obviate the objections which have been put forward in regard to public drinking fountains. After the fountain had been installed the school was paraded and a demonstration given of the method recommended for the proper use of the fountain. The headmaster reports that this drinking fountain has given every satisfaction and can be used equally well by infants and senior pupils.

Organisation and Administration.

During the past year no change has been made in the districts into which the city has been divided.

During the year the Health Visitors have carried out visits to Pre-school and School Children on account of :—

Infectious Disease	....	...	...	5813
Tuberculosis	...	...	...	3117

Visits to children found defective :—

Age 1-5...	1810
Over 5	2371

Re-visits :—

Age 1-5...	4755
Over 5	6423

Total	24289
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19503 homes were visited, and 902 visits were paid to schools.

Another year's experience of the system whereby each district has one Health Visitor allotted to it, has but added to the good impression made since the new scheme was inaugurated. The extended knowledge each Visitor now has of the families in her district, is of very great value, and while none claim to know everyone, yet very few homes can be a cause of enquiry without the Health Visitor being able to give some helpful information.

Sickness among members of the staff has curtailed the number of visits paid, but every member of the staff has ungrudgingly toiled to keep the work up to date.

Supervision of Infectious Disease.

During the past session Scarlet Fever and Measles have caused a large amount of non-attendance at school.

3479 certificates for exclusion from school on account of infectious disease were issued during the past session.

The following table gives the incidence, month by month, of reported cases of infectious disease, in addition to showing the numbers notified in the age groups of (1) Under one year, (2) 1-5 years, and 3 from 5-15 years. :—

	Scarlet Fever.			Diphtheria.			Measles.			Whooping Cough.			Mumps.			Pneumonia.			Other Diseases.		
	Under 1	1-5	5-15	Under 1	1-5	5-15	Under 1	1-5	5-15	Under 1	1-5	5-15	Under 1	1-5	5-15	Under 1	1-5	5-15	Under 1	1-5	5-15
1933																					
August ...	1	38	65	2	7	16	—	—	1	8	14	11	—	—	—	3	14	9	—	—	4
September	1	80	172	0	10	14	—	1	6	1	7	21	—	—	5	4	11	10	—	1	—
October ...	1	123	281	1	9	19	—	—	4	2	3	11	—	—	10	16	35	18	—	—	4
November	1	116	210	2	10	22	—	—	—	7	11	—	—	—	4	26	51	14	1	1	1
December	1	71	144	1	11	10	—	1	1	1	3	19	—	—	8	25	32	18	—	2	—
1934																					
January ...	5	74	147	1	15	20	—	1	2	5	35	18	—	1	4	19	27	8	1	0	1
February	1	45	95	—	11	27	—	—	2	5	13	36	—	—	6	8	12	11	—	1	1
March ...	3	26	106	—	11	12	—	3	88	1	16	33	—	—	11	7	14	17	1	—	—
April ...	2	21	27	—	10	10	3	14	51	4	24	48	—	—	9	7	14	14	—	—	—
May ...	1	13	42	1	6	16	—	17	134	6	14	46	—	1	11	4	12	12	3	4	1
June ...	0	9	21	—	8	13	18	111	308	3	8	22	—	—	17	4	17	20	—	1	1
July ...	—	8	11	—	5	9	34	144	45	3	7	—	—	2	—	2	13	14	4	1	13

Cleansing Station.

There have been 4038 attendances at the Cleansing Station during the past year. It is evident that the facilities offered by this institution are not generally known, as otherwise more opportunities would be taken to use the institution and so remove at once an undesirable bodily condition.

Presence of Parents at Inspection.

During the past year 5547 parents have attended the inspections of their children. The School Medical Staff would welcome an increase in the number of parents attending inspections as, if the parent be not present and the inspecting medical officer discovers some defect, instead of the parent having the defect explained there and then, the Health Visitor has to make a special visit to inform the parent of the defect and deliver any message sent by the doctor,

Physical Condition of School Children.

Total number of children examined :—

(1) ROUTINE EXAMINATIONS.

Boys	4,366
Girls	4,175
Boys and Girls	8,541

(2) SPECIAL EXAMINATIONS

Boys and Girls	3,733
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(3) EXAMINATIONS AS TO "FITNESS" FOR EMPLOYMENT.

Boys	1,032
Girls	261
Boys and Girls	1,293

Clothing.

	Boys.		Girls.		Boys & Girls.	
	Boys.	%	Girls.	%	Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Satisfactory	4,357	99	4,162	99	8,519	99
Unsatisfactory	9	—	13	—	22	—
In need of repair ...	87	2	61	2	148	2
Clothing clean	4,320	99	4,147	99	8,467	99
Clothing dirty	46	1	28	1	74	1

Footgear.

Number examined ...	4,366	—	4,175	—	8,541	—
Satisfactory	4,339	99	4,166	99	8,505	99
Unsatisfactory	21	—	8	—	29	—
Barefoot	6	—	1	—	7	—

Means are taken to see that any children with unsatisfactory footgear are attended to. A barefoot child is seldom seen nowadays. The hot weather at the end of the session was responsible for the small number of barefoot children noted.

Cleanliness of Head.

Number examined ...	4,366	—	4,175	—	8,541	—
Vermin	11	—	48	1	59	1
Nits	85	2	477	11	562	7
Clean	4,347	99	4,138	99	8,485	99

Percentage for 1924-25. Percentage for 1929-30.

Boys and Girls—Vermin	2	—
Nits	16	5

As regards the prevalence of nits in the hair in girls one must not forget that the fashion of short hair is dying out. The hair is now being worn much longer, and we are back to the old trouble of the necessity of frequent inspections at irregular intervals in order to combat this evil. If we could get the older girls to take a greater pride in their personal cleanliness instead of hiding the fact that they have allowed their hair to become infected, we would go a long way to solve this ever present problem. Owing to sickness among the nursing staff during the past session there was not so much time available for visiting in regard to this defect, but with a full staff one looks forward in the next session to a better condition of things.

As long as we have with us the careless and apathetic parents, the careful parents will have the possibility of infection of their children. It is in the careful household that infection is often unsuspected and only recognised when the condition is marked, thereafter causing weeks of patient attention from the mother.

Cleanliness of Body.

	Boys.		Girls.		Boys and Girls.	
	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Vermin ...	9	—	7	—	16	—
Vermin marked ...	169	4	155	4	324	4
Clean ...	4,225	97	4,145	99	8,370	99

Percentage for 1924-25. Percentage for 1929-30.

Boys and Girls—Vermin	1	—
Vermin marked	6	4

The practice of "dressing up" the children for Medical Inspection still continues, although not to the same extent. When one compares the figures of vermin-marked as against vermin noted, one cannot but suspect that certain children have had extensive preparation for what some parents regard as an unnecessary ordeal.

Condition of Skin.

	Boys and Girls.					
	Boys.	%	Girls.	%	Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Head—						
Ringworm... ..	3	—	—	—	3	—
Impetigo	88	2	90	2	178	2
Favus	—	—	—	—	—	—
Other diseases ...	43	1	48	1	91	1
Body—						
Ringworm... ..	13	—	5	—	18	—
Impetigo	109	2	104	3	213	2
Scabies	13	—	17	—	30	—
Other diseases ...	75	2	58	1	133	2

It is pleasing to record that fewer cases of scabies were noted during the past session. Parents now know of the facilities provided at the cleansing station, and the possibility of a thorough disinfection of bedding and house. Such facilities permit of a better plan of campaign against this highly infectious condition.

Nutrition.

Number examined ...	4,366	—	4,175	—	8,541	—
Above average ...	1,062	24	1,050	25	2,112	25
Average	2,894	66	2,681	64	5,575	65
Below average ...	371	9	391	9	762	9
Very bad	39	1	53	1	92	1

Boys and Girls.	Percentage of 1924-25	Percentage of 1929-30
Above average	40	33
Average	57	63
Below average	3	4
Very bad	—	—

The figures of the "Below average" and "Very Bad" groups again show an increase. It is significant to note that not only are there increased numbers in these groups but anaemia also has increased, enlarged tonsils, enlarged glands of the neck (may be also due to after-effects of scarlet fever), nasal catarrh, and rickets all show an increased percentage of incidence.

During the past session cases reported by headmasters as requiring feeding have been inspected by the medical staff as to their suitability for inclusion in the lists of those requiring extra nourishment

Owing to the kindness of a lady in the City, a supply of T.T. Milk has been sent to the Infant Department of a school for the past six months. It is interesting to report the following remarks by the doctor who examined the children at the end of the session :

"The first infant class have been receiving a cup of milk daily from February, 1934. On examination these children were all found satisfactory as regards weight, and were firmer and healthier than the children who usually enter school."

Teeth.

	Boys.		Girls.		Boys and Girls.	
	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Perfect ...	214	5	211	5	425	5
Sound ...	734	17	650	16	1,384	16
1-4 decayed ...	2,454	56	2,402	57	4,856	57
5 or more decayed ...	964	22	912	22	1,876	22
Oral sepsis ...	215	5	195	5	410	5

Nose and Throat.

Number examined ...	4,366	—	4,175	—	8,541	—
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Nose—

Catarrh ...	378	9	326	3	704	8
Obstruction ...	20	—	26	1	46	1
Other diseases ...	28	1	22	1	50	1

Throat—

(a) Tonsils—

Slightly enlarged	689	16	690	17	1,379	16
Much enlarged	174	4	151	4	325	4

(b) Adenoids—

Probably present	190	4	166	4	356	4
Present ...	40	1	30	1	70	1
Other diseases	30	1	20	—	50	1

(c) Glands—

	Boys.	%	Girls.	%	Boys and Girls.	%
Submaxillary—						
Enlarged ...	857	20	709	17	1,566	18
Much enlarged	7	—	11	—	28	—
Suppurating	—	—	—	—	—	—
Cicatrices ...	41	1	32	1	73	1
Cervical—						
Enlarged ...	307	7	295	7	602	7
Much enlarged	4	—	7	—	11	—
Suppurating ...	—	—	—	—	—	—
Cicatrices ...	34	1	31	1	65	1
(d) Mouth Breathers	302	7	238	6	540	6

External Eye Disease.

Number examined ...	4,366	—	4,175	—	8,541	—
Strabismus ...	111	3	133	3	244	3
Nystagmus ...	1	—	2	—	3	—
Blepharitis ...	141	3	149	4	290	3
Conjunctivitis ...	109	3	100	3	209	3
Corneal Nebulae ...	5	—	7	—	12	—
Corneal Ulcer ...	3	—	1	—	4	—
Other diseases ...	24	1	36	1	60	1

Boys and Girls—				Percentage for 1924-25.	Percentage for 1929-30
Strabismus ...	...	...	...	2	3
Blepharitis ...	...	...	...	2	2
Conjunctivitis ...	...	...	...	1	3

Visual Acuity.

6/6 indicates that at a distance of 20 feet a child can see letters
6/16 inch in size.

6/9 letters	8/16	„	„	„
6/12	„	11/16	„	„
6/18	„	17/16	„	„

				Boys and			
		Boys.	%	Girls.	%	Girls.	%
Number examined ...		3,008	—	2,919	—	5,927	—
6/6 ...		2,367	79	2,181	75	4,548	76
6/9-6/12 ...		394	13	471	16	865	15
6/18 or worse ...		247	8	267	9	514	9

				Percentage	Percentage
				for 1924-25.	for 1929-30.
Boys and Girls—6/6 ...		...	...	68	80
6/9-6/12 ...		...	...	20	12
6/18 or worse ...		...	...	12	8

Ears.

Number examined ...	4,366	—	4,175	—	8,541	—
Otorrhoea ...	46	1	35	1	81	1
Wax ...	144	3	110	3	254	3
Other diseases ...	6	—	7	—	13	—

Hearing.

Number examined ...	4,366	—	4,175	—	8,541	—
Somewhat deaf ...	46	1	35	1	81	1
Markedly deaf ...	—	—	2	—	2	—

Speech.

Number examined ...	4,366	—	4,175	—	8,541	—
Defective articulation	54	1	31	1	85	1
Stammer ...	25	1	11	—	36	—

Retarded Condition.

Number examined ...	4,366	—	4,175	—	8,541	—
"Retarded" ...	11	—	10	—	21	—

Heart and Circulation.

Number examined ...	4,366	—	4,175	—	8,541	—
Organic—						
Congenital ...	6	—	4	—	10	—
Acquired ...	16	—	30	1	46	1
Functional ...	41	1	65	2	106	1
Anaemia ...	438	10	390	9	828	10

Percentage for 1924-25.				Percentage for 1929-30.			
Boys and girls—Anaemia ...		...	...	6		6	

The figures for anaemia again show an increase over those of last year. The fact that the figures for nutrition in the "below average" and "very bad" groups also show an increase must be taken as an important and significant feature of this year's report.

Lungs.

	Boys.		Girls.		Boys and Girls.	
	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Bronchitis ...	175	4	127	3	302	4
Tuberculosis ...	3	—	1	—	4	—
? Tuberculosis ...	32	1	24	1	56	1

Nervous System.

Number examined ...	4,366	—	4,175	—	8,541	—
Epilepsy ...	2	—	—	—	2	—
Chorea ...	4	—	2	—	6	—
Infantile Paralysis ...	9	—	7	—	16	—
Other diseases ...	3	—	2	—	5	—

In cases of Chorea it is found to be to the advantage of the patients if they are relieved of all school work given a period of complete rest and recommended an open air life, free from worry. Cases kept at school often drag on for an indefinite period, and some severe cases have been found to derive benefit from a stay at the Special School.

Tuberculosis (Non-Pulmonary).

Number examined ...	4,366	—	4,175	—	8,541	—
Glandular ...	10	—	3	—	13	—
Bones and Joints ...	3	—	6	—	9	—
Abdominal ...	2	—	1	—	3	—
Skin ...	1	—	1	—	2	—
Other forms ...	—	—	—	—	—	—

Deformities.

Number examined ...	4,366	—	4,175	—	8,541	—
Bow Leg ...	21	—	9	—	30	—
Knock Knee ...	23	—	17	—	40	—
Cleft Palate ...	3	—	—	—	3	—
Spinal Curvature ...	15	—	10	—	25	—
Rickety Chest ...	154	4	71	2	225	3
Wry Neck ...	4	—	5	—	9	—
Club Foot ...	4	—	—	—	4	—
Congenital ...	4	—	4	—	8	—
Acquired (non-rachitic)	4	—	8	—	12	—

Rickets.

	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,366	—	4,175	—	8,541	—
Slight... ..	165	4	83	2	248	3
Marked	33	1	14	—	47	1
			Percentage for 1924-25.		Percentage for 1929-30.	
Boys and Girls—Slight ...	...	...	2		2	
Marked ... ..	...	...	3		—	
OTHER DISEASES	68	2	33	1	101	1

Result.

Number examined ...	4,366	—	4,175	—	8,541	—
Fit	3,890	89	3,681	88	7,571	89
Defective (excluding verminous cases) ...	476	11	494	12	970	11
			Percentage for 1924-25.		Percentage for 1929-30.	
Boys and Girls—Fit ...	...	...	91		92	
Defective ...	...	...	9		8	

Special Schools and Classes.*(1) Fairmuir Special School.*

Physically Defective Children—

	Boys.	Girls.
On roll, July, 1933 ...	125	105
Admitted ...	60	41
Left ...	48	50
On roll, July, 1934 ...	137	96

(2) Fairmuir Special School.

“ Retarded ” Children—

On roll, July, 1933 ...	63	39
Admitted ...	13	6
Left ...	16	10
On roll, July, 1934 ...	60	35

Again the accommodation in this school has been utilised to its fullest extent. Thanks to the district scheme the Health Visitors quickly get in touch with any family in which there is a defective

child, and as a result we are getting the children at an earlier age. This means that the lower end of the school is kept continuously filled up from the waiting list.

This year there has been a larger number of boys and girls leaving, and this has helped to reduce the very large waiting list with which the session was commenced.

We are again very much indebted to Mr Forbes, Miss Carmichael, and Miss Wood for their kindly attention to the orthopaedic work, which is such an important part of the functions of this school. During the past session we have been able to devote more time to these cases, with the result that there has been a very marked improvement in their physical well-being. The breathing exercises have been especially beneficial and one would like to see a demonstration arranged which would permit of teachers from elementary schools seeing these exercises. There must be many children in elementary schools who would benefit from such exercises, and who at present are denied the privilege of learning these effective exercises.

The fitting out of the classroom at the back of the school as a workshop has been one of the school's best innovations, and is largely being used by the boys from the retarded side of the school. Already the standard of their wood-work has gone up, and one is delighted to see these retarded boys turning out such practical and well made articles. These boys have been able to supply and fit up extra shelving in class rooms, they have made certain of the equipment used in the play of their schoolmates, and also many pieces of apparatus used in teaching hand work.

Their progress in the handling of tools has been marked and when the time comes for them to leave school their value in the labour market will be very much higher on this account.

The fact that this workshop is actually within the school grounds is another factor which deserves notice, in that boys now feel that they can learn something in the workshop which formerly was impossible of acquisition. These boys realise that an ability to handle tools means that a boy with this accomplishment is more likely to get a job, and therefore they are willing to stay on at school until such time as a suitable occupation has been found for them.

(3) *Blind Institution School.*

Blind and Partially Blind Children.

" Educationally " Blind—

			Boys.	Girls.
On roll, July, 1933 ...	...	...	16	15
Admitted ...	...	...	8	5
Left ...	...	...	5	1
On roll, July, 1934 ...	...	...	19	19

Other Cases—

On roll, July, 1933 ...	...	...	16	8
Admitted ...	...	...	2	1
Left ...	...	...	2	1
On roll, July, 1934 ...	...	...	16	8

(4) *Dudhope Terrace School.*

Deaf and Deaf Mute Children—

On roll, July, 1933 ...	...	...	40	26
Admitted ...	...	...	3	7
Left ...	...	...	6	4
On roll, July, 1934 ...	...	...	37	29

(5) *Sidlaw School, Auchterhouse Sanatorium.*

Children undergoing Sanatorium treatment.

On roll, July, 1933 ...	...	...	12	13
Admitted ...	...	...	34	24
Left ...	...	...	33	25
On roll, July, 1934 ...	...	...	13	12

Arrangements for Physical Training.

During the past session the work of this department has gone on quietly and effectively. We have to thank Mr Forbes and the whole of his staff for their hearty co operation in our work.

Special cases noted in the course of routine inspection are brought to the notice of the Physical Instructors in order that such cases may have special attention paid to them in the way of corrective remedial or breathing exercises.

In one school a special examination was made of every boy or girl before they took up organised games—this examination brought to light several interesting points—some of the children required special remedial exercises, some had such small chest movement

that breathing exercises were necessary to fit these children for their part in after life, while a few were found to be quite unsuited for participation in any active games.

The progress of these children is being watched with the greatest interest, and our thanks are due to the instructors who have so carefully drawn up and supervised the corrective exercises necessary for each child.

Arrangements for Medical Treatment.

Summary of attendance at Treatment Clinics.

Total attendances at all clinics...	84,594
-------------------------------------	-----	-----	-----	-----	--------

(1) *Central Clinic (Nelson Street).*

Dental	...	...	...	...	...	3,818
Skin and X-ray	...	...	...	...	...	12,602
Ear, Nose and Throat	9 859
Eye	14,024
Orthopaedic	58
General	15,905

Total attendances	56,266
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Total number of children who have attended the Central Clinic :—

(a) Off school	2,182
(b) Attending school	5,352
					7,534

Average attendance per child (days)	8
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Average daily attendance	208
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Cases sent by Headmasters, Doctors, Health Visitors or Attendance Officers	13,820
--	-----	-----	-----	--------

Return Cases	7,707
--------------	-----	-----	-----	-------

(2) *Broughty Ferry Clinic.*

Eyes	...	...	...	...	70
Ears	...	...	...	...	26
General	...	...	...	...	256

352

Cases sent by Headmaster	270
--------------------------	-----	-----	-----	-----

Return Cases	376
--------------	-----	-----	-----	-----

(3) *Ferry Road Clinic.*

Eyes	960
Ears	938
General	4,036
	<hr/>
	5,934

Cases sent by Headmaster	783
Return Cases	452

(4) *Lochee Clinic.*

Eyes	2,431
Ears	1,521
General	5,964
	<hr/>
	9,916

Cases sent by Headmasters	1,903
Return Cases	1,593

(5) *Isles' Lane Clinic.*

Eyes	1,268
Ears	1,111
General	5,539
	<hr/>
	7,918

Cases sent by Headmaster	1,154
Return Cases	726

(6) *"Sun" Clinics at Nelson Street and Lochee Clinic.*

	Boys	Girls	Boys and Girls.
Attendances ...	1,808	2,400	4,208
Total 2-5 attendances	389	524	913
Over 5 attendances	1,419	1,876	3,295

Each course of treatment consists of 36 exposures, Commencing with short exposures, the effect on the child is noted and the exposures lengthened at such times as are considered to be beneficial to the child, and during the whole course the child is examined at intervals.

(7) "Pre-school" Attendances.

438 "pre-school" children have attended the various clinics in the city. This department is growing slowly but steadily. To the doctor carrying out routine inspections it is a great help if the previous history of a child is known, as in many cases parents are often vague as to dates, etc. The attendance of "pre-school" children at clinics means that this information is available and also that minor defects seen in "pre-school" children may be corrected before they commence their school life.

Total Attendances at Clinics.

Nelson Street	...	...	...	...	...	56,266
Broughty Ferry	....	....	....	....	....	352
Ferry Road ...	...	...	...	...	...	5,934
Lochee	...	...	...	....	....	9,916
Isles Lane ...	...	....	...	...	...	7,918
"Sun" Clinics	...	...	...	...	...	4,208
						—
Total						84,594

Total Number of Children who have attended Clinics.

Nelson Street	...	...	...	...	...	13,820
Broughty Ferry	...	...	...	...	...	270
Ferry Road ...	...	...	...	...	...	783
Lochee	...	...	...	...	....	1,903
Isles Lane ...	...	....	...	...	...	1,154
"Pre-school"	...	...	...	...	...	438
						—
Total						18,368

Treatment Centres.

We have now had a full year's working of the Central and District Clinics. This arrangement has been found to work well, the district clinics afford facilities for advice and treatment, and at the same time save the long journey to the Central clinic. As the doctors attend the school clinics in the afternoons, this permits of the mother being free to prepare the mid-day meal, and as the clinics are near the schools they serve, attendance now entails less time being lost from school as most of the cases attend in the late afternoon.

Certain special cases require to attend twice daily for treatment,

but intimation of this is given to the Headmaster, and no child is in attendance at school and clinic without having a card given them stating the time when they are required to attend for treatment.

Children and Young Persons (Scotland) Act, 1932.

The coming into force of the "Bye Laws regarding the Employment of Children" has increased the work of this department. Before a child can undertake such work as is permitted by these bye-laws, a certificate of fitness must be obtained. This certificate is signed by the headmaster of the school, who states whether or not in his opinion the child may or may not without detriment to its general education engage in the proposed occupation. This certificate is also signed by one of the doctors on the staff who states, after a physical examination, as to the fitness or otherwise of the child to carry out the proposed employment. These certificates are then forwarded to the Town Clerk and in cases where the Corporation are satisfied the necessary permit is then issued.

Cases which are under consideration as to admission to an approved school are also examined

1,032 boys and 261 girls were examined.

97 boys and 19 girls were refused as unfit for employment, some on account of age and some on account of ill health.

Summary of Attendance Certificates Granted at Clinics.

Total number of certificates issued 17,041

(a) Unfit to attend school—

	Four Weeks.	Three Weeks.	Two Weeks.	One Week.
Clinic cases	5	14	131	1,942
Non-clinic cases	222	129	1,375	2,772
Total Clinic cases ... ..	...	...	2,092	
Total Non-Clinic Cases ... ..	...	...	4,498	
				6,590

(b) Fit to attend School.

Clinic cases ... ..	...	5,352	
Non-Clinic cases ... ..	...	5,099	
			10,451
Total	....		17,041

DENTIST'S REPORT, 1933-1934.

Sir,

I beg to submit my Tenth Annual Report for the year ending June, 1934

The number of children receiving treatment and advice at the Dental Clinic amounted to 2,813, this figure comprising :—

Boys	...	...	1,381
Girls...	....	....	1,432

Their visits gave a total attendance of....	...	3,818
The parents present were...	... ..	2,406

The casual cases submitted for treatment, these being mostly sufferers whose teeth are unsavable, are still far too numerous, and tend to occupy time that should be devoted to conservative work.

Routine inspection, however, has been carried out at the following schools :

Victoria Road, Tay Street, St. Andrew's, St. Mary's
(Forebank) and Ann Street

From 1,000 children (group 6-8 years) 391 were selected for fillings.

Consents and attendances were obtained in 266 cases, i.e., 68%.

46 cases were re-inspected, and 13 re-treated.

Numerical table of treatments done :—

Fillings	...	...	...	789
Dressing and Applications	...	...	...	1,388
Scalings and Brushings	...	...	...	7
Extractions—				
(a) Temporary Teeth	....	...	...	1,499
(b) Permanent Teeth	...	...	...	89
Anaesthetics—Local	...	...	...	855
—General	...	...	...	79
Advice was given in 181 cases				

Several cases of irregularities of the teeth were sent to the Dundee Dental Hospital and received treatment by means of the orthodontic appliances.

At Ann Street School I examined 100 children of both sexes, their ages ranging from 6 to 13 and found only 9 children whose mouths were free of dental decay.

Nurse Sutherland's services have been of great value.

Again I thank you and all who have facilitated the work of the School Dental Service.

(Signed) ERNEST E. CASSADAY,
M.B., Ch.B., L.D.S., D.P.H.

OPHTHALMIC SPECIALIST'S REPORT.

1933-1934.

Sir,

I beg to submit the following detailed list of 1,646 cases seen by me at the School Clinic during the session 1933-34 :—

Refractions	...	...	...	...	816
Corneal Ulcers	...	...	...	...	457
Blepharitis	...	...	...	...	33
Admitted to Sight Saving School	...				3
Interstitial Keratitis	...	...	...	...	150
Conjunctivitis	...	...	...	...	57
Follicular Conjunctivitis	...	...	...	...	30
Meibomian Cyst	...	...	...	...	51
Corneal Nebulae	...	...	...	...	2
Hordeolum	...	...	...	...	4
Tear Duct Obstruction	...	...	...	...	31
Foreign Body	...	...	...	...	5
Wound of Eyeball	...	...	...	...	3
Lid Abscess	...	...	...	...	2
Albinism	...	...	...	...	2
Total					1,646

My best thanks are due to the full-time Medical Staff and the Clinic Nurse for their valuable assistance during the past session.

(Signed) ALLISTER M. MACGILLIVRAY,
M.D., D.O.M.S.

EAR, NOSE, AND THROAT DEPARTMENT.

1933-1934.

New Cases seen	...	...	...	355
Diseases of the Ear—				
A.O.M.S.	....	...	...	16
C.O.M.S. ...	...	....	...	29
External Otitis	...	....	...	13
Mastoid ...	...	....	....	3
Inflation ...	...	...	...	7
Paracentesis	...	...	....	1
Conservative Treatment	...	...	...	66
Diseases of Nose and Throat—				
Nasal Cattarrh	...	...	....	8
Sinus Nasal Suppuration	...	...	....	1
Other Nasal Conditions	...	...	...	35
Glandular Pharyngitis	...	...	...	2
Operative Treatment—				
Tonsils and Adenoids	...	...	....	263
Mastoids ...	....	...	...	2
Septum ...	...	...	....	4
Polypus ....	...	...	...	1
Old Patients examined	...	...	...	204
Negative examinanions	....	...	...	41
Total number of cases examined	...	...	...	559
Average number of cases examined daily	...	...	...	13

(Signed) M. J. GIBSON,

M.B., F.R.C.S.E,

X-RAY SPECIALIST'S REPORT FOR 1933-34.

DURING the past year 82 children have made 538 attendances at this Department. The following table shows the diseases from which they suffered :—

Ringworm of the scalp :—					
Microsporon	...	...	...	....	4
Trichophyton	....	...	...	...	1
Kerion	...	...	...	...	1
Ringworm of the body	...	...	...		1
Favus of the scalp	....	...	....	....	1
Favus of the body	...	...	...	...	1
Other diseases of the scalp	....	....	....		11
Streptococcal dermatitis	...	...	...		10
Psoriasis	....	...	....	....	13
Scabies	....	....	....	....	13
Other diseases of the skin	...	...	...		26
					—
					82
					=

The X-ray tube after six years constant use became defective and had to be replaced. In the interval I treated two cases of ringworm with my private apparatus to avoid delay. The new tube has now been installed.

For the continued smooth working of this Department I have to tender my thanks as usual to Dr Kidd, Nurse Miller and the rest of the staff.

(Signed) JOHN KINNEAR,
M.D., M.R.C.P., Ed.

Holiday Homes.

On behalf of 1,198 children who went to one or other of the Holiday Homes we have to thank all those who give so freely of their time in the organisation of these most admirable institutions.

Without these Holiday Homes the children of the City would fare ill, as it is only by the opportunity of having a fortnight in the country that many a child is able to hold on during the winter months.

Auchterhouse Holiday Home (Dundee Invalid Aid Society).

Comerton Home, Newport.

Marfield Home, Rattray, Blairgowrie, (Dundee Social Union).

St. Leonard's Home, St. Andrews,

The Armitstead Home, Barnhill.

have all taken children from the City, and we wish to record the thanks of these 1,198 children for kindness and care which was expended upon them during their stay in these homes.

"Seeing is believing" and one certainly has to see children before and after a holiday to really understand the good that is done by these homes

Again the Pearson Picnics to Tayport gave delight and a day in the open air to many a child.

"Toc H" continues its excellent work among retarded boys—In addition to the picnic which is arranged for these lads annually, this year the members of Toc H have arranged a series of educational visits on Saturdays. Business establishments, workshops, steamships etc., have all been visited and the working arrangements were explained to the boys.

The Rotary Club picnic to Cripple and Invalid Children provides each year a pleasant and healthful outing to some 70 of these children.

In conclusion I wish to thank each member of the staff for their loyal support and their willing assistance in the times when sickness thinned the ranks. Extra work was undertaken and every endeavour was made to keep the work up to date.

Year by year the tact and courtesy, the patient teaching and above all, the human interest which every member of the staff takes in the work, result in the smooth working of this department.

I have also to tender my thanks to many members of other departments of the Public Health Service for their willing co-operation, and Dr Burgess in particular for his thoughtful assistance on every occasion.

VETERINARY INSPECTION.

REPORT By MR HUGH FERRIER. M.R.C.V.S.,
Veterinary Surgeon.

(1) Conditions and Cleanliness of Cattle.

The general conditions and cleanliness of the cattle were very satisfactory.

- (a) The quality of Hay, Straw and Turnips has been exceptionally good throughout the year.
- (b) Number of diseased cows found totalled 13, all suffering from Tuberculosis.
- (c) Disposal of milk from diseased cows :—Either destroyed or thoroughly boiled before being given to any other animals.

(2) Inspection of Cattle.

	Average Number of Cows	Number of Cows Inspected	Annual Frequency of Inspection
(a) Registered Dairies, ...	594	3,328	Every Two
(b) Exempted Premises, ...	19	11	Months

(3) Bovine Tuberculosis.

- (a) Total number of cows found Tuberculous on clinical examination and slaughtered under the T.B. Order of 1925, 2
- (b) Total number of cows found Tuberculous after tuberculin test, and slaughtered under the T.B. Order of 1925, 11
- (c) Total number of cows to which the tuberculin test was applied under Section 22 of the Milk and Dairies (Scotland) Act, 1914, was 28, all of which passed the test.

- (d) Number of dairies holding graded milk licences in respect of tubercle-free herds :—

Name and Address.	Average Number of Herd.	Estimated Number of Gallons Produced per Annum.
*CERTIFIED. Messrs. Alex. Keay & Sons, 11 Forthill Road, Broughty Ferry.	15	13,870
*GRADE "A" (T.T.). Messrs. Alex. Keay & Sons, 11 Forthill Road, Broughty Ferry.	15	13,870

*Same Herd of 15 Cows.

- (e) Number of any other dairies known to have tubercle-free herds :—none within the City.

(4) Miscellaneous.

- (a) List of dairies holding licences for the production of Grade "A" milk :—

Name and Address	Average Number of Herd	Estimated Number of Gallons Produced per annum
*Messrs Alex. Keay & Sons, 11 Forthill Road, Broughty Ferry	15	13,870

*Same Herd as above-mentioned.

- (b) There were no samples of milk taken for examination in terms of Section 21 of the Milk and Dairies (Scotland) Act, 1914.
- (c) The regulations under Sections 13 and 14 of the Milk and Dairies (Scotland) Act, 1914, are being duly complied with in this District, and there has been no occasion which demands special comment.

Meat Inspection at Slaughter-Houses and Dead Meat Market.

During the year 54,682 carcasses were inspected.

The number of cases of Tuberculosis detected during the year was 2,642, an increase of 295 cases as compared with 1932. Of the aforesaid number 895 were cows, an increase of 149 as compared with 1932.

The total amount of meat seized under this head during the year was 189,943 pounds, an increase of 14,569 pounds as compared with 1932.

The number of carcasses wholly or partially condemned for Tuberculosis during each year for the last five years were as follows :—

YEAR	Bulls	Bullocks	Heifers	Cows	Calves	Sheep	Pigs	Total
1929	168	1,198	31	609	2	...	92	2,169
1930	156	1,186	91	678	1	...	60	2,031
1931	190	1,239	16	618	...	...	88	2,151
1932	263	1,223	22	746	1	...	92	2,347
1933	236	1,399	17	895	2	...	93	2,642

Other Diseases.

The detections under this head during the year amounted to 1,505, a decrease of 28 cases as compared with 1932. The total amount of meat seized being 35,763 pounds, a decrease of 5,689 pounds as compared with 1932.

Animals Slaughtered at Public Slaughter-Houses.

The number of detections of disease during the process of slaughter for the year was 7,652, an increase of 385 cases as compared with 1932.

Carcasses Dressed and Undressed Brought into the Slaughter-Houses.

The number of detections of disease in consigned carcasses during the year was 178, a decrease of 64 cases as compared with 1932.

Cattle, Sheep and Pig Organs.

During the year 17,375 cattle, sheep and pig organs were seized and condemned as compared with 16,480 during 1932, an increase of 895 organs for the year.

The following is a synopsis of the organs seized and condemned during the year:—

CATTLE ORGANS		SHEEP ORGANS		PIGS' ORGANS	
Cows' Udders ...	966	Livers ...	29	Udders ...	20
Livers ...	3,127	Plucks ...	854	Plucks ...	106
Lungs ...	3,025	Kidneys ...	506	Kidneys ...	148
Hearts ...	925	Lungs ...	1,461	Livers ...	58
Kidneys ...	2,129			Lungs ...	84
Heads ...	894	Total ...	2,850	Total ...	416
Tongues ...	925				
Skirts ...	2,118				
Total ...	14,109				

Tinned and Frozen Meat.

During the year 26 pounds of frozen ox livers, 4 pounds frozen ox kidneys, and 20 pounds tinned meat were seized for decomposition.

Statement Showing Number of Animals Slaughtered, Wholly Condemned, Partially Condemned and Weight (in lbs.) of Meat Condemned During the Year, 1933

Class of Animal.	NUMBER OF ANIMALS.			Weight (in lbs.) of Condemned Meat.
	Slaughtered.	Wholly Condemned.	Partially Condemned.	
Cattle ...	13,714	184	4,778	200,272
Sheep ...	26,669	31	2,352	2,040
Pigs ...	3,993	22	285	5,411

Cattle Market.

The Cattle Market was visited by me every market day (Tuesday), and all the cattle sheep and pigs exposed for sale were inspected for the purpose of preventing animals showing symptoms of disease, and which are ultimately intended for human food, being sold. The Superintendent of the Market and I seize all suspicious animals exposed for sale in the fat stock market, under powers conferred by Section 43 of the Public Health (Scotland) Act, 1897, which renders the owners of animals so seized liable to prosecution. The owners of such animals are given the option of sending them to the Slaughter-House to be killed. There the carcasses undergo a minute inspection, and are dealt with on their merits. In the event of the owner of such failing to comply with our request, the animal can be seized and the owner prosecuted under the Act above mentioned.

During the year three cows and one heifer were seized in the Cattle Market with the owners' consent as suspicious animals and sent to the Slaughter-House to be slaughtered.

Throughout the year licences were granted for the movement of 8 Irish cows sold in the Cattle Market.

Anthrax.

There were no cases of this disease during the year.

Swine Fever.

There were no cases of this disease during the year. Two visits were made to pigs suspected of Swine Fever, and reported same to the Ministry of Agriculture and Fisheries, but found later that the feeding was too strong, and that there was no fever.

One visit was made to 30 pigs which showed no symptoms of contagious disease.

Parasitic Mange.

During the year five visits were made to a horse infected with Parasitic Mange. It was reported to the Ministry of Agriculture and Fisheries. A Restriction of Movement Notice was served on the owner preventing the horse from working, and thus coming in contact with other horses. This notice is still in force.

Foot and Mouth Disease.

There has been no outbreak of this disease in the City during the year.

Importation of Animals Act, 1922.

Under this Order 1,475 Irish and Canadian Cattle were admitted into the City accompanied by licence, necessitating 137 visits of inspection, an increase of 196 imported cattle as compared with 1932.

Transit of Animals Order (1927) and Amendment Order of 1931.

Under this Order all railway trucks and road vehicles whether mechanically propelled or horse-driven, used for the conveyance of live stock to a market must be washed, scrubbed, thoroughly cleansed, and thereafter disinfected before leaving the market and before any other animal, or any fodder or litter, or any other thing intended to be used for or about animals is placed in it, provided the Local Authority have such washing facilities or have caused such facilities to be erected,

A record of all animals carried and the dates and places at which the vehicle was cleansed and disinfected must be kept available on the vehicle to which it relates by the owner.

During the year one farmer and one driver of horse-drawn vehicle were prosecuted for contravening the above Order. The former was fined 20s and the latter 15s.

During the year 1,988 motor floats, 170 horse floats, 4 trailers and 87 crates, bringing in cattle, sheep and pigs to the market were washed, scrubbed and disinfected at the Cattle Market.

From periodical visits made by me to the various Railway Stations it was observed that the Railway Authorities are adhering to this Order.

Veterinary Attendance on Horses Belonging to the Corporation.

The attendance during illness of horses belonging to the various Corporation departments necessitated 23 visits during the year.

The whole stud is in a satisfactory state of health, and are in good working condition.

Other Work.

One visit to pony, float and harness reported damaged in colliding with Corporation bus.

Two visits to Highland Show ground arranging about the disinfection of floats.

One visit to Aviary at Dudhope Park.

One visit to horse injured by motor lorry and destroyed same.

One visit to Knackery making post-mortem examination on horse which had a fractured pelvis.

One visit along with Superintendent of Cleansing to Murroes seeing Garron.

Two visits to Knackery making post-mortem examination on horse belonging to the Cleansing Department which had a broken back.

Two visits to two horses which were in collision with a Corporation bus, both were slightly injured.

One visit to horse belonging to the Cleansing Department at Magdalen's Kirkton.

HUGH FERRIER, M.R.C.V.S.,
Veterinary Surgeon.

SANITARY DEPARTMENT,
WEST BELL STREET,
DUNDEE, 1st MAY, 1934.

To the Honourable—

The Department of Health for Scotland; and
the Lord Provost, Magistrates, and Councillors—
the Local Authority of the City of Dundee.

GENTLEMEN,

I have the honour to submit my Annual Report showing the work of the Sanitary Department during the year 1933. The Report has been prepared in accordance with the circular of the Department of Health for Scotland dated 23rd December, 1933, namely:—

A.—GENERAL SANITATION.

- 1.—Water Supplies—quality and sufficiency.
- 2.—Drainage System—efficiency.
- 3.—Sewage Purification and Disposal — methods and efficiency.
- 4.—Scavenging—methods and efficiency—disposal of refuse.
- 5.—Sanitary Conveniences, etc., used in common—Include a statement as to the number of (a) water-closets; (b) dry closets; (c) privy-middens; and (d) ashpits in use, shewing for each separately the number serving 2, 3, 4, and 5 or more tenants respectively. Show also the number of houses without inside water supply and sink.
- 6.—Rivers Pollution — presence or absence, nature and sources.
- 7.—Offensive Trades—action taken.
- 8.—(a) Schools; (b) Workshops; (c) Factories; (d) Common Lodging-Houses; and (e) Burial Grounds—sanitary condition.
- 9.—Miscellaneous—any other sanitary matters calling for comment.

B.—HOUSING.

1.—Housing (Scotland) Acts, 1925 and 1930, and Housing (Rural Workers) Acts, 1926 and 1931—Proceedings. Including reference to :—

- (a) Sufficiency of working-class houses;
- (b) Habitability of existing houses—action taken to deal with defective or uninhabitable houses;
- (c) Clearance or improvement areas under Part I. of the Housing (Scotland) Act, 1930 — proposals under consideration or contemplated; and
- (d) Overcrowding—action taken.

N.B.—If the Sanitary Inspector is the designated officer under Article 2 of the Housing (Inspection of District) Regulations (Scotland), 1928, he should include in this report the information required in the form of report issued with the Department's circular dated 7th December, 1933.

C.—FOOD SUPPLY.

1.—Milk—Administration of Acts, Orders and Regulations.

Include a reference (where the duties of inspection have been placed on the Sanitary Inspector) to the sanitary inspection of registered dairies and exempted premises—the conditions found, complaints received and dealt with, any improvements effected, and generally to all matters of outstanding interest. State how far—

- (a) Dairies conform with the structural and sanitary requirements of the dairy bye-laws;
- (b) Dairy men and their employees comply with the requirements of the bye-laws relating to methods of milking, handling, and generally to the production of clean milk; and
- (c) Articles 5 to 16 of the Milk and Dairies (Scotland) Order, 1925, are being complied with.

Show—

- (a) The number of registered dairies in the area, and the approximate total number of cows therein; and
- (b) The number of premises exempted from registration (if available), and the approximate number of cows in such premises.

- 2.—Meat—Administration of sections 33 and 43 of the Public Health (Scotland) Act, 1897, the Public Health (Meat) Regulations (Scotland), 1932, and the Public Health (Preservatives, Etc., in Food) Regulations. State the names and addresses of new slaughter-houses opened and old slaughter-houses closed during the year.
- 3.—Miscellaneous—Administration of other Acts, Orders and Regulations governing the supervision of the food supply, e.g., the Food and Drugs (Adulteration) Act, 1928, the Imported Food Regulations, and the Public Health (Preservatives, Etc., in Food) Regulations. Include reference to the sanitary condition of premises where foods are manufactured, prepared, stored, or exposed for sale for human consumption.

Introductory.

The year 1933 can well be termed "The Year of Recovery," bringing in its wake the turning point in the Nation's finances and an improvement in the trade aspect of our Country. In Sanitary and Public Health Services, however, there can be no turning point or relaxing of efforts for many years yet; the necessity still remains for much work to be carried out so that improved conditions in Housing, with its attendant drainage, sewerage and refuse disposal; Food Supply, including water; the prevention of impurities being cast into the air we breathe; and the many other incidents necessary to the well being and healthy living of our population. There must be no lessening of standard if we are to maintain the improvement of health as recognised to-day, and eradicate, so far as humanly possible, Infectious Diseases and the conditions which lead to them from which we still suffer.

The **Housing of the Working Classes** for a number of years back has been a subject to which much time and thought have been given. We, in Dundee, are unfortunately the possessors of a legacy comprising a slumdom which is not confined to one particular area, relics we ascribe to the lack of visionary power in those who have gone before us, and to the fact that in olden days there was no effort made (at least it seems so) towards the erection of buildings on a systematic and planned basis. Any person who owned a piece of ground could, it would appear, set up a building irrespective whether the proposed building was to discomfort the occupiers of or be a restriction on buildings already existing. Not that this state of affairs is confined to Dundee—far from it—but we in this City seem to possess slums, or rather shall we say,

buildings which have outlived their day and generation; not in one particular and definable area which we could term "Old Dundee," but they are found in all Wards from I. to XI. Accordingly, the task of planning the future development of the City has been made somewhat more difficult. Nevertheless, work of inspection, preparation of reports, demolition of buildings, and the erection of new ones to house the displaced tenants have gone on with unabated vigour, and will do so, we hope, until the last slum has been blotted from within our City.

The **Second Housing Survey** which was commenced during 1932 was completed during the year under review, and the tables and data prepared thereon are included in this Report. A vast amount of additional work is thrown on the shoulders of the District Inspecting and Office Staffs by these periodical Surveys; but as formerly, and with the whole job carried out on a thoroughly organised basis, although it was necessary for much work to be carried out long after the usual working hours, no addition to the staff was necessary.

Notwithstanding the serious drought of last year, there was no discomfort nor serious inconvenience caused in this area. Fortunately placed indeed are we in Dundee with our **Water Supply**; obtained principally from Lintrathen with such a degree of wholesomeness that steps necessary for purification are only of a minor nature. There was an increased consumpt as compared with last year of almost 400,000 gallons, while the daily domestic consumpt per head of population averaged 33 gallons.

The **Milk Marketing Scheme**, termed in certain quarters "A Stupendous Experiment in Compulsory Co-operation," was inaugurated late in the year. While the terms of the Scheme do not appear to assist materially towards a purer supply of milk, there are certain factors so far as relating to the Butter Fat content which suggest an appropriate amendment being made in the Sale of Milk Regulations of 1901. In these Regulations the standard laid down for milk-fat is 3 per cent., and when that figure is not reached the milk is presumed to have been adulterated. Under the Milk Marketing Scheme certain prices have been laid down, and these fixed rates are only payable when the Butter Fat content on analysis of the milk is returned as 3.40% for the period from February to July, and 3.50% from August to January. These rates and figures apply to producers only, but there is nothing in

the Scheme which governs the milk supply (so far as standard is concerned) from the Distributor to the Consumer. Would it be unreasonable to suggest, therefore, that new Regulations should be promulgated prescribing a standard of 3.25 per cent. butter fat in milk?

Refuse Storage, Collection and Disposal.—Gradually the insanitary ashpit is being abolished, and in its stead the employment of suitable galvanised iron dustbins is progressing. The latter storage vessels are certainly more hygienic, and when in use prevent the particularly disagreeable smells which pervade the atmosphere in no uncertain manner during hot weather, with which we associate “the open cesspools of filth”—as rightly can be termed the ashpit. The Refuse Destructor Plant has been able to keep pace with the amount of material available for destruction, while on the revenue side of this innovation we are glad to note every opportunity is taken to dispose of “rescued” material suitable for sale.

The only **New Legislation** of importance to which reference might be made as having a bearing on Public Health Services which came into force during the year was (1) The Rent and Mortgage Interest Restrictions (Amendment) Act, 1933, and (2) The Port Sanitary Regulations (Scotland), 1933.

Staff.

The number and composition of the staff are as follows:—

- 1 Chief Sanitary Inspector.
- 1 Assistant Chief Sanitary Inspector.
- 1 Plumbing Inspector.
- 2 Food Inspectors and Sampling Officers.
- 1 Indoor Inspector.
- 1 Housing Inspector.
- 2 Housing Officers.
- 4 District Inspectors.
- 1 Port Officer.
- 5 District Officers.
- 2 Junior District Officers.
- 1 Clerk.

Total 22

The resignation of Mr Samuel Chisholm, one of the senior members of the staff, falls to be recorded as from 15th May, 1933. Mr Chisholm, who was formerly a member of the City Police, joined the staff of the Department as a Sanitary Constable in 1891. At the date of his retirement he held the position of Superintendent to which he was appointed on 6th December, 1915; altogether Mr Chisholm had over 50 years' service with the Corporation.

A most painstaking official, Mr Chisholm took great pride in the accomplishment of the many duties falling to his lot, which were always carried out in a most efficient and effectual manner.

Following on the aforementioned resignation, the appointment of Mr Alex. A. Russell, Housing Inspector, to the post of Assistant Chief Sanitary Inspector became effective, and was noted by the Department of Health for Scotland.

The work of the Department during the year has been carried out by the whole staff in an efficient and smooth-working manner, and I wish to acknowledge with gratitude their able and loyal support, particularly during periods of pressure.

Death-Rate : Density of Population, and Acreage.

The death-rate per 1,000, as calculated and corrected by the Medical Officer of Health, for 1933 was 14.5, as against 13.8 in 1932 and 13.9 in 1931.

The population, as estimated to the middle of 1933 by the Registrar-General, is 177,177.

The acreage of the City, excluding foreshore, is 7,316. This works out at 24.21 persons to an acre.

Rainfall.

The total rainfall in Dundee, as noted at the Eastern Necropolis and reported by the Superintendent of Cemeteries, was 22.84 inches as against 28 01 inches last year. The figures for each month are as follows :—

January	...	...	...	...	1.67 inches.
February	...	...	...	...	2.36 inches.
March	...	...	...	...	1.60 inches.
April	...	...	...	...	1.29 inches.
May	...	...	...	...	1.36 inches.

June	...	...	...	...	1.48 inches.
July	...	...	...	...	3.54 inches.
August	...	...	...	...	0.85 inches.
September	...	...	...	...	1.52 inches.
October	...	...	...	...	3.63 inches.
November	...	...	...	...	2.24 inches.
December	...	...	...	...	1.30 inches.

Total ... 22.84 inches.

This shows an average fall of 1.90 inches per month, as against 2.33 inches of the former year, and 2.63 in 1931.

Public Sewerage of the City.

Dundee is very happily situated for disposal of its sewage. It has direct discharge into the tidal waters of the Firth of Tay, thus obviating the vast expenditure which many inland towns have to bear when confronted with the problem of sewage disposal.

The work of constructing and maintaining sewers in the City is carried out by the Works Department under the City Engineer. In the past year approximately 5 miles of new sewers were laid down, making the total length of sewers in the City, 149.695 miles. In maintenance and repair the sum of £2714 was spent.

During the past few years the City Engineer's Department has taken the opportunity to replace existing untrapped gullies with those of modern design. There are still many old-fashioned ones, but these are being gradually reduced in number when carrying out street improvements. There is active co-operation between the Works and Sanitary Departments in this connection, and complaints about offensive old gullies are dealt with so far as is consistent with economical administration.

Work on the sanctioned portion of the Downfield Outfall Sewer is now nearly completed. This section, 3.42 miles in length, runs from the Estuary to No. 2 Ejector Station, Downfield. The Ejector Station will thus no longer be required, and the major portion of Downfield will be drained by gravitation. At the same time, Kingsway Sewer will be relieved of a load equal to the capacity of the Ejector, and further relief will have been afforded by Overflows in Forfar Road and Pitkerro Road, thereby providing additional sewerage for the development of building in the northern and eastern districts of the city. When the remainder of Downfield Drainage Scheme is sanctioned, it will be possible to abandon Ejector Station No. 1, which presently handles the re-

mainder of Downfield sewage. It will then also be possible to provide the village of Trottick with an efficient drainage system. Trottick village is the only populous part of the city which is not presently connected with the drainage system.

Rivers Pollution.

Serious complaints were received of offensive odours emanating from one of the tributaries of the Gelly Burn during the hot spell of weather experienced in July. Investigations showed that this resulted from sewage contamination, the source of which was discovered to be an extensive leakage of sewage from drains in a field adjoining on the west and on the line of the Shone Ejector. The City Engineer was notified and necessary repairs were immediately effected; the burn scoured, and the banks treated with Chloride of Lime. Thereafter the nuisance took end.

Water Supply.

The Corporation are responsible for the Supply of Water to the City. The Department particularly concerned therewith is under the charge of Mr George Baxter, O.B.E., A.M.I.C.E., who reports as follows:—

“ The principal source of supply is Lintrathen Loch, from which in a normal year over 80 per cent. of the requirements of the City and District are supplied. The other sources of supply are Monikie and Crombie Reservoirs, the former source being utilised to supplement the supply from Lintrathen, while normally Crombie provides the supply to the Burgh of Carnoustie and surrounding district.

The average quantities of water drawn daily from the various Reservoirs during the past year were as follows:—

Lintrathen	...	...	...	...	...	9,450,100
Monikie	...	...	...	...	...	737,300
Crombie (for the supply of Carnoustie)	...					270,100
						<hr/>
Total	...					10,457,500
						<hr/>

This total is higher by 377,500 gallons than the figure for the previous year, and in this reflects the increased demand for water for industrial purposes and the effect of the long spell of warm weather experienced during the summer months.

The above total represents a daily consumpt of 51.26 gallons per head of the population supplied, i.e., 204,000. Of this consumpt per head 13.74 gallons represents water used for trade and industrial purposes through meter, while the remaining 37.52 gallons represents the average daily consumpt for domestic purposes, unmetered trade consumption, general public health purposes, including street and sewer flushing and leakage. The average daily consumption per head for domestic purposes only is approximately 33 gallons. Recent metered observations of the consumpt for domestic purposes in different parts of the City show wide variation, the rate varying from over 100 gallons per head per day in some cases to as low as 10 gallons per head per day in congested localities where facilities for the use of water are restricted to a single $\frac{1}{2}$ -inch tap.

The following is a typical chemical analysis of the water supplied from Lintrathen Loch:—

ONE MILLION PARTS OF THIS WATER YIELD :—

Free Ammonia	...	...	...	...	.002
Albuminoid Ammonia	...	...	...	...	.088
Carbonate of Lime, etc.	...	...	...	...	30.00
Chlorine	...	...	...	...	9.00
Nitrogen, as Nitrates	...	...	...	...	None
Nitrites	...	...	...	...	None
Hardness, in Clark's Degrees	...	...	...	2 Degrees	
Lead or other Poisonous Metals	...	...	...	...	None

Domestic Water Supplies—Sinks, Etc.

At 18 properties from which complaints had been received regarding insufficient supply of water for domestic purposes larger main service pipes were provided—922 feet of piping being used for that purpose.

109 sinks and water supplies were installed in 49 properties. These were mostly provided in attic flat houses, where the occu-

piers had previously to draw their supplies from taps over sinks on the attic landings used in common by a number of tenants. It is to be regretted that we do not have regulations enforcing the provision of fireclay or stoneware sinks, the result being that in certain cases of renewals the out-of-date cast-iron type is still used. While such a fitting may be kept in a fair degree of cleanliness, it never has the same appearance as the white enamelled variety. The latter, set on iron frames, can be left quite open to enable the space under and around it being thoroughly cleansed. Eight of the aforementioned 109 sinks were renewals, cast-iron ones having been replaced by modern white enamelled stoneware type set on iron frames and left open as recommended.

Scavenging and General Nuisances.

The scavenging of the city is wholly in the care of a separate Department under the charge of the Superintendent of Cleansing. The work of removal of refuse—which year by year is becoming more mechanised—has been carried through in a particularly efficient manner, and, so far as the methods employed are concerned, no complaints were received thereanent.

The Refuse Destructor Plant has been successfully conducted, and the following figures are available as to the year's working. Altogether 30,922 tons 11 cwts. 3 qrs. of material were dealt with by the Plant, the lowest daily weight being 62 tons 3 cwts. 2 qrs., and the highest, 167 tons 2 cwts. 3 qrs. The operation of the Plant has shown that during winter heavy loads are experienced, while in summer, the loads, though light, are more of a bulky nature.

The riddled material has found a ready sale amongst farmers—no less than 9,278 tons being disposed of for manurial purposes.

I might mention that the destructor re-erected at Broughty Ferry deals with the whole of the refuse in that area. All burnable material is now destroyed, the dust and ashes sold to farmers and the residue of broken glass, clinkers, etc., is disposed of at the tip on the foreshore.

General Nuisances.—A large portion of the District Inspectors' time is occupied in the detection and abatement of nuisances, a class of work which must of necessity be maintained with a rigid continuity if we are to succeed in our efforts to keep the city as free as possible from the conditions which are forerunners of

outbreaks of disease. Whether petty in character, or created by careless or wilful tenants who by their mischievousness are a menace to the health and well-being of the other sections of the community, it is necessary that steps be taken early for the abatement of the nuisance. Often it is from minor nuisances, hidden away in some unfrequented corner that the more serious troubles arise. Thus in all classes of nuisance no time is wasted in having abatement measures applied, always keeping the view before us of the potentialities of the undetected and unattended minor defect.

Of the nuisances attended to during the year, I make mention of one or two which I think should be detailed in this Report.

A complaint, which had a sequel from which a moral can be drawn, came from a tenant in the east end of the town. The complainer was getting a gas fire installed in one of the bedrooms, and the plumber, on going under the floor, found about 3 or 4 inches of water. The tenant complained to this Department, alleging that the bedroom was uninhabitable owing to a damp smell. After investigation the Inspecting Officer came to the conclusion that it was sub-soil water, and recommended to the agents that field drain pipes should be laid round the block so that the water from the surrounding high ground would be caught and carried to the drain. This was ultimately carried out, but not before a period of one month had elapsed. Underfloor was then dry, and no further complaints have been received.

Sequel.—The complainer withheld one quarter's rent, alleging that while the water was under the floor the room was uninhabitable. The agents sued for the rent in a small debt action, while the tenant counter-claimed a rebate. After hearing the evidence, the Sheriff decided that the tenant's claim was justified and awarded a substantial rebate and expenses. He held that the agents were dilatory in having the necessary work carried out.

Moral.—Get the work done without delay.

Complaints were received from residents in a widespread area about a very offensive smell. It was also the subject of newspaper articles and letters. When the wind was easterly, residents in Taybank district got it, and when it was westerly it was Craigiebank's turn. After much sniffing and direction finding, and after many suspected places were visited, the source was located at premises where imported crude oil residue is distilled

for the purpose of extracting oil fuel, and the residue goes to make road compound. It was from this process the obnoxious odour was coming. The steam or vapour from the boiling crude mixture is brought through a condenser and run off into open vats. There was, however, a percentage of the vapour escaping into the atmosphere. The manager of the works was most helpful and approved of the suggestion of the Medical Officer of Health and myself to have covers fitted to the receptacles, which was done, while a further pipe carried the vapour to an additional condenser. The small amount left uncondensed was then discharged into the base of the chimney, where it was burned. No further complaint has arisen, and incidentally the vapour which escaped and annoyed the residents of the district before is now augmenting the oil fuel output.

Our attention was drawn to a complaint by an alarming article which appeared in one of the newspapers. It was a thing of the past when we first heard of it; however, full inquiry was made and all the tenants of the affected property were interviewed. Occurring in the early hours of one morning, it was so bad that the good folks were aroused from their slumbers with a choking sensation. Now the residents of this district are accustomed to the characteristic smell of the Gas Works, but all said it was different on this occasion. Further inquiries disclosed the fact that the street gullies were emptied on that particular morning by the usual method—the contents were taken out and left on the roadway until removed by carts. Some days after, a householder in Baffin Street gave information that when the carts were passing on the morning concerned the smell was so bad she had to close the windows of her house. All the evidence pointed to this being the cause of the smell.

Complaints of this nature should be things of the past, as belongs the system under which the gullies in this city are emptied.

The method whereby such nauseating and offensive odours can be eliminated or at least greatly minimised by employing for this job a mechanical gully emptier, is one which we cannot be too strong in recommending. Not only does this system enable the work to be conducted in as hygienic a manner as possible, but after being emptied the gully is immediately closed, so far as the escape at this point is concerned of sewer gases, by the application of a water seal. By the older system the seal is often broken and is not again effectively applied until the street is flushed or rain occurs.

The want of sufficient public convenience accommodation at Broughty Ferry and the alleged insanitary state of the beach there was, *inter alia*, the subject of a complaint by a holiday-maker to the Department of Health for Scotland, who submitted the matter to the Local Authority for their observations. Inquiries were instituted, and the investigations showed that so far as the complaint related to the beach and sands, there was a small amount of litter and sea wrack lying at the portion near the Castle, but which did not constitute justification then for that part of the complaint. Taking into consideration the thousands of people who frequent this place in the summer months, it is not to be expected that the beach will present an ideally tidy appearance at all times of the day. There will always be that class of person who unconsciously and indiscriminately dumps his refuse (including bottles) anywhere, with no thought of those who follow him in occupation. The portion of the complaint dealing with insufficient sanitary accommodation however, was somewhat justifiable. Even though there are altogether 27 Water Closets and 4 Urinals on the area between the Castle Green and Barnhill Golf Course, there is a demand for a central building where, in addition to the usual sanitary accommodation, including facilities for personal ablution, there should also be a first-aid dressing station. The whole subject as to the development of this area as a recreational centre and the proposed conveniences to be erected, was placed in the hands of a Special Committee of the Town Council to consider and advise comprehensively.

Towards the detection and removal of nuisances, of which 10,288 were discovered, 62,669 visits of inspection were made.

Verminous Houses and Persons.

The long dry summer which we experienced, was the means of an increased number of complaints being received in connection with the infestation of houses by bugs. Altogether 235 rooms in 190 houses were dealt with—in 187 cases this was done by means of spraying the internal walls, woodwork, etc., with a disinfecting solution, having where necessary the door-facings, skirtings and picture rails removed and, in addition, the whole of the paper stripped from the walls. In the other 3 cases fumigation was carried out within the dwellings by means of Sulphur. There can be no doubt but that the climatic conditions were very favourable to the propagation of this evil-smelling insect. Unfortunately, infested properties are not confined to one particular area; the purchase of old furniture, particularly pictures, bed-

steads, and mattresses already carrying their quota of the vermin is often a means whereby infestation of properties takes place. In one instance, in a new Housing Scheme, a tenant on the ground floor was responsible for the pollution of his house and two others above, and on being tackled he made the extraordinary allegation "that bugs were coming out of the new wood;" very ludicrous if it were not so serious.

A complaint was received during the year from the Dundee Property Owners' and Factors' Association in regard to infestation of properties under their care by bugs taken into houses with timber from demolished properties.

The matter was submitted to a meeting of the Housing and Factorial Committee of the Town Council, and the following is a copy of the Minute thereanent:—

"The Town Clerk submitted a letter of date 26th September last from Mr A. Burns Petrie, Secretary, Dundee Property Owners' and Factors' Association, 84 Commercial Street, Dundee, stating that he had received a number of complaints from various members of his Association in regard to the prevalence of bugs in the city. These pests have been discovered in quite a number of house properties which were formerly free from vermin. One or two members of his Association have made enquiries and have come to the conclusion that the source of the trouble had arisen from the demolition of old properties, and it was learned that the wood and timber from these old properties were either being sold or given to tenants and firewood merchants. In many instances the wood and timber was infected with bugs, and those who were obtaining a supply of the wood were apparently in ignorance of the danger involved. As this was a serious matter both from the public health point of view and the owners and tenants of properties, he asked that the Council consider this question with a view to taking steps to remedy matters. He added that the only sure way of dealing with this menace was to burn the old wood and timber on the spot.

The Director of Housing reported that all skirtings, facings and laths were burned on the site, and that only good, sound timber was sold. Sarking and floor boards were sold at 15/- to 25/- per ton, and scantlings were sold at 2d to 3d per lineal foot. He added that if all this material was destroyed

on the site there would be a very considerable loss to the Corporation.

The Committee unanimously agreed to instruct the Director of Housing to burn all the old wood and timber from old properties; and further to instruct the Chief Sanitary Inspector to treat with 'Killo,' free of cost, all Corporation houses infested with bugs and tenanted by unemployed persons."

Only in three cases was it necessary to deal with persons found to be verminous. In each case adequate measures were taken which ensured a thorough cleansing of their persons and clothing, and in two of the cases disinfestation measures were also applied to the household furnishings.

Whitewashing and Painting Common Stairs and Passages.

The attention of owners and agents of tenemental properties was drawn by means of letter intimations in June to the necessity of taking early measures to ensure the proper cleansing by means of painting, size colouring or lime-washing of common stairs and passages embraced in 887 tenements. The terms of these intimations were in a large number of instances promptly carried out, while in a few cases, owing to other alterations being contemplated, delay was allowed. It was, however, necessary in 37 instances to serve statutory notices in terms of Clause 354 of the General Police and Improvement Act of 1862 on delinquents who had failed to take the necessary steps to have the work carried out. At the end of the year most of the work was either completed or in progress.

Whitewash brushes numbering 2,698 were given out on loan to persons of the poorer classes, who were unable to purchase brushes for themselves, to carry out the annual (and sometimes bi-annual) whitewashing of some 4,867 rooms. In cases of need Ochre and Whiting were issued free on the recommendation of the District Inspectors.

Stables and Piggeries.

Stables.—These premises number 315, and to them 283 visits of inspection were made. They were periodically limewashed, and the removal of manure was regularly conducted.

In regard to one stable, serious complaints were received from tenants of adjoining property that infestation of rats was taking place; and as the premises concerned were in a poor state of repair there was excellent harbourage for the vermin. As the proposition of putting the premises into a state which could be termed reasonable was not likely to prove an economical one, the owners determined to demolish the building when the tenancy expired. This was done, and the area provided formed a fine open site. No doubt the trend towards mechanical transport swayed somewhat the opinion of the owners towards demolition.

Piggeries.—The latest figures available for 1933 show that at November there were 670 pigs housed in 55 pig-stys. They were inspected on 143 occasions, and found to be kept as cleanly as possible, keeping in view the nature of the business. No serious complaint fell to be dealt with thereanent.

Back Courts, Areas, Footways, Etc.

The provision of paving slabs or concrete on back courts, areas and footways tends to their better and easier cleansing and upkeep, and suitably laid with a fall to a surface drain they can be periodically hosed. To that end 11,256 square feet of impervious material was laid down during the year.

In older tenemental properties, where bleaching greens still prevail, there is more difficulty encountered towards keeping them in a cleanly state, while the tendency of the "younger generation" to destroy the surrounding fences does not assist towards appearance. Generally the nuisances caused by cats and dogs are more numerous than where the areas are paved, while the "good intentions" of certain women in throwing bread to birds and the feeding of stray animals is sometimes the means of temporary incursions of rats and other vermin. We recommend that, where possible, paving with impervious material be carried out.

Schools.

It is seldom the necessity arises for action on the part of this Department in connection with these places. They are separately controlled, and the Inspectors of the Department concerned see to it that the premises are maintained in as hygienic a manner as possible.

Gradually the older schools are being dispensed with, while the new ones built in the vicinity of new housing schemes are so constructed and fitted that they may be well termed the acme of perfection. There is one thing, however, to which we would direct the attention of the Authorities interested, and that is the common drinking cup. In its day, and while there was no system available whereby it could be dispensed with, there was no alternative, but to-day things are different. The school is the one place where every endeavour should be made towards the reduction of the chance of contracting disease and every opportunity should be taken to take preventive and precautionary measures. In that direction alone, there is a sufficiency of reason for the provision of the latest drinking fountains and the total abolition of the drinking cup.

Complaints.

Complaints received at the office, either personally or by letter showed an increase over last year, numbering 4,524 as against 3,822 for 1932. Enquiries were instituted by the District Inspectors, and in those cases where the complaints were justified action was taken to have remedial measures applied. In 251 of the complaints, however, there was no reason for further action by the Department, these being either of a trivial nature or a result of neighbours' quarrels.

The nature of complaints received are indeed varied, and while the Department is not immediately concerned with certain of them, steps are taken so that their cause is removed or relieved as soon as possible. To the Staffs of the Chief Constable and the Cleansing Superintendent we are indebted for their notification of nuisances coming under observation in the course of their duties.

Statutory Intimations or Notices.

Under the Public Health (Scotland) Act of 1897; Local Acts; the Burgh Police (Scotland) Acts, and other Acts which fall to be given effect to by the Department, 12,287 notices or intimations, written or verbal, were served upon the proprietors or agents of property or authors of nuisances. These have received, or are now in the course of receiving attention.

No Statutory Notices were authorised by the Public Health Committee as the Local Authority for service in terms of Section 20 of the Public Health (Scotland) Act, 1897, during the year.

Plans Submitted to the Works Committee.

The examination of all plans of new buildings and those showing proposed improvements to existing properties, enable objections to be made when occasion warrants. Thus the terms of Local Regulations and Bye-Laws governing such erections can be insisted on, while the restriction of free circulation of air to buildings already existing, by the erection of other buildings in proximity thereto, can be prevented if at all possible.

Drainage and Structural Work.

Additions and improvements have been carried out at 158 properties, in connection with which the following materials have been used :—

358	Water Closets,
109	Sinks,
10	Baths,
29	Lavatory Basins,
32	Wash Tubs,
142	Lead Traps.
4,676	Feet W.C. Soil Piping,
2,080	Feet W.C. Flushing Piping,
2,821	Feet Waste Piping,
7,930	Feet Water Piping,
5,620	Feet Ventilation Piping,
657	Feet Cast-Iron Drain Piping,
18	Cast-Iron Traps,
484	Yards Fireclay Drain Piping,
86	Drain Traps,
33	Drain Inspection Chambers,
304	W.C. Apartments,
4	Dormer Windows,
10	Rooflights,
13	Roof Ventilators,
4	Floor Gratings,
2	Gas Boilers.

During the course of the progress of this work 1,606 inspections were made by the Plumber Inspector,

Water Closets.

358 Water Closets, new and renewed, together with all the necessary soil, flushing, water, and ventilation pipes, were installed into 121 properties. This number is 113 more than returned in 1932, when 245 W.C.'s were installed in 82 properties.

155 were installed within dwelling-houses, 23 of these being renewals;

191 were provided in tenemental properties in such positions as staircases, passage, courts, attic flats, etc.;

4 were installed in shops, one of these for females;

5 were installed in workplaces, 2 being new and 3 renewals;

1 was installed in hall; and

2 were installed in a football pavilion.

All these W.C.'s, with the exception of renewals, were in addition to those already existing at the properties concerned.

At 3 properties, outside Water Closets were abolished and W.C.'s installed into every house, i.e., into 18, 16, and 8 houses respectively. This is certainly the best procedure where it can be carried out, and is the ideal aimed at, but it is not always possible in existing properties to have this done without prohibitive structural alterations.

Baths and Lavatory Basins.

10 baths and 9 lavatory basins, along with hot water installations were introduced into 10 different houses.

16 basins have been installed into 5 hairdressing saloons and 4 into workplaces.

In all, 10 baths and 29 basins with all necessary waste, water and ventilation pipes, have been installed.

Bye-Laws—Drainage and Plumbing Work of Buildings—Infringements.

Four infringements of these Bye-Laws came to our notice during the year. At one property the waste pipe leading from

three attic sinks had been connected to a rainwater pipe, which is not allowed. After negotiating with the agent of the property, a separate pipe was provided to carry off the rainwater.

At another property a long length of internal sink waste pipe had been left unventilated. The occupier, who was also owner, was notified by letter of the contravention, and after an interview agreed to provide the ventilation required. The same occurred at a third property. A sink had been installed into a shop, but the waste pipe was left unventilated. The plumber concerned and the agent of the property were both written to on the subject, and ultimately a ventilating pipe was provided.

In the fourth case a sink waste pipe had been renewed. This pipe originally terminated at the top sink and was thus unventilated. The plumber who carried out the renewal left it in a similar condition, but after being communicated with, together with the agent of the property, he agreed to complete the work in accordance with the Bye-Laws.

Drainage Tests.

At 6 properties the drainage systems which consisted of fire-clay pipes and traps, on being smoke tested, were found defective.

At one property the fireclay drain was overhauled and left in a sound condition, while at the other five the defective sections of the fireclay drains were replaced by cast-iron drain pipes, traps, and access fittings. Cast-iron drains were also provided at one workplace when alterations and improvements on the sanitary arrangements of a section of the premises were carried out. In this connection 378 feet of cast-iron drain and 17 cast-iron traps were used.

Cast-iron drain pipes, traps and access fittings might with advantage be much more extensively used in the drainage of properties than they are meantime. Such drains can be relied upon to remain sound for an indefinite period, whereas the fireclay type are liable to be rendered defective from numerous causes.

Washing-Houses.

32 white enamelled fireclay tubs set on iron frames have been introduced into 14 different washing-houses where previously there were no fixed tubs; or the existing tubs were dilapidated wooden fixtures.

One new washing-house was erected and 3 reconstructed. In 2 washing-houses gas boilers were installed,

Second Housing Survey.

The work of re-surveying the city in accordance with the requirements of the Department of Health for Scotland, commenced during 1932, was completed early in October, and submitted herewith is a copy of the Report presented to the Local Authority on 16th October, in which is contained all the information required by the Department:—

Sanitary Department,
West Bell Street, Dundee, 16th Oct., 1933.

Unto the Honourable the Public Health Committee
of the Town Council.

Gentlemen,

In a Circular-Letter of date 23rd December, 1932, the Department of Health for Scotland requested a Statement to be included in the Annual Report of the Sanitary Inspector, showing:—

“the number of (a) Water Closets; (b) Dry Closets; (c) Privy Middens, and (d) Ashpits in use, showing for each separately the number serving 2, 3, 4 and 5 or more tenants respectively, also the number of houses without inside water supply and sink.”

The work of surveying the City has now been completed, and the particulars relating thereto are as follows:—

(1) Number of Water Closets in use serving in common:—

2 tenants	3 tenants	4 tenants	5 or more tenants
4,294	2,184	1,913	694

(2) Number of houses without Water Supply and Sink inside house, ... 1,142

(3) Number of (a) Dry Closets serving:—

1 House	2 Houses	3 Houses
60	4	4

in addition there are four Dry Closets serving premises other than houses.

(b) Privy Middens serving:—1 House, 8

(c) Ashpits serving:—

2 tenants	3 tenants	4 tenants	5 or more tenants
6	5	6	279

In connection with the survey of the City, I am submitting further details on the attached statement, which, I trust, may be of interest.

It is to be noted that the figures shown in relation to population do not include such Institutions as the Dundee Royal Infirmary, King's Cross Hospital, Maryfield Hospital, Industrial Schools, certain Common Lodging Houses, Hostels and similar Institutions.

Also the Areas of the various Parks, Cemeteries, etc., have been correspondingly subtracted from the total acreage of the City.

During the course of this Survey, 38,550 Visits of Inspection have been made by the Staff of the Department, and the work has called for a great amount of overtime in the preparation of the details and figures as submitted in this Report. The whole work has been carried through without any addition to the Staff.

SECOND HOUSING SURVEY — 1933

COMPARATIVE STATEMENT

Ward	Popu- lation	No. of Houses	No. of Sh.- Ho.	Total Sh.-Ho.	ALLOCATION OF HOUSES									
					Shop Ho.	2	Shop Ho.	3	Shop Ho.	4	Shop Ho.	5	6 and over	Shop Ho.
1	15,587	4,161	12	4,173	425	7	1,879	2	1,304	2	346	1	92	115
2	11,097	2,984	9	2,993	384	7	1,154	—	660	1	274	1	138	374
3	16,102	4,416	21	4,437	693	10	2,369	5	966	1	184	5	84	120
4	16,842	4,759	17	4,776	495	7	2,458	6	1,139	4	369	—	134	164
5	24,316	6,983	27	7,010	938	15	3,842	8	1,511	4	244	—	127	321
6	16,007	4,241	12	4,253	993	6	2,075	3	624	2	350	1	84	115
7	23,793	6,622	21	6,643	565	8	2,719	6	2,325	5	436	1	226	351
8	18,395	5,306	14	5,320	981	9	2,753	4	1,090	1	211	—	131	140
9	19,004	5,280	9	5,289	761	4	2,488	2	1,011	3	424	—	157	439
10	4,292	1,185	12	1,197	38	1	364	3	196	7	113	1	63	411
11	6,424	1,861	10	1,871	31	—	421	1	443	7	296	1	251	419
Tls.	171,859	47,798	164	47,962	6,304	74	22,522	40	11,269	37	3,247	11	1,487	2,969

POPULATION (excluding Institutions)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ACREAGE (excluding Parks, Cemeteries, etc.)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of PERSONS per Acre	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of HOUSES per Acre	...	...	...	...	...	...	...	...	...	...	...	...	...	...

171,859

6,559

26.20

7.31

SHOPS AND OTHER PREMISES

Number of	W A R D S .											TOTAL
	1	2	3	4	5	6	7	8	9	10	11	
Shops	329	390	280	318	349	516	232	262	324	23	141	3,164
Other Premises	696	456	205	181	215	937	209	210	186	91	160	3,546

WATER SUPPLY

WATER SUPPLY

[illegible]

SANITARY CONVENIENCES

I T E M	W A R D S .											TOTAL
	1	2	3	4	5	6	7	8	9	10	11	
WATER CLOSETS—												
(a) For Houses	2,687	1,902	2,493	3,144	4,729	2,089	5,031	3,153	3,192	912	1,578	30,910
(b) For Shops, etc.,	508	462	164	172	143	786	151	110	180	36	113	2,825
DRY CLOSETS—No. of	1	2	7	1	27	—	17	2	—	3	12	72
Serving (a) Houses	1	1	9	1	36	—	16	2	—	3	11	80
(b) Other Premises	—	1	—	—	—	—	2	—	—	—	1	4
PRIVY MIDDENS—No. of ...	—	—	—	2	—	—	—	—	1	5	—	8
HOUSES SERVED	—	—	—	2	—	—	—	—	1	5	—	8

ALLOCATION OF WATER CLOSETS TO HOUSES
WITH ADDITIONAL HOUSES SERVED BY DRY CLOSETS AND PRIVY MIDDENS

WARD	NUMBER OF HOUSEHOLDS INCLUDED AT					TOTAL HOUSES SERVED BY			TOTAL HOUSES Served by (a), (b) and (c)
	1 Tenant to 1 W.C.	2 Tenants to 1 W.C.	3 Tenants to 1 W.C.	4 Tenants to 1 W.C.	5 & over Tenants to 1 W.C.	(a) Water Closets	(b) Dry Closets	(c) Privy Middens	
1.	1,846	839	642	583	262	4,172	1	—	4,173
2.	1,315	605	322	416	334	2,992	1	—	2,993
3.	1,427	1,014	688	949	350	4,428	9	—	4,437
4.	2,347	564	732	808	322	4,773	1	2	4,776
5.	3,526	1,067	844	1,129	408	6,974	36	—	7,010
6.	1,065	753	740	1,104	594	4,253	—	—	4,253
7.	4,066	1,165	424	731	240	6,626	16	—	*6,642
8.	1,991	1,095	946	749	537	5,318	2	—	5,320
9.	2,073	1,046	840	818	510	5,287	—	1	*5,288
10.	765	150	96	81	95	1,187	3	5	*1,195
11.	1,404	198	117	83	56	1,858	11	—	*1,869
Totals	21,825	8,496	6,391	7,448	3,708	47,868	80	8	47,956

*WARD 7—In addition	1	Bothy No. W.C. Accommodation.							
*WARD 9—In addition	1	House No W. C. Accommodation							
*WARD 10—In addition	1	Bothy and 1 House no W. C. Accommodation.							
*WARD 11—In addition	1	Bothy and 1 House No W. C. Accommodation.							

Total Houses
No Water
Closet
Accommodation, 6.

ALLOCATION OF

Ward	ASHPTS SERVING											HOUSEHOLDS					ASHBINS					SERVING HOUSEHOLDS					Total	
 321										 321				 12,799											
	1	2	3	4	5/	11/	21/	31/	41/	50	51 & over	Total Houses Served	1	2	3	4	5 & over	Total Houses Served	1	2	3	4	5 & over	Total Houses Served				
1.	2	1	—	—	6	17	11	4	1	1	1	850	428	333	6	43	206	2,783	428	333	6	43	206	2,783				
2.	2	—	—	—	2	—	1	—	—	—	—	45	218	28	33	103	208	2,119	218	28	33	103	208	2,119				
3.	2	1	3	—	4	4	2	—	—	—	—	149	295	212	123	157	419	4,264	295	212	123	157	419	4,264				
4	1	—	—	2	51	28	8	4	3	1	1	1,347	274	21	22	225	314	3,354	274	21	22	225	314	3,354				
5.	5	1	—	—	30	28	15	1	2	2	2	1,236	508	312	199	181	520	5,747	508	312	199	181	520	5,747				
6.	3	1	—	1	4	6	2	4	1	—	—	360	62	16	24	74	392	3,003	62	16	24	74	392	3,003				
7.	3	—	1	1	7	5	6	—	1	—	—	332	598	673	246	177	410	6,270	598	673	246	177	410	6,270				
8.	1	—	—	—	6	—	—	—	—	1	1	208	350	201	28	296	476	5,023	350	201	28	296	476	5,023				
9.	1	2	1	1	6	—	—	—	—	—	—	60	442	20	144	242	510	5,133	442	20	144	242	510	5,133				
10.	1	—	—	—	—	2	—	—	—	—	—	25	516	45	60	28	24	1,049	516	45	60	28	24	1,049				
11.	4	—	—	1	1	1	—	—	—	—	—	31	682	214	64	66	31	1,743	682	214	64	66	31	1,743				
Totals	25	6	5	6	117	91	45	13	8	5	5	4,643	4,673	2,075	949	1,592	3,510	40,488	4,673	2,075	949	1,592	3,510	40,488				

12,799

321

Earth, Closets, Privies, and Privy Middens.

AS AT 31ST DECEMBER, 1933.

SITUATION.	NUMBER OF		TO SERVE.		
	Privies or Earth Closets.	Privy Middens	No. of Households.	Persons.	
				M.	F.
Dighty Toll House - - - -	1	...	1	3	3
Old Manse, Mains, - - - -	1	...	1	3	3
Castle Mains (South House) - -	1	...	1	...	3
Manse Lodge (Old Glamis Road) -	1	...	1	...	2
Trottick - - - - -	14	...	22	28	32
Claverhouse Road (Church House)-	1	...	1	1	2
Harestane Rd. (W. March Cottar House)	1	...	1	1	2
Magdalene's Kirkton (Cottar House) -	1	...	1	2	2
Harestane Road (Bleachfield) - -	1	...	1	1	1
South Baldovan Farm - - - -	1	...	1	1	1
East Pitempton - - - - -	1	...	1	1	1
Pitempton Railway Cottages - -	2	...	2	...	4
Pitempton (Baldovan) - - - -	1	...	1	2	1
517 Strathmartine Road - - - -	1	...	1	1	4
Station Cottage, Cox Street - - -	1	...	1	3	3
West Kirkton Cottages, Kirkton Road -	5	...	5	13	10
Fountainbleau (Hamlet) - - - -	7	...	7	15	13
Gelly Cottages - - - - -	2	...	2	3	4
East Lodge—McAlpine Road - - -	1	...	1	2	4
Beach Strip Cottage—Coupar-Angus Rd.	1	...	1	3	1
Main Lodge—Coupar-Angus Rd, - -	1	...	1	1	3
Backhill of Balgay - - - - -	1	...	3	4	9
King's Cross Cottar House - - -	1	...	1	...	1
Hillside Farm - - - - -	1	...	1	5	6
Blackness Nursery (Cottage) - -	...	†1	1	4	1
Ninewells (Railway Cottage) - - -	1	...	1	3	4
Balgay—Mains - - - - -	1	...	1	2	2
Bingham Terrace (Gallowhill) - -	1	...	1	1	2
220-222 Arbroath Road - - - -	...	2	2	3	7
399 Arbroath Road (Craigie North Lodge)	1	...	1	1	1
Gotterstone Cottar Houses (North) -	...	5	5	11	10
do. do. do. (South) - - - -	2	...	2	5	5
51 Forthill Road (Pullar) - - -	1	...	1	1	1
52 do. do. (McQuarrie's Houses) -	3	...	3	3	4
Balgillo Road (Keillor) - - - -	1	...	1	4	2
do. do. (Elrick) - - - - -	1	...	1	1	1
East Balgillo Cottar House - - -	1	...	1	4	4
do. do. do. do. (Grieve's House)	1	...	1	3	2
Barnhill Farm (Grieve's House) - -	1	...	1	1	2
434 King Street, Broughty Ferry - -	1	...	1	...	1
Arbroath Road (Linlathen W. Lodge) -	1	...	1	1	1

† House under Closing Order.

The laying of a public sewer along Balgillo Road, Broughty Ferry, will be the means of a number of the privies shown in the foregoing list being dispensed with and modern water closets provided in their stead. When intimation was received that the work on the sewer was taking place, letters were sent to the owners of the properties in the vicinity whose premises were not provided with proper sanitary accommodation, to get into touch with the Department of the City Engineer and have a connection made to the sewer when the ground was open, and so avoid, at a later date, the expense of opening the ground for this purpose. By the end of the year one owner-occupier had a water closet installed within his dwelling while other conveniences were at that time in the course of erection. Before long all the privies in this area will be replaced by modern fittings. In regard to premises belonging to the Corporation in the rural parts of the city and particularly in that area recently included by the extension of the Burgh Boundaries, the question of the provision of suitable sanitary accommodation in lieu of unsatisfactory existing dry and earth closets was the subject of a report submitted to the Town Clerk on 16th November. The matter was brought before a meeting of the Public Health Committee in the same month, when it was agreed to remit the subject to a Sub-Committee for consideration and report.

Ashpits and Ash or Dust Bins.

Each year sees a further advance towards the total elimination of the open insanitary ashpit from our city, and the replacement thereof by the more hygienic galvanised iron bin. The figures applying to 1933 are as follows:—

285 ashpits have been demolished, and replaced by
743 galvanised iron dust bins.

In addition,

1,057 bins which had become unfit for use were renewed,
and

24 bins were provided at properties where formerly
there was no storage system available.

An examination of the figures returned at the Surveys reported in 1930 and 1933 shows particularly interesting data.

1926-1930 SURVEY		1932-1933 SURVEY	
No. of Ashpits	No. of Ashbins	No. of Ashpits	No. of Ashbins
1,785	8,019	321	12,799
serving	serving	serving	serving
24,117 houses	19,830 houses	4,643 houses	40,488 houses

So far as Ward 10 is concerned, at the end of the year, the ashpit, as a means for the storage of refuse, had been completely dispensed with.

Housing.

No more controversial subject has ever been introduced to the realms of sanitation than "Housing." It has been the cause of a great deal of legislation and litigation. Subsidies have been, and are being, given in aid of it. It has filled columns of the daily and weekly newspapers with articles and criticisms, and has even formed the subject of the cartoonists' humour, a humour which is not, however, always kindly.

Yet, despite all the adverse criticisms and ill-timed cries of "Enough" from poorly informed and timid economists, Sanitarians and Public Health Officials throughout the country still pursue the task of securing, or rather **endeavouring to secure**, a reformation of the conditions under which so many of our fellows are "existing." The word "existing" is used advisedly, because the term "living" could not possibly be applied to many of the cases which come under our notice. To spend one's days in a dark, damp, ill-ventilated house, robbed of the benefits and pleasures of fresh air and sunlight can never be called "living," and—so long as such conditions continue—we must pursue our present policy and press for the abolition of slums.

Unfortunately, our efforts do not always meet with success. In many cases owners have to borrow money to repair houses, which, at the best, are made "fit" for a few more years, but are never satisfactory either to owner or tenant and are a constant source of trouble to officials. As these properties are handed down from one generation to another, the number of "owners" or heritors entitled to a share of the revenue increases along with the burden of borrowed money, with the result that money which should go to repair and upkeep is swallowed by the ever increasing demand, and ultimately the property becomes once more "unfit for human habitation."

That the problem is still acute, despite the progress that has been made, there can be no doubt, and the Government, by the

appointment of a Scottish Departmental Committee on Housing has shown that it is fully alive to the urgency of the situation.

The Committee, which includes well-known Social Workers and Politicians, was appointed to consider and report on:—“(a) What, if any, further steps are necessary or desirable to secure the maintenance of a proper standard of fitness for human habitation in working-class houses which are neither situate in an area suitable for clearance under Part I. of the Housing (Scotland) Act, 1930, nor suitable for demolition under Section 16 of that Act; and (b) What, if any further steps are necessary or desirable to promote the supply of houses for the working classes (without public charge) through the agency of public utility societies or other bodies subject to similar limitations, operating in particular areas or otherwise.”

This Committee, appointed on 3rd May, 1933, held 14 meetings, heard and considered evidence from many people well known and well versed in Sanitation, Public Health, Finance, and National and Local Government Administration.

Social Workers and the Owners of Property were represented, and the Report of the Committee, published under date 8th December, 1933, is a very full and interesting document.

The recommendations of the Committee would, if they became law, have a far reaching effect on the future housing accommodation of the people; and we, who have worked for many years to achieve an improvement, would see at last a definite step towards the goal of our ambition, viz., a decent home for every citizen.

Surely it is not too much to hope that the work of the Committee, backed by the plea of H.R.H. The Prince of Wales, will lead to a definite and progressive policy, having for its object the complete abolition—not merely the transference—of the horrors and misery caused by overcrowding and residence in slum properties.

That these two problems are closely connected there can be no doubt, and while one must readily admit that every overcrowded house is NOT a slum, many of the slum houses are definitely overcrowded. These facts were brought forcibly to our notice during an inspection of the houses, and while overcrowding figures are provided elsewhere in this Report, no survey of the Housing Position

would be complete without a reference to the problem. When it is known that among the houses closed under the Housing (Scotland) Act, 1930, there were one-roomed houses with 6, 7, 8, 9, and 10 persons respectively, and two-roomed houses containing families numbering up to 13 persons, it will be realised even by the most complacent of economists that we have an overcrowding problem, and that the work of the Sanitary Staff is to a large extent nullified thereby. How can any treatment for Tuberculosis be effective if the patient is condemned to live in overcrowded, sun-starved conditions and in close proximity to three or four other persons?

The figures given in our last Annual Report, quoted from the Registrar General's Census Return, showed that Dundee had a very grave overcrowding problem indeed, and it is no less acute now.

Housing Requirements.

In 1930 the Town Council furnished to the Department of Health for Scotland, the following estimate of the number of houses likely to be provided by the Local Authority within the next three years :—(a) To be built consequent upon Demolition or Closing of Houses; and (b) To abate overcrowding—708 annually for the next three years; and (c) to be built to meet the normal growth of the population—300 annually for the next three years; a total of 3,024 houses to be provided by the Local Authority within three years.

At the 31st December, 1933, the following houses had been provided by the Local Authority during the period under review, viz. :—

Year	R O O M S			Total
	2	3	4	
1931	144	234	—	378
1932	118	290	—	408
1933	116	400	90	606
				—
				1,392

This gives an average of 464 houses per annum over the three years, and is only 46.03% of the original figure aimed at.

There were, in addition to the above figure, 99 two-roomed and 276 three-roomed houses under course of construction at the end of December,

Even if we include this figure we only get a total of 1,767 in place of 3,024 houses estimated, but it must be remembered that the three years' period **has** elapsed, and we are still far behind with the original programme.

True, the figure for 1933 was an improvement on the totals for 1931 and 1932, but when one bears in mind that there were 766 houses in course of construction at the end of 1932 and that only 606 of these **had been completed** by the end of 1933, one is inclined to despair.

This review of our "Three Years Programme" naturally leads to a consideration of the

" Five Years Plan "

which aroused so much discussion, publicity and criticism.

Public opinion in a nebulous way has realised the seriousness of the problem, and has disposed of the question quite satisfactorily by emphatically asserting that " Something must be done about it."

From the point of view of those responsible for the administration of the Housing and Public Health Acts, the position is not satisfactory by any means.

Public opinion looks to us to find a solution, and we know how complex and elusive our problem is.

On the one hand we have the cumulative ill effects arising from a section of the population being born and bred under sordid and unhealthy conditions; a state of affairs calling for the utmost vigilance and unceasing effort on the part of the health and sanitary services.

On the other hand we have the helplessness, hopelessness, inertia and even opposition to change on the part of some of the slum-dwellers. We are familiar with the objections of owners to the penal legislation under which their properties are acquired compulsorily at " site value." We appreciate the enormous cost of rehousing at very uneconomic rents, and we fully realise the objection on the part of " Suburbia " to the transplanting of the slum population in new districts,

We are faced with a shortage of land within our city boundaries, and if we contemplate rehousing upon the outskirts there is the bogey of means and cost of transport.

Truly the scales are heavily weighted against progress, but our sense of duty to the public provides a steady impulse to endeavour to surmount all obstacles.

Section 22 (1) of the Housing (Scotland) Act, 1930, requires "every Local Authority to consider the Housing conditions in their district in regard to the provision of further Housing Accommodation for persons of the working classes, and for that purpose to review any information brought to their notice as a result of inspection and surveys made under the Act."

Sub-Section (2) further states "every local authority shall, in the year 1933 and every fifth year afterwards furnish to the Department of Health for Scotland a general statement of the measures they propose to take for dealing with Housing Conditions in their district and for the further provision of housing accommodation." The Department also prepared a form of statement showing the particulars to be submitted to them, as follows:—

- (1) An estimate of the number of houses **required** for:—
 - (a) Replacing houses unfit for human habitation;
 - (b) Abatement of overcrowding; and
 - (c) Meeting normal growth of population.
- (2) An estimate of the number of houses **likely to be provided by the Local Authority** during the next five years:—
 - (a) In place of houses Demolished or Closed as unfit;
 - (b) To abate overcrowding; and
 - (c) To meet the normal growth of population.

In order to assist the Local Authority to make a fair and reasonable estimate for submission to the Department, we carefully considered the problem, under **each separate heading**, and as a whole; and guided by the information in our possession, gathered from recent surveys and inspections, reported that 5,152 houses would be required during the next five years, made up as follows:—

(a) To replace houses presently unfit for habitation,	3,603
(b) To abate overcrowding,	569
(c) To meet normal growth of population (based on census figures 1921-1931),	980
	—
	5,152

Against this estimate of our **requirements**, the Local Authority are proposing to provide 2,500 houses at the rate of 500 per annum.

At the time of writing this question is still under consideration, and it is to be hoped that a wider outlook will prevail. Surely with the number of local unemployed operatives in the building trades—approximating 1,000 — a greater number of houses could be achieved in this interval.

Reconstruction of Houses.

We have already written of the difficulties and of the energy and money wasted in attempting to make old properties new; but must again refer to this question, as it will be seen from the figures in our return to the Department of Health for Scotland that during the year a number of houses have been “ Rendered Fit ” for human habitation, and undertakings to “ Render houses Fit for human habitation ” have been accepted for a much greater number. This work is now going on, and we hope to be in a better position to discuss the results in the next Annual Report.

In the special “ Housing and Slum Clearance ” Supplement to a well-known periodical issued recently a writer said, “ There are three essentials to our attack on slums, viz. :—

- (1) We must be passionately eager to win ;
- (2) We must know who and where the enemy is ;
- (3) We must know what weapons we have got and how to use them.”

Only by the knowledge of the justice of our cause and the fearless use of the weapons provided, i.e., the Statutory powers with which we are invested can we ever hope to realise the call of H.R.H. The Prince of Wales, “ Let it be said of our generation that we swept the slums away.”

The initial cost may be great, but the results can never be calculated in mere pounds, shillings and pence. A decently housed, healthy and happy populace is surely recompense enough for any financial loss.

From experience already gained it will be generally admitted that the benefits derived from rehousing the slum dwellers are neither shadowy nor hypothetical. Although operations have only been carried out upon a limited scale, they have demonstrated that in the majority of cases, fully 95 per cent. we would say, improved environment and conditions have resulted in an uplift for the families concerned, and it is to the rising generation that we must look for improvement.

The following tables and comments are intended to provide the members of the Town Council and also those of the community who have the health and welfare of the citizens generally at heart, with a record of the work done by the Housing Section of this Department during the past year.

It will be seen that since the beginning of 1924, Representations and Reports to the number of 564 dealing with 4,947 houses have been submitted to the Local Authority and that of these 204 dealing with 1,879, or approximately 38% of the total, were submitted during the year 1933.

TABLE I.

Shows the number of houses which have been provided by the Corporation and Private Enterprise during the year 1933 :—

	2 Rooms	3 Rooms	4 Rooms and over	Total
By the Corporation	116	400	90	606
By Private Enterprise	—	12	113	125
				—
Total				731

This is a decrease of twenty-three on the number provided during 1932, and while it can be safely assumed that those provided by private enterprise (125) were built for sale to owner occupiers and not for letting; of the 606 provided by the Corporation, 92 were under the 1924 Act and the remaining 514 for "Slum Clearance."

The figure 606 is the second highest attained since the Town Council commenced in 1919 with their Post-War Housing Policy; and even if this rate of building could be maintained it would materially help to alleviate the misery, illness and moral degeneration—the evils generally associated with the dismal and dilapidated houses which go to make up "Slumdom."

While we can congratulate ourselves on the rate of progress in new housing made during the past year, we must not forget that during the same period a total of 599 houses were Closed or Demolished as unfit for human habitation—see Table II.; and if we deduct this amount from the figure 606, we find **we are only 7 houses to the good**; or in other words—the rate of building is barely keeping pace with work of Closing and Demolition.

TABLE II.

Houses Closed by Order or Demolition Order; Voluntarily Closed, etc., during the year 1933 :—

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
(a) Voluntarily—houses generally in very bad repair, very damp, and not reasonably fit for human habitation	10	20	5	5	40
(b) Converted into business premises, offices, shops, or Workshops, etc.	10	8	4	17	39
(c) By absorption into other houses	18	16	11	19	64
(d) Closed by Order or Demolition Order	41	47	6	3	97
(e) Clearance Areas—					
1st Instalment	27	39	4	2	72
2nd Instalment	67	69	2	2	140
Queen St., Broughty Ferry	2	2	—	—	4
Bogwell	—	1	—	—	1
(f) Small's Wynd Improvement Scheme	53	79	8	2	142
	—	—	—	—	—
	228	281	40	50	599

TABLE IV.

Gives the number of houses erected since 1919 by the Town Council.

	2 Rooms	3 Rooms	4 Rooms and over	Total
1919	72	—	—	72*
1920	44	150	—	194*
1921	96	132	4	232
1922	—	252	—	252
1923	—	16	—	16
1924	8	50	4	62
1925	22	86	94	202
1926	76	287	26	389
1927	86	887	—	973
1928	114	325	—	439
1929	240	310	—	550
1930	—	30	24	54
1931	144	234	—	378
1932	118	290	—	408
1933	116	400	90	606
Total	1,136	3,449	242	4,827*

*These figures include 76 wooden huts erected in 1919-20.

The above table shows 4,827 houses have been provided by the Corporation, or an average of 321 houses per annum for the past 15 years. In a like period, however, as shown in Table V., a number of houses have disappeared from use as such through being Voluntarily Closed, Closed by Order, Demolished, or converted into business premises, etc.

TABLE V.

Houses Voluntarily Closed, Closed by Order, Demolished or turned into Business Premises :—

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919	36	52	9	15	112
1920	27	22	3	5	57
1921	20	6	1	2	29
1922	17	21	4	6	48
1923	36	27	8	12	83
1924	25	20	10	15	70
1925	8	12	9	12	41
1926	35	36	6	10	87

1927	.....	95	41	6	19	161
1928	.....	48	57	18	12	135
1929	.....	145	117	10	23	295
1930	.....	53	49	26	22	150
1931	.....	135	196	45	42	418
1932	.....	186	229	32	25	472
1933	.....	228	281	40	50	599
Total ...		1,094	1,166	227	270	2,757

This total of 2757 houses which have gone out of use as such during these years gives an average of 183 per annum, against 4,827 provided or 321 per annum, and if we deduct the former figures from the latter we find the net increase of houses to the City to be 2,070 or an average of 138 for each year of the period under review.

To arrive at the grand total of houses from all sources provided during these years, we must include those that have been repaired and re-opened, shops, etc., converted into dwelling-houses, and large houses being sub-divided (Table VI.), as also those obtained through the beneficence of the Fleming and Gray Trusts (Table VII.), and by Private Enterprise (Table VIII.).

TABLE VI.

Shops, etc., converted into dwelling-houses; houses reconstructed and re-opened, and large houses sub-divided.

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919	14	67	11	7	99
1920	8	16	8	8	40
1921	4	1	1	2	8
1922	3	13	5	4	25
1923	6	5	3	4	18
1924	5	17	5	9	36
1925	9	10	4	6	29
1926	3	6	1	3	13
1927	1	12	2	3	18
1928	4	15	2	4	25
1929	9	10	7	12	38
1930	2	21	5	12	40
1931	4	15	5	14	38
1932	17	32	5	5	59
1933	15	49	15	30	109
Total ...	104	289	79	123	595

TABLE VII.

Houses provided by the Fleming and Peter Gray Trusts.

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
By Fleming Trust (Gift of the late Robt. Fleming, Esq., LL.D.)	192	158	146	—	496
By the Peter Gray Housing Trust	24	—	—	—	24
Total					520

TABLE VIII.

Houses provided by Private Enterprise.

	2 Rooms	3 Rooms	4 Rooms and over	Total
1919	—	—	5	5
1920	—	1	1	2
1921	—	27	15	42
1922	—	5	20	25
1923	1	4	51	56
1924	—	2	101	103
1925	—	13	74	87
1926	2	172	181	355
1927	—	263	95	358
1928	—	12	114	126
1929	—	9	77	86
1930	—	3	88	91
1931	1	8	82	91
1932	—	11	107	118
1933	—	12	113	125
Total	4	542	1,124	1,670

These three tables together give the sum of 2,785, which figure added to 4,827—the Corporation's quota, makes a grand total of 7,612 houses provided during the past 15 years—or an average of 507 houses per annum; deducting the 2,757 houses which have gone out of use during these years, gives us 4,855 additional houses within the City, equal to an average annual contribution of 324.

Reference has been made to:—

(a) THE FLEMING TRUST SCHEME;
which consists of 496 dwelling houses:—

192 Single Apartments;
158 Two Apartments; and
146 Three Apartments.

This, the initial portion of the scheme is now completed, and some 1,600 people are housed in bright, airy, modern houses which are in vivid contrast to the conditions in which they previously dwelt. How the altered conditions are appreciated must be seen to be believed; and these conditions have given the recipients a new outlook on life and a new conception of the word "home" and all that it stands for. The scheme, of course, will not end here. As funds accumulate from rents, so will more houses be provided and the benefits become available to an ever increasing number. Truly, it was a beautiful thought which prompted this gift, and no greater memorial to our distinguished townsman could ever be provided.

(b) THE PETER GRAY HOUSING TRUST;

of 24 single apartment houses, has been in occupation for some time. Intended solely for the use of single or widowed ladies, it was promptly christened "No Man's Land." Its occupants are delighted with their houses, and are full of gratitude to the family who provided them. Built as a memorial to their forebears, on ground in the midst of a working-class area, where the Gray family has been well known and highly respected for many years, these houses are filling a very essential need.

The Sir James Caird Land Acquisition Fund—Marryat Bequest.

The Town Council have agreed that the income accruing from the above Fund (£100,000) during the first ten years, be applied wholly to the acquisition of land in dense or slum areas, for the purpose of providing open spaces as playgrounds for the children of such neighbourhoods, and for the provision of playing fields for the benefit of young people in like circumstances—all to be suitably laid out.

The subjects acquired to date by the Town Council with the aid of the above Fund are as follows:—

(a) **Blackness Road District.**

An insanitary building, comprising 9 one-roomed houses and 3 two-roomed houses. The owner died, and, as the property was for sale, opportunity was taken to acquire it for the Town—the building to be demolished and the ground left as an open space.

(b) Broughty Ferry Castle Green.

When it was learned that the War Department were to dispose of the piece of ground adjacent to Broughty Ferry Castle, known as "Castle Green," the Local Authority, after inspecting the locus and buildings and carefully considering the Conditions of Sale, agreed to purchase the ground.

(c) Forebank Road District.

Old properties fronting and adjoining Ann Street had been acquired by the Town Council with the view of clearing the sites and erecting some modern dwelling-houses thereon. To open out the area to the south it was decided to purchase two insanitary buildings comprising 7 one-roomed houses, 7 two-roomed houses, and 2 three-roomed houses, and utilise the site as a children's playground.

(d) Corso Street.

Ground, surplus to Housing Requirements, extending to 123.2 poles has been acquired for a children's playground.

Slum Property Equalisation Fund.

The Dundee Corporation Order Confirmation Act, 1932, became operative on 12th July, 1932, and by virtue of Section 43, the Corporation was empowered to establish a Fund to be called "The Slum Property Equalisation Fund."

The sum of £6,000 is "earmarked" in the current financial year's estimates for this fund, but no expenditure has so far been debited against it.

Housing (Scotland) Act, 1925.

The Dundee (Blue Mountains, Etc.) Improvement Scheme, 1925; Confirmation Order, 1925, made by the Department of Health for Scotland under the Housing (Scotland) Act, 1925.

This Scheme was completed in 1932.

The Dundee (Small's Wynd) Improvement Scheme, 1928, Confirmation Order, 1929, made by the Department of Health for Scotland under the Housing (Scotland) Act, 1925.

The scheme embraces some 315 houses and 64 other premises, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
139	147	26	3	315

The position at the end of 1933 is as follows, viz. :—

Houses still in Occupation :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
29	27	6	—	62

This shows only 253 houses vacated, slow progress indeed. Since the Scheme was approved of in 1929, very few repairs have been effected, and the dwelling houses—considered at that time to be insanitary and unhealthy—are now mostly hovels.

To re-house the tenants displaced from this scheme the Town Council approved of plans for the erection of 246 houses at Wester Clepington, viz. :—

96 two-roomed houses and
150 three-roomed houses.

These houses are now completed and ready for occupation. Dare we express the hope that in the next Annual Report we will be able to write “ Finis ” across this Scheme.

Housing (Scotland) Act, 1930.

The campaign, initiated by the Medical Officer and myself under the above Act in 1930 against insanitary houses and areas in the City is still proceeding, and the results of our efforts, up to the present, will be found in the following tables :—

Clearance Areas.

(First Instalment.)

The Representations which embraced some 18 Areas in Wards 1, 4, and 5, involved 304 dwelling houses and 73 other premises, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
133	148	16	7	304

To develop the area the Director of Housing, in virtue of Section 3 of the Act, included other 23 houses and 19 other premises, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
3	16	3	1	23

Altogether, 327 houses were included, and of these, 18 were already Closed by Order and 10 Voluntarily, leaving 299 occupied houses with a population of 970 persons.

The position at 31st December, 1933, is :—

Houses still in Occupation.

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
6	8	2	—	16

This shows 311 houses have been Closed or Demolished, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
130	156	17	8	311

It will be seen considerable progress has been made—95 per cent. of the houses having been Closed or Demolished. Regarding the provision of new houses to re-house the tenants displaced, the Town Council decided that the Fleming Trust Houses should be utilised for this purpose as far as possible and in terms of the Deed of Gift.

Queen Street, Broughty Ferry

These four areas situated on the north side of Queen Street, Broughty Ferry, comprising 15 houses represented by the Medical Officer of Health and 1 house and three other premises included by the Director of Housing, have now been entirely demolished and a block consisting of 6 two-roomed and 24 three-roomed houses has been erected on the site. The building forms three sides of a square and the ground in front has been tastefully laid out by the Parks Department with shrubs. It is a typical example of what can be done by erecting new houses on a site lately occupied by old dilapidated buildings, and those who knew this locality in its old condition are agreeably surprised when they see it now. These occupants are delighted with the situation of and the conveniences provided in their new homes.

These houses were greatly needed in the District, and we trust they are merely the forerunners of other schemes in that area.

Second Instalment.

This Scheme, which embraced 12 Areas in Wards 5, 6, and 7 and comprising 265 dwelling houses and 65 other premises has now been completed. The population of 822 persons has been re-housed and the whole of the buildings are demolished. These areas have been dealt with in an expeditious and very satisfactory manner—a promptitude we would like to see extended to the Small's Wynd and First Instalment Schemes.

Bog Close and Bogwell Clearance Areas.

The Official Representation made by the Medical Officer of Health on 31st March, 1932, consisted of two areas embracing 50 houses, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
45	4	—	1	50

To satisfactorily develop these Areas, the Director of Housing, by virtue of Section 3 of the Act, included 2 houses :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1	—	—	1	2

Altogether 52 houses are included, with a population of 179 persons.

Considerable progress has been made with this area and the position at 31st December, 1933, is :—

Houses Still in Occupation.

1 Room	2 Rooms	3 Rooms	4 Rooms	Total
20	—	—	—	20

This shows that 32 houses have been closed or demolished, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms	Total
26	4	—	2	32

or approximately 62% of the total.

Blackness Road Area.

It was originally intended that this area of "Old Dundee," known locally as the "Gowden Knowes," should be dealt with as

an Improvement Area, but, as several of the buildings had been demolished—their site is now occupied by a very modern Nursery School—the Local Authority came to the conclusion that the buildings could best be dealt with by Demolition Orders, Repair Notices and Clearance Areas, and that course was finally adopted. As a result of this action most of the buildings will be demolished and the ground made available for future development.

Those buildings not dealt with by Demolition Orders and Repair Notices are now included in Clearance Areas.

Third Instalment.

Consists of 57 Areas situated in Wards 1, 2, 4, 5, and 6. The Representations of these Areas submitted by the Medical Officer of Health in September and October were before the Council at their meeting on 2nd November, 1933, when it was agreed that the said Areas be Clearance Areas, and that the adjoining additional lands and buildings thereon necessary for the satisfactory development of the Areas be purchased.

The Representations of the Medical Officer of Health included 834 occupied houses, viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
409	380	32	13	834

plus 56 unoccupied houses which had been Voluntarily Closed or Closed by Order and 100 other premises.

The Director of Housing, in order to complete the schemes included, by virtue of Section 3 of the Act, 111 houses, viz :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
34	66	9	2	111

and 80 other premises.

The total number of houses, occupied and unoccupied, is therefore 1,001, plus 180 other premises, and there is a total population of 3,333 persons.

This scheme is the largest yet dealt with by the Local Authority, and embraces almost as many houses as were contained in the Small's Wynd, First and Second Instalments and Bogwell Areas combined. The re-housing of these people must be gone on with at an early date, and we hope that progress in this direction will be rapid, as there are many areas yet to be dealt with,

Insanitary Buildings.

Since 1924, the year in which the Post-War Housing Policy of the Council was inaugurated, 564 Reports and Representations have been submitted to the Local Authority in order to deal with Insanitary and Obstructive buildings or Areas.

The total number of houses has now reached 4,947, and the following tables show, in detail, the position as it stood at 31st December, 1933.

Year	No. of Representa- tions	REPRESENTED.				Total Houses	No. of other Premises
		No. of Rooms					
		1 Room	2 Rooms	3 Rooms	4 Rooms and over		
1924	1*	59	45	4	1	= 109	21
1925	17	53	24	1	1	= 79	5
1926	45	81	96	8	11	= 196	6
1926	1*	139	147	26	3	= 315	64
1927	44	175	108	29	—	= 312	—
1928	44	138	132	5	5	= 280	—
1929	63	135	187	26	10	= 358	—
1930	41	73	151	17	12	= 253	11
1930	18*	136	164	19	8	= 327	92
1931	14*	140	136	12	6	= 294	82
1931	1*	7	8	1	—	= 16	3
1931	1*	90	118	1	1	= 210	16
1931	48	47	117	14	8	= 186	—
1932	20	36	27	14	4	= 81	—
1932	2*	46	4	—	2	= 52	—
1933	147	304	503	55	16	= 878	—
1933	57*	478	464	44	15	= 1,001	180
<hr/>							
	564	2,137	2,431	276	103	= 4,947	480

*Improvement or Clearance Areas.

Of the 4,947 houses Represented :—

1,631 were closed and demolished.

559 were closed and are standing empty.

198 were closed and are now used as club-rooms, etc.
(permission being granted by the Local Authority).

384 have been repaired or reconstructed.

1,445 are still in occupation, made up as follows :—

402 individual unfit houses.

62 Small's Wynd improvement scheme.

16 Clearance Areas (18)—1st Instalment.

945 Clearance Areas (57)—3rd Instalment.

20 Bog Close and Bogwell Areas.

1,445 Total.

382 are being dealt with by notices, and these are at present under, or negotiation for, repair.

103 are under undertakings given by owners to repair.

245 Transferred to Clearance Areas, etc.

4,947

In addition to the above, two obstructive buildings have been demolished and the sites cleared.

Closing or Demolition Orders.

Section 16 (1).

110 Representations, involving 539 houses, were made to the Local Authority in terms of the above section, viz. :—

232 one-roomed houses,

255 two-roomed houses,

37 three-roomed houses, and

15 four or more roomed houses,

and these were disposed of as follows :—

Demolition Orders were served upon the owners of 205 houses, viz. :—

- 81 one-roomed houses,
- 87 two-roomed houses,
- 27 three-roomed houses,
- 10 four or more roomed houses.

Closing Orders were served upon the owners of 2 houses, viz. :—

- 1 two-roomed house,
- 1 four-roomed house.

Sixteen owners gave undertakings to repair 103 houses, viz. :—

- 22 one-roomed houses,
- 75 two-roomed houses,
- 5 three-roomed houses, and
- 1 seven-roomed house.

Fifty-nine owners gave undertakings not to let for human habitation until rendered fit for that purpose, 229 houses, viz. :—

- 125 one-roomed houses,
- 97 two-roomed houses,
- 6 three-roomed houses, and
- 1 four-roomed house.

During the year 18 of the above houses have been rendered fit, viz. :—

- 3 one-roomed houses,
- 14 two-roomed houses, and
- 1 three-roomed house.

Repair Notices.

SECTION 14.

37 Representations, involving 343 houses, were made to the Local Authority in terms of the above Section, viz. :—

- 76 one-roomed houses,
- 248 two-roomed houses,
- 18 three-roomed houses, and
- 1 house of four rooms.

The owners of six one-roomed houses and one two-roomed house requested in terms of Section 17 that Demolition Orders be substituted, and the Local Authority agreed,

Summary in regard to Housing conditions and alterations during 1933

I.—Particulars of Houses (366) Improved :—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) At properties that had been "Closed by Order" for a period	3	21	1	—
(b) At instance of Sanitary Inspector, but not "represented" to Committee	81	157	15	3
(c) After Plans had been submitted to and approved of by the Works Committee	—	1	4	20
(d) Two or more houses made into one	—	7	4	9
(e) Houses divided and improved	8	9	7	16

II.—Shops and other premises converted into dwelling-houses (24) :—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) 6 Shops	2	4	—	—
(b) 1 Showroom	—	1	—	—
(c) 6 Offices	1	2	2	1
(d) Hotel	—	—	—	1
(e) 3 Workshops	—	2	—	1
(f) 3 Stores	1	2	—	—
(g) 1 Hall	—	1	—	—
(h) 2 Stables	—	—	1	1
(i) 1 Business Premises	—	—	—	1

III.—New Houses completed and ready for occupation during the year :—

(a) Under the Corporation Housing Schemes.

	2 Rooms	3 Rooms	4 Rooms & over
Ward III., Lorne Street,	—	36	—
Ward V., Sandeman Street	—	112	90
Ward VII., Various Schemes,	110	228	—
Ward X., Queen St. (Broughty Ferry)	6	24	—

Total, 606 houses,

(b) By Private Enterprise.

						2 Rooms	3 Rooms	4 Rooms & over
Ward 1	—	—	7
Ward 3	—	—	10
Ward 4	—	6	40
Ward 5	—	—	16
Ward 6	—	1	—
Ward 7	—	5	18
Ward 8	—	—	4
Ward 9	—	—	4
Ward 10	—	—	3
Ward 11	—	—	11

Total, 125 houses.

Giving a grand total of 731 new houses erected throughout the year.

IV.—Particulars of dwelling-houses Closed (599) for human habitation during the year 1933 in whole or in part :—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) Voluntarily — houses generally in very bad repair, very damp, and not reasonably fit for human habitation	10	20	5	5
(b) Converted into business premises, offices, shops or workshops, etc.	10	8	4	17
(c) By absorption into other houses ...	18	16	11	19
(d) Closed by Order or Demolition Order	41	47	6	3
(e) Clearance Areas	149	190	14	6
	—	—	—	—
Total	228	281	40	50

V.—Dwelling-houses Demolished (508) during the year 1933 :—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) Dwelling-houses that had been closed by order or demolition order	58	70	7	3
(b) Dwelling-houses that had been closed voluntarily	3	—	4	2
(c) School Site	—	—	—	1
(d) Business Extension	—	—	1	2
(e) Clearance Areas	99	112	6	5
(f) Small's Wynd Improvement Scheme	47	76	10	2
Total	207	258	28	15

In addition to the above, 62 other premises were demolished, viz. :—

5 Workshops.	17 Stores.	26 Shops.
4 Stables.	1 Clubroom.	5 Offices.
1 Urinal.	2 Mission Halls.	1 Nursery.

VI.—Net Results for 1933 :—

The net result for the year is that there are 241 more houses available for human habitation than at 31st December, 1932, i.e., houses of :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over
213 less	116 less	387 more	183 more

VII.—The total number of Dwelling-houses (Private and Corporation) in course of erection (448)—all stages—at 31st December, 1933, is as follows :—

	2 Rooms	3 Rooms	4 Rooms & over
Ward 1	18	—	2
Ward 2	6	12	1
Ward 3	—	1	1
Ward 4	18	6	25
Ward 5	—	12	6
Ward 7	57	251	10
Ward 8	—	—	8
Ward 10	—	—	3
Ward 11	—	3	9
Total	99	285	64

VIII.—Estimated Number of Inhabited Houses excluding Institutions and other large establishments within the Burgh of Dundee as at 31st December, 1933—corrected (added to and deducted from). Based on Census Return of 26th April, 1931, viz. :—46,229 houses.

Year.	1 Room		2 Rooms		3 Rooms		4 Rooms and over		Total
	Add.	Deduct.	Add.	Deduct.	Add.	Deduct.	Add.	Deduct.	
From Census Return	6,347		22,252		10,405		7,225		46,229
	or 13.7%		or 48.2%		or 22.5%		or 15.6%		
1931 ...	—	27	—	4	286	—	54	—	309
1932 ...	—	105	31	—	328	—	87	—	341
1933 ...	—	213	—	116	387	—	183	—	241
	—	345	31	120	1,001	—	324	—	47,120

Thus giving at 31st Dec., 1933 :—

6,002	22,163	11,406	7,549
or 12.74%	or 47.04%	or 24.20%	or 16.02%

IX.—The Official Return submitted to the Department of Health for Scotland for the year ended 31st Dec., 1933, is :—

Housing (Inspection of District) Regulations (Scotland) 1928

1. Number of dwelling-houses inspected - 1798
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 - - 1484

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	-	-	These provisions do not apply in Burghs.
(b) cases where works carried out by Local Authority after failure of owners to do so	-	-	
(c) cases still pending	-	-	
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 111

(a)	Nil.
(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 :—	-	-	-	-	These provisions do not apply in Burghs
(a) cases where requirements complied with by owners	-	-	-	-	
(b) cases where works carried out by Local Authority after failure of owners to do so	-	-	-	-	
(c) cases still pending	-	-	-	-	

Housing (Scotland) Act, 1930.

6. Number of dwelling-houses in respect of which notices were served under Section 14 (1)	-	-	-	-	343
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)	-	-	-	-	7
10. Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1)	-	-	-	-	539
11. Number of dwelling-houses referred to in 10:—					
(a) which have been rendered fit for human habitation	-	-	-	-	(a) 2
(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) 314
(c) in respect of which demolition orders* have been made under Section 16 (3)	-	-	-	-	(c) 205
(d) in respect of which closing orders have been made under Section 16 (3) and (4)	-	-	-	-	(d) 2

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 as 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 :—

Inadequate lighting and ventilation; dampness in houses; houses not provided with sinks and inside water supplies; insufficient water closet accommodation; want of suitable storage for foodstuffs and fuel; insufficient ashpit or ashbin accommodation; lack of facilities for the washing and drying of household and wearing apparel; and open spaces around buildings restricted.

Overcrowding, unfortunately, is still much in evidence, and the incidence thereof is not confined to any special district. Endeavour is made to cope with this situation by persuading the City Factor and the various House Factors to give larger houses, if at all possible, to those who are most in need of such accommodation.

The Rent and Mortgage Interest (Restrictions) Acts. 1920 to 1933.

The following tables show the number of applications made under the Rent and Mortgage Interest (Restrictions) Acts, 1920 to 1933, and how disposed of :—

Year	BY TENANTS.			BY OWNERS.		
	No of Applications	Granted	Refused	No. of Applications	Granted	Refused
1920	85	79	6	—	—	—
1921	17	14	3	—	—	—
1922	2	1	1	—	—	—
1923	5	3	2	1	1	—
1924	3	2	1	—	—	—

1925	4	3	1	—	—	—
1926	11	8	3	—	—	—
1927	17	16	1	3	3	—
1928	5	4	1	1	—	1
1929	1	1	—	1	1	—
1930	8	7	1	4	4	—
1931	2	2	—	1	1	—
1932	*713	677	31	149	148	1
1933	†83	70	9	†142	136	4
	956	887	60	302	294	6

*4 Tenants had money returned—rents had never been increased; while 1 Tenant wished no further action taken; and 46 Houses were claimed by Factors to be de-controlled.

† 3 in abeyance ; 1 had fee returned.

† 2 in abeyance.

During the past 14 years 956 applications have been made in terms of the above Acts by tenants, for Certificates declaring their houses were not in all respects in a reasonable state of repair; 83, or 8.6% were made during the year under review, and of these 70, or 84%, were granted.

This year there is a great reduction on the figure for 1932, which was the " peak " period so far as Certificates under these Acts were concerned. It will also be observed that while 887 Certificates have been granted to tenants only 294, or approximately 33.1% have been revoked on the application of the Owners or Agents. This is accounted for by the fact that many of the houses were under Demolition Orders or in Clearance Areas, and have now been dealt with under these orders.

Under the Act of 1933, houses of an Annual Rental not exceeding £26 5s shall not be de-controlled, even if they do become vacant, unless they were de-controlled and registered as such with the Clerk to the Local Authority prior to 18th October, 1933. Registration of a house by the Owner or Agent does not of itself render the house de-controlled, and where it is decided in a Court that a " registered " house is not de-controlled, that house must be struck off the Register. On the other hand, when an Owner or Agent has omitted to register a de-controlled house, the Courts can—provided application is made by the Owner or Agent, within seven days of receiving a Certificate under the Acts, and there is reasonable excuse for the omission—order such house to be registered. So far no case under either proviso has been tested in Dundee. It would be very interesting and informative to have a decision in each case.

Under the principal Act, an owner was allowed 8% of the cost of "structural alterations" in addition to ordinary rent. Section 7 of the 1933 Act lays it down that the Court shall not make an order **against the payment of the charge** on the application of a tenant unless he proves that the work was done without his written consent. Certain Agents, having received Notices under the Housing (Scotland) Act, 1930, calling for structural alterations and improvements which would entitle them to charge the 8% have asked the tenants to consent in writing to the work being carried out, and on refusal have delayed carrying out these works.

Supported by the Town Clerk, our opinion is that the terms of the Statutes enacted in the interests of Public Health cannot be thwarted by any tenant refusing to permit the improvements and alterations deemed necessary by the Local Authority.

This form of stalemate cannot endure, and, if required, it might be considered expedient to obtain a Court ruling concerning this proviso in the near future.

Tents and Vans.

Other than the sojournment of amusement caterers with their tents and vans at pleasure grounds, and the annual carnival on the ground at the north end of the City promoted by an entertainments proprietor, it is seldom that this class of dwelling falls to be dealt with in the area under our jurisdiction.

An encampment in Broughty Ferry during the holiday season contained at times some twenty tents principally of the small bivouac variety. Water supply is available, but the sanitary accommodation, consisting of a privy, is somewhat antiquated and at the same time insufficient. Should the intention be to let this ground each year for the purposes aforementioned, more proper and permanent conveniences will be insisted on.

Visits numbering 61 were paid to these places throughout the year.

Housing of Seasonal Outworkers.

A complaint that nuisance was being created at or near the sewage pumping station, Downfield, by berry pickers, was dealt with and remedied by the provision of a number of portable closets. Adequate water supply is available at the Farm Steading.

Otherwise, there were no contraventions of the Bye-Laws under this heading.

Common Lodging Houses.

The following premises within the Burgh are registered as Common Lodging Houses having accommodation undernoted:—

	Lodgers	
	Male	Female
55 Commercial Street,	242	—
3/5 Craig Street,	137	—
19 Overgate,	51	—
43 Overgate,	43	—
25 North Lindsay Street,	56	—
130 Overgate,	16	22
77 Overgate,	24	12
97 Overgate,	53	38
	<hr/>	<hr/>
	622	72
	<hr/>	<hr/>

They gave little cause for complaint, the bedding being kept in a clean condition, while the sleeping rooms were well ventilated and regularly washed. To them 379 visits were paid by day and 8 by night. The Lodging House at No. 77 Overgate changed hands during the year, and after alterations had taken place there was accommodation for 36 Lodgers, being an increase of 2.

The SEAMENS' BOARDING HOUSE (DUNDEE SAILORS' HOME AND HOSTEL) and the SALVATION ARMY HOME AND METROPOLE FOR WOMEN are well kept—clean and comfortable, the former also being available for commercial “boarders.”

Houses Let in Lodgings.

At the end of the year there were 102 Houses Let in Lodgings registered in terms of Section 72 of the Public Health (Scotland) Act, 1897, being an increase of 6 from last year, and to them 277 inspections were made. Beyond a few instances when it was necessary to insist on some cleaning up, these houses gave the Department little cause for official interference. By the registration of a certain class of house during the year, however, a new phase has arisen. The houses concerned are of a larger type than usual, in each case comprising four rooms, and letting takes place

at a particular sum per bed per week. Generally speaking, their conduct has been on the lines of Common Lodging Houses, with the lodgers cooking their own food in kitchens used in common. Their cubic capacity at 400 ft. per adult allows for the housing of 9, 17, 7 and 9 lodgers respectively. Particular attention has been given them and weekly inspectional visits were made.

Weekly Let Houses.

To houses of this description 200 visits of inspection were made between the hours of 12 midnight and 4 a.m., and cases of overcrowding or lack of proper sex segregation were discovered in 27 houses. Of the houses inspected, 13.5% were unsuited to the needs of the families occupying them. In no house was more than one family found to be staying; had it been otherwise, the lodgers would certainly have been moved on, but as the supply of houses is still short of the demand, official action by the Department would be deemed intolerable.

Overcrowding.

The subject embraced under this head has of recent years received considerable prominence, and at this stage it would be superfluous to write of the manifold evils which can be ascribed to it. We all know that the herding together of human beings, in houses already congested through the proximity of other properties, can be definitely attributed as the cause of untold suffering and ill-health—particularly of respiratory diseases—while the moral outlook to which those inmates attune themselves, particularly where the intermingling of the sexes occur, is a problem which only an improvement in the actual housing conditions will mitigate and eventually overcome.

There would appear, however, to be a somewhat changing outlook on the part of many of those persons who meantime are compelled to reside under such conditions. Their desire is for better housing — not waiting until their plight is discovered by the Inspecting Officer, as in olden days, and endeavouring even then to hide the actual state of affairs—they are now pleading their cases here in the fervent hope that something may be done to improve their lot.

Some years ago a Register was made of such cases, and where at all possible steps were taken when opportunity arose to assist those people towards a betterment of their housing condi-

tions. This has been continued, and during last year 210 cases were enquired into, a summary of which is as follows :—

- 92 One-roomed houses were occupied by 483 persons, being an average of 5.2 persons per house.
- 105 Two-roomed houses were occupied by 810 persons, being an average of 7.7 persons per house.
- 12 Three-roomed houses were occupied by 123 persons, being an average of 10.3 persons per house.
- 1 Four-roomed house was occupied by 10 persons.

That there is a definite need for particular and special attention to cases of this description is undoubted. At the moment we trust to the generosity and sympathetic understanding of House Owners and Agents when we bring to their notice the necessity of rehousing certain families, and to the hope of obtaining for them one of the houses in existing schemes erected to house displaced tenants from Slum Areas when one of these houses becomes vacant, which is of rare occurrence.

A Report submitted to the Local Authority of 529 houses in the Burgh known to be overcrowded and not included in existing Slum Clearance Schemes showed that 166 of 1 room, 337 of 2 rooms, and 26 of 3-roomed houses, with a total of 4,135 persons (averaging 7.8 persons per house), could be termed grossly overcrowded by reason of the insufficiency in cubic capacity of the houses, or by the fact that in the present accommodation there are no means, or the means are insufficient, for the proper segregation of the sexes.

Unfortunately there is no Legal Standard by which we can determine the exact description of the meaning of "Overcrowding," such a definition being left to each individual Authority, who, in terms of Section 59 of the Housing (Scotland) Act, 1925, can make Bye-Laws governing *inter alia* "the number of adult persons and children who may occupy a house or any apartment thereof such numbers to be prescribed in accordance with a cubic space standard."

Bye-Laws, drafted on these lines, are ready, but have not yet been adopted for Dundee. We have as a guide, however, the Bye-Laws applicable to Houses Let in Lodgings whereby it is necessary for 400 cubic feet of air space to be allowed for adult

persons—two persons below the age of 10 years to be counted as one adult person, while persons of different sexes above the age of 10 years are not permitted to occupy the same sleeping apartment, except in the case of husband and wife. This scale applied to dwelling houses is a very moderate one, and in any house where a family of greater proportion than that allowed under those Bye-Laws is in occupation, they are indeed living under overcrowded conditions and in a manner likely to be detrimental to the health of the inmates. The particulars relating to a few of the cases reported on during the year are appended herewith.

Case No. 125.—Two-roomed house occupied by husband and wife, 2 sons aged $12\frac{1}{2}$ and 7 years, and 3 daughters aged 14, 11 and 9 years. Rent 4/11 weekly. Income £2. Cubic feet required 2,400. Cubic contents of house 1,807. Deficiency, 593 cubic feet. Three of the children suffer from non-pulmonary tuberculosis. Both parents are also T.B. suspect and are under observation.

Case No. 161.—One-roomed house occupied by husband, wife and husband's mother, 4 sons aged 10, 9, 7 and 2 years, and 1 daughter aged 4 years. Rent £2 quarterly. Income £1 12/-. Cubic feet required 2,400. Cubic contents of house 1,249. Deficiency 1,151 cubic feet. Overcrowded to the extent of 3 adults. Sex separation impossible. Husband suffers from T.B.

Case No. 62.—Two-roomed house occupied by husband and wife. 5 sons aged 18, 14, 9, 6 and 4 years. 5 daughters aged 21, 16, 12, 10 and 1 year. Rent 5/8 weekly. Income £4 6/-. Cubic feet required 4,000. Cubic contents of house 2,507. Deficiency of 1,493 cubic feet. Overcrowded to the extent of 3 adults and 1 juvenile. No means for proper separation of the sexes.

Case No. 131.—Two-roomed house occupied by husband and wife. 6 sons aged 13, 10, $3\frac{1}{2}$, and $3\frac{1}{2}$ years, 15 months and 3 weeks. 3 daughters aged 9, 6 and 5 years. Rent 5/- weekly. Income £2. Cubic feet required 3,000. Cubic contents of house 2,263. Deficiency 737 cubic feet. Overcrowded to the extent of 2 adults.

Case No. 23.—One-roomed house occupied by husband and wife. Twin sons aged 8 years. 4 daughters aged 13, 12, 10 and 7

years. Rent 2/11 per week. Income 31/- weekly. Cubic feet required 2,600. Cubic contents of house 1,173. Deficiency 1,427 cubic feet. Overcrowded to the extent of 3 adults and 1 juvenile.

Case No. 41.—One-roomed house occupied by mother, 1 son aged 2 years and 6 daughters aged 18, 15, 13, 12, 10 and 5 years. Rent 4/- weekly. Income £2 10/-. Cubic feet required 2,800. Cubic contents of house 1,100. Deficiency 1,700 cubic feet. Overcrowded to the extent of 4 adults and 1 juvenile.

Case No. 14.—Two-roomed house occupied by husband and wife. 5 sons aged 25, 19, 18, 14 and 12 years, and 4 daughters aged 23, 21, 13 and 11 years. Rent 25/7 monthly. Income £5 5/-. Cubic feet required 4,400. Cubic contents of house 2,948. Deficiency 1,452 cubic feet. Overcrowded to the extent of 3 adults and 1 juvenile. Sex separation impossible.

Case No. 69.—Two-roomed house occupied by husband and wife. 8 sons aged 16, 12, 11, 9, 7, 5, 3, and 1 year. 2 daughters aged 15 and 2 years. Rent 4/7 weekly. Income £3 3/-. Cubic feet required 3,600. Cubic contents of house 2,109. Deficiency 1,491 cubic feet. Overcrowded to the extent of 3 adults and 1 juvenile. The daughter aged 2 years suffers from non-pulmonary Tuberculosis.

Case No. 51.—Two-roomed house occupied by husband and wife. 6 sons aged 21, 20, 16, 15, 12 and 2 years, and 5 daughters aged 14, 11, 9, 7 years and 6 months. Rent 27/1 monthly. Income £4 15s. Overcrowded and no means for sex separation.

Case No. 61.—Two-roomed house occupied by 2 families comprising 4 adult males and 4 adult females; 3 juvenile males and 3 juvenile females—in all 14 persons. Cubic capacity of house 1,704 feet. Space required 4,400 cubic feet. Overcrowded to the extent of 6 adults and 1 juvenile.

Factories and Workshops.

Throughout the year 983 visits of inspection were paid to these premises (other than bakehouses), and only in two instances was it necessary for departmental action to be taken.

One report was received from H.M. Inspector of Factories, viz :—

No means provided for removal of fumes from Gas Stove.

As the report was only received in late December remedial measures have not yet been applied,

The following Workshops, etc., are upon the Register at 31st December, 1933 :—

TRADE OR BUSINESS.	Workshops	Domestic Workshops	Homework	Workplaces
Blacksmiths, Cartwrights and Carriage Builders	18	0	0	0
Boot Repairers	72	14	0	0
Cabinetmakers, Joiners, and French Polishers	58	0	0	0
Cycle and Motor Mechanics, Enamellers and Vulcanisers	31	0	0	1
Dental Mechanics	40	11	0	0
Dress, Mantle, and Corset Makers	39	22	0	0
Engineers	13	0	0	0
Electro - Platers, Wire Workers, Blind Makers and Bellhangers	2	0	0	0
Florists	0	0	0	13
Furriers	3	0	0	0
Granite and Marble Cutters, and Masons	0	0	0	25
Hairdressers and Wigmakers	0	2	0	124
Hotels and Restaurants	0	0	0	42
Milliners	26	1	0	0
Painters	0	0	0	46
Photographers	12	0	0	0
Piano and Gramophone Repairers	7	0	0	0
Picture Framers, Gilders, and Glaziers	7	0	0	0
Plasterers	0	0	0	17
Plumbers and Tinsmiths	58	0	0	0
Saddlers and Leather Cutters	10	0	0	0
Slaters	0	0	0	24
Stamp Cutters, Engravers and Ticket Writers	2	0	0	0
Sugar Boilers	6	0	0	0
Tailors	49	16	1	0
Umbrella Makers and Repairers	2	0	0	0
Underclothing, Baby Linen, and Blouse Makers, Hosiers and Knitters... ..	27	2	0	0
Upholsterers and Carpet Sewers	14	0	0	0
Waste, Rag and Metal Merchants	0	0	0	13
Watch and Jewellery Repairers and Opticians	37	5	0	0
Miscellaneous, i.e., Gut Manufacturer, Mica Makers, Clay Pipe Makers, Paper Bag Makers, Bottlers, Potted Meat Manufacturers, Oil Refiners, Manufacturing Chemists, Sack Repairers, Laundries, Basket Makers, Brush Makers, Scale Makers, etc.	66	5	0	16
	599	78	1	321

Bakehouses.

The following bakehouses are upon the Register :—

Occupied factory bakehouses	...	...	...	57
(Included in this number are 7 underground).				
Occupied workshop bakehouses	...	...	...	30
(Included in this number are 4 underground).				
Bakehouses empty but fit for occupation	...	...	...	2

These premises have been systematically inspected, and to ensure that they have been kept in a state leaving no room for complaint 723 visits were paid to them. On 64 occasions it was necessary to draw the attention of the occupiers to small deficiencies, and in the main remedial measures were soon applied.

The usual limewashing was carried out twice during the year, in April and October. In certain instances limewashing was delayed in the earlier months owing to a threatened labour dispute, but the work was eventually overtaken. Only in one case was it necessary in terms of Section 99 of the Factory and Workshop Act, 1901, to serve a notice on the occupier of a bakehouse insisting that the cleansing of internal walls be carried out. The defects discovered generally consisted of dirty floors, dusty walls, improperly cleaned utensils, accumulations of refuse under fixed tables and machinery. It is found that where dough troughs, tray racks, and such fittings are of a mobile type, there is little at which one can cavil; more often than not when floors are dirty it is because of difficulty of thorough cleansing where fittings are of a fixed nature. One certificate of suitability was granted by the Local Authority for the underground factory bakehouse situated at No. 35 Victoria Road.

The Milk and Dairies (Scotland) Acts; and Orders.

Registers.—At the end of the year the Registers stood as follows :—

Dairymen or Cow-Keepers	...	...	...	...	35
Retail Purveyors of Milk	...	...	...	...	855

made up as under :—

Purveyors from Shops	...	...	...	...	733
Producers (dairymen or cow-keepers)	...	...	...	...	35
Purveyors from vans	...	...	...	...	51
Purveyors resident outwith the City but registered to purvey milk within it from vans on streets					25
Purveyors from shops or milkhouses together with vans on streets	...	...	...	...	46

Milk (Special Designations) Order (Scotland), 1930.—In terms of this Order there are licensed :—

- 2 Producers of Pasteurised Milk and
- 223 Retail Sellers thereof.

A total of 225, as against 217 last year; and

- 1 Producer of Grade A. (T.T.) and Certified Milk,
- 3 Dealers in Grade A. (T.T.) Milk,
- 1 Producer of Certified Milk, and
- 3 Dealers in Certified Milk.

There are 6 cowsheds where 19 milk cows are kept, exempt from Registration, under Section 2 to the 1914 Act " From which a person sells milk only in small quantities and for their own consumption to persons in his employment or to neighbours."

Though not wholly of the standard necessary in registered dairies, these premises can be looked upon as having been maintained satisfactorily.

Within the 35 Registered Dairies, to which 402 visits of inspection were made, there are housed 594 cows.

Generally the maintenance of the Dairy Premises, appurtenances and utensils has been satisfactory, while the animals have been kept well groomed.

To premises registered for the sale of milk by retail, 3,948 inspections were made.

So far as we are able to ascertain from systematic inspection, the requirements of Articles 5 to 16 of the Milk and Dairies (Scotland) Order, 1925, are generally being complied with, with the exception of the instance hereinafter mentioned.

Article 11.—Prohibition of colouring matter, etc.

One contravention (Annatto in Cream) is dealt with under the Section of this Report bearing on Food and Drugs (Adulteration) Act, 1928,

OTHER CONTRAVENTIONS.

In a dairy situated in the north end of the city it was discovered that milch cows were being housed in unregistered, improvised timber and corrugated iron erections, and in one of these mill dust was being used for bedding purposes. A warning letter was sent to the offender which had the desired result.

One unregistered purveyor was found to be selling milk from off a van contrary to Section 7 (1) and (8) of the Milk and Dairies (Scotland) Act, 1914, while in two cases vans belonging to purveyors did not have their names and addresses conspicuously displayed thereon as required by Section 35 (9) of Food and Drugs (Adulteration) Act, 1928. In the former, registration was applied for, and in the latter two cases the terms of the Act were complied with. As a result of a petition from occupiers of tenemental property in the east end against nuisance from lairage premises a detailed report thereon was submitted to the Public Health Committee, who agreed that a sub-committee visit the locus. This was done, and a decision arrived at that the use of the premises for the purposes mentioned in the complaint be discontinued, and that under no circumstances should cattle beasts be housed therein.

The following **Improvements** were carried out at registered dairy premises during the year:—

5 Fairfield Road.—Walls improved and prepared for painting instead of lime-washing.

Old Craigie Road.—Milk Cooler installed.

Forthill Farm Dairy.—Commendable enterprise was shown by the occupiers of these premises when during the year the work of constructing a new byre to house a herd of Certified Cows and capable of stalling 28 animals (with cubic capacity for 30) was completed. Well lighted and ventilated, a feature has been provided in the form of special rubber mats for use in lieu of the usual straw bedding. These mats should ensure easier but more thorough cleansing, and the experiment will be watched with interest. On the whole, the byre has been prepared on up-to-date lines, and we hope the example set by this firm will be closely followed by other members of the trade,

Food Inspection.

FOODSTUFFS ARRIVING AT THE PORT OF DUNDEE, EITHER
DIRECTLY FROM ABROAD OR BY COASTWISE TRAFFIC.

The following two tables show the kind and quantity of foods arriving by waterway at the Port during the year.

The total of 56,576 tons 14 cwts. 0 qrs., as against 70,829 tons 10 cwts. 1 qr. last year, and 69,325 tons 17 cwts. 3 qrs. in 1931.

TABLE No. I.

Shows the foodstuffs arriving coastwise at the Port by steamers plying between Dundee and the Ports of London, Hull, Liverpool, Aberdeen, Newcastle, Belfast, Southampton, Leith, etc.

					Tons.	Cwts.	Qrs.
Bacon and Ham	...	...	...	...	18	2	2
Butter	...	...	...	...	401	8	3
Cereals	...	...	...	...	86	19	3
Cheese	...	...	...	...	385	0	3
Chemical Food	...	...	...	...	7	10	3
Cocoa and Cocoa Beans	...	...	...	...	144	8	3
Cocoa Butter	...	...	...	...	48	18	0
Cocoanuts, Cocoanut Stearine and							
Desiccated Cocoanut	..	...	...	...	33	2	3
Coffee	...	...	...	...	41	0	3
Confectionery	...	...	...	...	647	6	1
Corn Four	...	...	...	...	2	18	2
Cream of Tartar	...	...	...	...	21	11	2
Cream (Tinned)	...	...	...	...	0	10	3
Custard Powder	...	...	...	...	1	11	2
Eggs	...	...	...	...	23	16	1
Fish (Dried)	...	...	...	...	0	0	3
Fish (Tinned)	...	...	...	...	176	15	2
Flour	...	...	...	...	6,574	13	3
Fruit	...	...	...	...	1,395	19	1
Fruit (Dried)	...	...	...	...	457	3	1
Fruit (Pulp)	...	...	...	...	76	15	0
Fruit (Tinned)	...	...	...	...	447	11	3
Glucose	...	...	...	...	583	6	0
Lard and Lard Compound	...	...	...	...	856	11	0
Macaroni	...	...	...	...	1	14	1
Margarine	...	...	...	...	1,415	13	3
Meat Extract	...	...	...	...	51	0	1
Meat (Tinned)	...	...	...	...	262	16	2
Milk (Dried)	...	...	...	...	4	7	3
Milk (Tinned)	...	...	...	...	280	6	0
Nuts	...	...	...	...	30	13	0
Olive Oil	...	...	...	...	8	11	1

					Tons.	Cwts.	Qrs.
Peas, Beans, &c.	...	...	...	...	181	4	2
Pickles, Spices, Condiments and							
Sauces	...	...	...	...	59	14	2
Preserves	...	...	...	...	260	15	0
Rice	...	...	...	...	177	12	3
Sago and Semolina	...	...	...	...	6	13	2
Sugar	...	...	...	...	618	5	0
Syrup	...	...	...	...	542	8	3
Tapioca	...	...	...	...	72	15	0
Treacle	...	...	...	...	360	4	1
Vegetables	...	...	...	...	662	16	2
Vegetables (Tinned)	...	...	...	...	61	14	2
Vinegar	...	...	...	...	19	1	1
					17,511	12	0

TABLE No. II.

Shows the amount and kind of foods arriving direct from abroad.

					Tons.	Cwts.	Qrs.
Biscuits	...	...	...	...	1	5	2
Butter	...	...	...	...	28	9	0
Cereals	...	...	...	...	21	17	0
Cheese	...	...	...	...	218	9	2
Cocoa Butter	...	...	...	...	25	2	0
Confectionery	...	...	...	...	1	0	0
Flour	...	...	...	...	8,448	10	2
Fruit	...	...	...	...	0	6	0
Fruit (Pulp)	...	...	...	...	323	9	1
Fruit (Tinned)	...	...	...	...	27	3	1
Glucose	...	...	...	...	430	19	3
Lard	...	...	...	...	113	6	3
Macaroni	...	...	...	...	4	15	2
Margarine	...	...	...	...	5	4	2
Meat (Tinned)	...	...	...	...	74	9	1
Milk (Tinned)	...	...	...	...	540	17	3
Milk (Dried)	...	...	...	...	8	10	0
Peas, Beans, &c.	...	...	...	...	235	13	0
Pickles, Spices, &c.	...	...	...	...	5	7	1
Rice	...	...	...	...	30	1	2
Sugar	...	...	...	...	27,666	7	1
Vegetables	...	...	...	...	825	4	0
Vegetables (Tinned)	...	...	...	...	28	13	2
					39,065	2	0

Two consignments of flour, water damaged, amounting to 933 bags, each of $1\frac{1}{4}$ cwts., released by another Authority only on the definite understanding that the flour was not to be used for human food, were disposed of to jute and linen manufacturing firms wholly for starching purposes.

Fish Inspection at the Fish Market, Carolina Port.

Only on four occasions was it necessary for certificates to be granted where fish were submitted for examination and found to be unfit for human consumption. The decomposed fish comprised Halibut, 9 lbs.; Kippers, 126 lbs.; Shrimps, 21 lbs.; and White Fillets, 56 lbs.

Taking into consideration the large amount of fish handled at this market, it is remarkable that such a small quantity should be found unfit for food. These premises and method of handling gave rise to no complaint.

Public Health (Meat) Regulations (Scotland) 1932, Article 15.

Three certificates were granted in terms of the above Regulations to persons who sell or offer or expose for sale meat or meat food products from a cart or other vehicle, etc., approving of the accommodation used for the storage of the meat, etc.

Public Slaughter-Houses and Dead Meat Market.

The undernoted figures conclusively prove the undoubted necessity of a thorough inspection of meat intended for human consumption. With a system such as prevails in Dundee, i.e., the "Clearing House," it is well nigh impossible for tainted or diseased meat to reach the table of the consumer. Under this arrangement it is compulsory for all meat to be thoroughly examined before it is allowed out for the purpose of sale by retail.

The meat found to be unfit for human consumption and condemned at the Public Slaughter-Houses during the year is as follows :—

Class of Animals	Number of Animals			Weight (in lbs.) of condemned meat and offals
	Slaughtered	Wholly Condemned	Partially Condemned	
Cattle,	13,714	184	4,778	200,272
Sheep,	26,669	31	2,352	2,040
Pigs,	3,993	22	285	5,411

There are no Private Slaughter-Houses within the boundaries of the City.

Food Inspection (Shops, Stalls, Barrows, etc.).

On 84 occasions it was necessary to seize food as unfit for human consumption. The undernoted table indicates the nature and quantities

ARTICLES OF FOOD SEIZED.

ARTICLES.	WHERE SEIZED.	QUANTITIES OR WEIGHTS.				REASONS FOR SEIZURE.
		Tons.	Cwts.	Qrs.	Lbs	
Pork and Beans (tinned) ...	Shops, or stalls, or barrows on streets, or food or wholesale stores, or railway stations.	0	0	0	26	Decomposition, etc.
Sausage		0	0	0	6	
Spiced Ham		0	6	0	0	
Mutton		0	1	2	0	
Milk (tinned)		0	2	1	12	
Beef (tinned)		0	9	0	10	
Fruit (tinned)		1	18	1	7	
Jellied Veal, etc. ...		0	7	1	4	
Chicken and Ham Roll, etc.		0	1	2	4	
Fish		0	0	2	9	
Fish (cured)		0	1	0	14	
Fish (tinned)		0	0	2	20	
Ham (tinned)		0	1	0	13	
Tongue (tinned)		0	2	1	6	
Vegetables (tinned) ...		0	1	1	17	
Pork (tinned)		0	0	3	0	
Galantine		0	0	1	11	
Meat Roll		0	0	0	21	
Shrimps		0	0	0	21	
Roast Chicken		0	0	0	12	
Soup (tinned)		0	0	0	21	
Tomato Puree		0	2	2	8	
Treacle		0	0	0	2	
Bacon		0	0	3	11	
Eggs		0	0	3	16	
Grouse		0	0	0	9	
Venison		0	1	1	20	

It will be observed that among the foodstuffs seized, tinned varieties again predominate, generally a result of excessive and careless handling in transit from producer to retailer when damage to the tins occur.

To the premises where foods are prepared, stored or sold, 8,803 visits of inspection were made.

The sale of foodstuffs (other than meat and meat food products) by individual traders from vans and other vehicles in the public streets is undoubtedly on the increase, and in this connection there is often difficulty in tracing the accommodation where the unsold foodstuffs are stored. It is practically impossible to keep up to date with the many changes in addresses of such places, and

consideration should now be given to promulgate Regulations governing the places where foodstuffs may be stored and requiring the Registration of such premises with the Local Authority. Were such an enactment in force, it would be a simple matter to keep track of these places and at the same time have better and stronger powers in ensuring that the storage of foodstuffs at all times was conducted on hygienic lines.

Merchandise Marks Act, 1926, and Agricultural Produce (Grading and Marking) Act, 1928, Etc.

During the year, 382 visits were paid to shops, etc., throughout the city to ensure that the marking of the various articles of produce offered for sale was carried out in accordance with the many Orders and Regulations made in terms of these Acts.

In one case it was discovered that butter of a Swedish origin was being wrapped in packets bearing the inscription, "Danish." The excuse given was to the effect that properly stamped wrappers were not to hand, and those marked "Danish" were used temporarily. This practice being in contravention of No. 1 Order, 1932, was immediately stopped and the sale of the butter withdrawn until properly stamped wrappers were forthcoming from the Company's Head Office.

Periodically, tomatoes offered for sale in the open market place are unticketed, but on approach of the Inspectors little or no time is lost in having the matter rectified.

Generally, however, the terms of the various Orders have been carried out in a satisfactory manner.

Rag Flock Acts, 1911-1928.

During the year four samples of Rag Flock were taken in the premises of bedding factories, etc., and submitted to the Public Analyst, who reported on the samples as under:—

One sample yielded	...	...	6.00 parts
One sample yielded	...	...	8.87 parts
One sample yielded	...	...	29.59 parts
One sample yielded	...	...	120.00 parts

In three cases the maximum standard of 30 parts Chlorine per 100,000 parts flock was not exceeded.

One sample was certified by the Public Analyst to contain 90 parts Chlorine in excess to that allowed. The matter was taken up with the suppliers who communicated with the manufacturers on the subject. This firm, whose works are ideally situated alongside a river where a plentiful supply of water is available, intimated that owing to a scarcity at that time of " Linsey " Rags (a rag said to be of a high quality) they were compelled to accept along with their usual grade, rags of an inferior quality and of foreign origin.

In these circumstances the matter was not reported to the Procurator Fiscal, but we insisted that the whole consignment of rags affected be returned to the manufacturers forthwith, and this was done.

The Public Health (Preservatives, Etc., in Food) Regulations (Scotland) 1925 to 1927.

MINCE.—24 official samples were purchased during the year, and of these 6 were found to contain an excess of preservative to that allowed by the regulations, i.e., 450 parts preservative per million parts butcher meat and that only during the months June, July, August and September.

In two cases where the excess preservative amounted to only 30 and 38 parts respectively warnings were deemed to be sufficient, and in the remaining 4 cases, where the amounts varied from 364 parts to 620 parts in excess, Court proceedings were instituted with results as follows :—

One was fined £1 10s;
Two were each fined £2; and
One was fined £4.

SAUSAGES.—Of the 15 official samples of Sausages submitted for analysis, 2 (including one Lorne Sausage) were returned as containing added preservative in excess to that allowed. In both instances the matter was reported to the Procurator Fiscal and fines were inflicted on the offenders of £1 and £2 respectively.

We are unwilling to believe that in cases of this description the addition of excessive quantities of Preservative has been of a deliberate nature; rather do we suppose it is more by ignorance of the article in use that cases of this nature occur, although no doubt there will always be exceptions to the rule. Nevertheless, traders must be made to realise that the unrestricted use of preservative is not in the interests of the health of the community, and

accordingly the Department will in all cases where there is a high percentage in excess, institute proceedings against the offenders.

Food and Drugs (Adulteration) Act, 1928.

Undernoted I give a statement of the number of samples purchased under these Acts during the last ten years :—

			Certified to be	
			Genuine.	Adulterated.
Purchased.				
1924	...	684	659	25
1925	...	693	661	32
1926	...	666	645	21
1927	...	675	640	35
1928	...	669	637	32
1929	...	674	630	44
1930	...	635	600	35
1931	...	654	618	36
1932	...	637	606	31
1933	...	638	611	27

SYNOPSIS OF THE SAMPLES PURCHASED THIS YEAR :—

I.—Samples taken in the ordinary course, with a view of following up by prosecution, if necessary, should adulteration be discovered.

				Certified to be	
				Genuine.	Adulterated.
Purchased.					
Sweet Milk	...	...	173	165	8
Do. (Pasteurised)	...	...	11	11	0
Do. (Sterilised)	...	...	5	5	0
Do. (Certified)	...	...	4	4	0
Do. (Grade A.T.L.)	...	...	5	4	1
Margarine	...	...	14	14	0
Coffee	...	...	9	9	0
Whole Rice	...	...	10	10	0
Ground Rice	...	...	3	3	0
Ground Cinnamon	...	...	5	4	1
Lard	...	...	3	3	0
Sausages	...	...	13	12	1
Sausage (Lorne)	...	...	2	1	1
Pot Barley	...	...	2	2	0
Mince	...	...	24	18	6
White Pepper	...	...	12	12	0
Cream of Tartar	...	...	8	8	0
Ground Ginger	...	...	4	4	0
Tapioca	...	...	1	1	0
Butter (Salt or Fresh)	...	...	8	8	0
Cream	...	...	1	—	1
Dripping	...	...	1	1	—
Flour	...	...	1	1	—
Total	...	...	319	300	19

II.—The following samples were taken in terms of Section 8 (1) (c) of the 1928 Act :—

	Taken	Genuine	Adulterated
Sweet or Fresh Butter,	5	5	0

III.—The undernoted “ test ” samples were purchased or taken :—

	Purchased or Taken	Certified to be Genuine	Adulterated
Sweet Milk	7	7	0
Do. (Pasteurised) ...	1	1	0
Do. (Grade A.T.T.) ...	20	19	1
Do. (Certified) ...	2	2	0
Cream	4	4	0
Milk (Tinned)	25	25	0
Tapioca	4	4	0
Margarine	22	22	0
Coffee	9	9	0
Whole Rice	11	11	0
Ground Cinnamon	10	8	2
Lard	4	4	0
Sago	5	5	0
Cream (Tinned)	1	1	0
White Pepper	21	21	0
Barley	8	8	0
Cream of Tartar	13	13	0
Ground Ginger	11	11	0
Baking Soda	6	6	0
Ground Rice	9	9	0
Vinegar	2	2	0
Flour	6	6	0
Oatmeal	7	7	0
Salt and Sweet or Fresh Butter	15	15	0
Egg Powder	1	1	0
Sauce	7	7	0
Fish (Tinned)	14	14	0
Mince	5	4	1
Sausages	9	6	3
Sausages (Lorne)	4	4	0
Vegetable Fat,	1	1	0
Chicken, Ham & Tongue Paste	6	6	0
Lemon Cheese	2	2	0
Hydrogen Peroxide	1	1	0
Lobster Paste	1	1	0
Syrup of Figs	1	1	0
Glycerine	2	2	0
Jam	12	12	0
Cheese	2	2	0
Floor Polish	6	6	0
Iodine and Tincture of Iodine	4	3	1
Olive Oil	3	3	0

Castor Oil	4	4	0
Camphorated Oil	2	2	0
Methylated Spirits	1	1	0
Eau de Cologne	1	1	0
Yellow Soap	1	1	0
Baking Powder	1	1	0
Total	314	306	8
Add Table I.	319	300	19
Add Table II.	5	5	0
Total	638	611	27

With a population of 177,177 this works out to 3.60 samples for every 1000 persons, as against 3.88 last year.

The average milk fat of the samples taken each month (other than those taken at Institutions) was as follows:—

	No. of Samples			Average-Fat Content		
	Official	Test	Total	Official	Test	Total
January ...	16	—	16	3.47	—	3.47
February	18	—	18	3.52	—	3.52
March ...	16	—	16	3.40	—	3.40
April	16	—	16	3.44	—	3.44
May	14	—	14	3.77	—	3.77
June	16	—	16	3.71	—	3.71
July	20	—	20	3.75	—	3.75
August	18	—	18	3.70	—	3.70
September	16	—	16	3.56	—	3.56
October ...	16	—	16	3.71	—	3.71
November	15	1	16	3.68	4.46	3.73
December	17	—	17	3.62	—	3.62
	198	1	199	3.61	4.46	3.61

The lowest milk fat recorded this year in **official samples** was 2.42 per cent. and the highest 5.56 per cent. The number of samples with milk fat below 3 per cent. was 4, and the number of samples with milk fat of 4 per cent. and over was 28.

Test samples of the milk as supplied to King's Cross Hospital, the Infant Hospital, and Armitstead Convalescent Home, Broughty Ferry, were submitted on 29 occasions, and the results as declared by the City Analyst were as follows:—

King's Cross Hospital :—

17 samples of Grade "A." T.T. Milk averaged 3.81 per cent. of fat.

7 samples of Sweet Milk averaged 3.71 per cent. of fat.

The highest fat content in the Graded Milk was 4.21 per cent. and the lowest 3.20 per cent., while the figures of Sweet Milk were 4.03 per cent. and 3.42 per cent. respectively—the grand average over the 24 samples taken at this Hospital being 3.78 per cent.

Infant Hospital, Broughty Ferry :—

2 Samples of Grade "A." T.T. Milk were tested and reported to have a fat content of 4.32 per cent. and 4.00 per cent. respectively.

Armitstead Convalescent Home :—

1 Sample of Certified Milk contained 4.00 per cent. of fat ;

1 Sample of Grade "A." T.T. Milk contained 7.35 per cent. of fat ;

1 Sample of Sweet Milk contained 4.00 per cent. of fat.

The eight cases where **Official** Samples of sweet milk did not conform to the prescribed standards laid down for percentage of fat and non-fatty solids were disposed of as follows :—

Warnings were given to offenders in 5 cases.

One case, reported for prosecution, was warned by the Procurator Fiscal, a defective and leaky cooler being blamed for the deficiency. The remaining two cases were prosecuted, and fines of £2 and £3 respectively were inflicted. With regard to the sample of Grade "A." T.T. milk which did not conform to the requirements of the Milk (Special Designations) Order (Scotland), 1930, where a standard of 3.5 per cent. of fat is laid down, the offender was warned and notified that should a similar breach of the Order again occur the question of withdrawal of his license to sell Graded Milk would be considered.

The sample of Cream reported as adulterated was found to contain a colouring matter in the form of Annatto. A prosecution resulted, and the offence cost the delinquent £2.

A sample purchased as Ground Cinnamon was returned by the Analyst as "Mixed Spices." A warning in this case was deemed sufficient.

Details concerning the samples of sausages and mince returned as adulterated will be found in the part of this Report headed "The Public Health (Preservatives, Etc., in Food) Regulations (Scotland), 1925 to 1927."

Two test samples of Ground Cinnamon on analysis were found to be in excess of the arbitrary standard of 2 per cent. of sand or silicious matter—by 9.23 per cent. and 8.94 per cent. respectively. On representations by this Department, the sale of the consignment concerned was suspended, and after the retailer had communicated with the manufacturers the unsold stock was returned.

A sample of Iodine of the type commonly sold amongst the small traders and put up on an attractive display carton was reported to contain 2.20 per cent. W/V of Iodine, thus being .25 per cent. Iodine W/V below the B.P. limits of 2.45% to 2.55%. The matter was taken up with the manufacturers, who investigated the deficiency which was attributed to evaporation caused by an inferior type of cork used. The remaining bottles of Iodine were returned to the manufacturers.

Margarine, Etc.—426 inspections were made to the various shops or premises in the City where Margarine, Margarine Cheese, or Milk Blended Butter were offered for sale.

Wholesale Dealers.—At the end of the year the premises registered where the business of a Wholesale Dealer in Margarine, Margarine Cheese, or Milk Blended Butter is carried on numbered 40.

Re-Worked Butter.—Five factories—all duly registered—where by way of trade, butter is blended or re-worked, were found to be suitable and satisfactory. Seven samples of Re-Worked Butter were taken during the year and certified by the Public Analyst to conform to the Statute.

Methylated Spirits and Cheap Perfumes.

Dundee, like other large cities in Scotland, has its quota of drinkers of Methylated Spirits or of cheap Perfumes and their admixture with low-priced wines, commonly known as "Red Biddy." Unquestionably the drinking of this "Fire Water"

leads to disastrous consequences, and in an endeavour to nullify or lessen the danger, the Local Authority have taken up the question in a manner which we hope will ultimately mean greater restriction being placed upon the sale of Methylated Spirits and the use of cheap Perfumes for other than industrial or commercial use.

Perfumes, such as Lavender Water and Eau de Cologne, sold in fair quantities at sixpence per bottle, in a number of shops throughout the City—ostensibly for use in the bath—are unfortunately in great demand as a beverage. A test sample of the latter was submitted, and the figures returned by the Public Analyst show this spirit to be almost as potent as the one otherwise designated. The Analyst's figures are as follows:—

Test Sample—No. 179a—Eau de Cologne.

Specific Gravity of Distillate at 15.5 deg. C.,	.8703
Alcohol per cent. by volume,	77.88%
Alcohol per cent. by weight,	71.00%
Per cent. over proof,	35.8 deg. (O.P)
Essential Oils,	1.70%
Methyl Alcohol,	Present
Aldehydes,	Present
Furfural,	Trace
Pyridine,	Absent

From the above observations the probable composition of the Eau de Cologne by weight is as follows:—

Essential Oil,	1.70
Industrial Methylated Spirit,	77.20
Water,	21.10
	<hr/>
	100.00
	<hr/>

Two important factors are revealed by the analysis. First, there is the absence of Pyridine, and secondly the contents contain "Industrial Methylated Spirits," which, in itself, by reason of certain Excise Regulations and other Restrictions, is difficult to obtain.

Mr Andrew Dargie, B.Sc., A.I.C., Public Analyst, kindly supplies the following interesting figures and particulars:—

“ The average quality of the Public Milk Supply for the year 1933 was as follows :—

Water	87.62
Total Solids	12.38
Fat	3.63
Non-Fatty Solids	8.75
	<hr/>
	100.00
	<hr/>

The percentage of butter fat is 0.02 per cent. higher than that for year 1932, and 0.07 per cent. higher than the average for 1931. There is, therefore, a slight upward tendency which is most satisfactory. The distribution frequencies of the Butter Fat and Non-Fatty Solids are given in the following table :—

Butter Fat %	Frequencies	Non-Fatty Solids %	Frequencies
Up to 2.69	2	Up to 7.99	4
2.70—2.79	—	8.00—8.09	—
2.80—2.89	2	8.10—8.19	1
2.90—2.99	—	8.20—8.29	1
3.00—3.09	14	8.50—8.59	44
3.10—3.19	8	8.60—8.69	36
3.20—3.29	11	8.70—8.79	39
3.30—3.39	16	8.80—8.89	47
3.40—3.49	17	8.90—8.99	26
3.50—3.59	31	9.00—9.09	15
3.60—3.69	22	9.10—9.19	11
3.70—3.79	31	9.20—9.29	4
3.80—3.89	18		<hr/>
3.90—3.99	17		228
4.00—4.09	14		<hr/>
4.10—4.19	4		
4.20—4.29	10		
4.30—4.39	5		
4.40—4.49	1		
4.50—4.59	—		
4.60 and over	5		
	<hr/>		
	228		
	<hr/>		

Under the Sale of Milk Regulations, 1901, the presumptive standards for Butter Fat and Non-Fatty Solids are 3.00 per cent.

and 8.50 per cent. respectively. When Sweet Milk contains less than these amounts it is presumed to be not genuine until the contrary is proved. During the year four samples were below the standard for butter fat and six in non-fatty solids. The lowest butter fat was 2.42 per cent. and the highest 7.35 per cent.; the lowest non-fatty solids was 7.66 per cent.

Butter and Margarine.

28 samples of Butter and 36 of Margarine were examined during the year and found to be genuine. One butter contained 16.00 per cent. of water, which is the maximum amount allowed; the next highest was 15.87 per cent. water. The average content of water in the 28 butters was 14.73 per cent. The lowest content of water in the Margarines was 12.30 per cent. and the highest 15.95 per cent.; the average being 14.51 per cent. The frequency distribution may be seen from the following table:—

Percentage of Water	Butter	Margarine
10.00—10.99	1	—
11.00—11.99	—	—
12.00—12.99	3	1
13.00—13.99	1	9
14.00—14.99	7	16
15.00—15.99	15	10
16.00	1	—
	—	—
	28	36

Spices.

White Pepper	...	...	...	...	33
Ground Cinnamon	...	...	...	...	15
Ground Ginger,	...	...	...	...	15
					—
					63

The ash or mineral matter in the white peppers average 1.01 per cent. and were found to be genuine. The Ground Cinnamons contained an average of 6.49 per cent. of ash, but two of these were exceptionally high, 17.39 per cent. and 17.20 per cent. respectively. The sand and siliceous matter in those two were found to be very high, 11.23 per cent. and 10.94 per cent., and were reported as adulterated. There is no statutory standard for sand in spices generally, but an arbitrary standard of 2 per cent. is taken as a generous allowance for contingencies. The average per cent. of ash in the Ground Gingers was 4.37 per cent.; all conformed to preservatives regulations,

Whole Rice and Pot Barley.

21 samples of Whole Rice and 10 samples of Pot Barley were examined and all were found to be genuine. All the samples of Barley and 9 of the Whole Rice were free from Talc facing; the amount of facing in the remaining samples of Rice varied from 0.14 per cent. to 0.50 per cent. The arbitrary standard is 0.50 per cent.

Preservatives Regulations.

28 samples of Sausages and 29 of Mince were examined particularly for the content of sulphur dioxide. There were seven contraventions in Mince, either for the presence of preservative during the prohibited period or exceeding the maximum amount permitted during the summer months. Five Sausages were also adversely reported upon for exceeding 450 parts of the preservative per million parts of the sample; the highest amounts found were 940 and 1070 parts per million in two Mince and 900 and 940 parts per million in two Sausages. Those amounts are more than double what is permitted by the Regulations. It is difficult to understand the anomaly of allowing preservative in Sausages throughout the year and restricting its use in Mince to the winter months. The frequency distribution of sulphur dioxide is given in table below :—

Sulphur Dioxide in			
Parts per Million		Mince	Sausages
Absent		15	—
Up to 99 parts,		1	2
100—199 „		3	8
200—299 „		3	3
300—399 „		2	4
400—450 „		—	6
450—499 „		2	1
500—599 „		1	—
600—699 „		—	2
700 and over		2	2
		—	—
		29	28
		<hr/>	<hr/>

Full Cream Condensed Milk.

Seven samples were examined and found to conform to the Condensed Milk Regulations. The results of analyses were as follows :—

Total Milk Solids	Butter Fat
per cent.	per cent.
34.20	9.10
32.79	9.20
33.21	9.02
34.27	9.06
33.79	9.89
32.16	9.66
35.01	9.60
—	—
Average—33.63%	9.36%

Machine Skimmed Condensed Milk.

18 samples were submitted for analysis, and all conformed to the standards set forth in the Regulations. The Total Milk Solids and Butter Fat were as follows :—

Total Milk Solids	Butter Fat
per cent.	per cent.
28.15	0.48
28.35	0.43
27.42	0.35
29.34	0.32
28.46	0.40
30.15	0.28
30.32	0.30
29.41	1.00
28.03	0.35
28.38	0.40
27.88	0.24
27.38	0.25
30.85	0.30
27.64	0.22
27.15	0.62
28.19	0.77
27.70	0.83
29.62	0.72
—	—
Average—28.58%	0.46%

Jams and Jellies.—12 samples were examined and found to conform to the Food Manufacturers' Federation's Standards. They also conformed to the Preservatives Regulations.

Sardines and Bristling.—14 samples were examined for Lead and other metals; only slight traces were found in three of the samples.

Cream.—6 samples were submitted for analysis; one sample was found to be artificially coloured with Annatto which was accordingly reported as a contravention.

Tincture of Iodine.—4 samples. One sample contained only 2.20 per cent. of Iodine, which is 0.25 per cent. below the B.P. Standard. This sample was reported deficient.

Rag Flock.—4 samples. One sample contained 120 parts of Chlorine per 100,000 parts of Flock, being 90 parts per 100,000 in excess of the maximum amount permitted by the Rag Flock Act.

Standards and Definition of Food, Etc.

The Food and Drugs (Adulteration) Act, 1928, consolidated the then existing law, but it did not overcome difficulties arising from the omission of several desirable and necessary provisions in previous legislation.

Definitions and standards are confined to a few articles such as Condensed Milk, Dried Milk, Butter and Margarine, but generally speaking there are no standards for the amounts of foreign substances frequently found in articles of food.

This matter is at present being considered by a Departmental Committee appointed by the Minister of Health and the Secretary of State for Scotland. Their recommendations as to what alterations in the law are advisable are being anxiously awaited by all connected with the Administration of the Food and Drugs Acts."

Milk for Bacteriological Examination.

Samples were purchased or taken for Bacteriological examination as follows:—

Sweet Milk	48
„ (Pasteurised)	14
„ (Grade A. T.T.)	8
„ (Certified)	7

These were submitted to Prof. W. J. Tulloch at the University College, the duly appointed Bacteriologist.

The result of the examinations will be found fully dealt with by the Medical Officer of Health in his Report for the year.

Burial Grounds.

The following interments were made at the undernoted Burial Grounds within the Burgh during the year:—

Eastern Necropolis	1,352
Western Necropolis	1,071
Western Cemetery (Perth Road)	184
Barnhill Cemetery	187
Parish Church Burying-Ground (Broughty Ferry)	8
Constitution Road Burying Ground	—
St. Luke's Episcopal Church, Downfield	1
New Mains Cemetery	20
Old Mains Cemetery	—
Total	2,823

No material change has occurred on these places throughout the year. They have been maintained in a satisfactory manner.

A re-interment which took place during the year in the grounds of St Luke's Episcopal Church, Downfield, was that of a soldier son of a family well known in these parts, who had died in a foreign land twenty-seven years ago.

Interments.

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

69 applications were made for the burial of persons declared to be destitute or whose friends were not in a position to meet the expenses incurred. 66 of these were granted and in 3 cases other arrangements were made for the burial. Of the 66 persons buried at the expense of the Local Authority, 8 were adults, 34 were juveniles, and the remaining 24 were still-born children. The total cost to the Local Authority of the interments amounted to £107, but of this sum £12 10s was recovered from relatives or through the medium of Insurance Companies, which amount has been handed over to the City Collector.

Smoke Nuisance.

46 observations were made of chimneys where excessive smoke was being emitted into the atmosphere. In 30 cases it was necessary for warning letters to be sent to the occupiers of the various factories and premises concerned.

Complaint was made by the occupier of a recently erected dwelling-house in the Lochee district that smoke from the chimney of a plant adjoining was entering the house and causing nuisance therein. Dissatisfied with the progress made by this Department towards the abatement of the nuisance, the complaint was put into the hands of the Department of Health for Scotland, and became the subject of much correspondence. While the amount and density of the smoke emitted from this chimney was such that a charge of nuisance created by excessive smoke emission could not be laid against it, the position of the chimney was such that with a wind from a certain direction the smoke found its way into the house of the complainer. Accordingly we recommended an extension to the chimney so that the passage of the smoke would be overhead and not in line with the dwelling. Eventually this was satisfactorily accomplished, and since that time no further complaints have arisen thereon.

There is no doubt, in these times of enlightenment, that the nuisance caused by lading the atmosphere with unconsumed carbon—for that is what smoke is—could in a greater degree be minimised. In manufacturing plants the greater use of appliances now available for the prevention of smoke and their proper manipulation in an intelligent manner would tend to the reduction of the smoke pall from this direction.

It is not wholly the works chimney to which we ascribe this nuisance; in an equal degree at least, it applies also to the chimney of the dwelling house. Here, however, while proper attention to stoking would benefit, the question could not be solved this way even if all householders were to be thoroughly educated in that direction. Rather does the solution lie in the restriction of the use of the open fire—or when used the employment of coal which has formerly been treated by carbonisation or other method—and the popularising of the use of gas and electrical heating apparatus. In this direction, so far as the dwelling house is concerned, lies the “cure to the disease.” When we take into consideration the fact that coal (or Raw Stone Coal) has been the principal com-

bustible material in use for over 300 years, and during that time little (if any) improvement has been effected other than improvement to plant—there is in this direction an undoubted need for thorough research in an effort to so prepare the raw coal as will ensure its freedom from the smoke producing class. Public opinion is particularly vituperative so far as trade manufactured smoke is concerned, but unfortunately on the other hand there is also a considerable “ public apathy ” towards the smoke issuing from chimneys of dwelling houses. What is required is a thorough and complete “ Advertising Programme,” an advocacy of the merits of the numerous ways in which the emission of smoke can be minimised. In this way will the public realise it is “ all smoke ” that is detrimental to health and not only that emanating from one particular class of chimney.

Installations of power plant with current obtained from the town's main supply have been introduced and put into working order during the year at the following premises :—

Walton Works.—Motors energising approximately 1,000 h.p. were introduced, eliminating the power formerly derived from two boilers, and correspondingly the smoke from the furnaces thereof. A Lancashire Boiler, for heating purposes only, was also installed.

South Anchor Works.—At the new extension to these works motors approximating 160 h.p. have been installed to provide the necessary motive force to drive the various machinery.

Baltic Works.—Electrical drive of an accumulated power up to 600 h.p. has been fitted, resulting in the shutting down of one boiler. A remaining boiler is only used for heating purposes.

Shops Acts.

In carrying out the provisions of the Shops Act, 1912, the various Closing Orders made thereunder, and the Shops (Hours of Closing) Act, 1928, 5,889 visits of inspection and 66 hours of street patrol duty in the evenings after the usual closing hours of shops were made to see that the requirements thereunder were being adhered to.

Contraventions numbering 296 were discovered, but of these only 16 were considered as warranting Court proceedings against the offenders. The results of these prosecutions are as follows :—

8 cases were fined £1 each.

4 cases were fined 15/- each.

2 cases were departed from.

2 cases were found guilty and admonished.

45 complaints were received at the office during the year mainly in regard to shops being kept open beyond the permitted hours, and in this respect the business of hairdresser was again to the fore. With the continued demand and additional features applying to this class of trade so far as relating to tonsorial efforts in the feminine section, some of which means the "patient" or patron (whichever way you look at it) being in the hands of the hairdresser for a few hours at one sitting, it is fairly common for appointments to be made with clients fixing such times within the prescribed hours when the shops can remain open, but requiring the continuation of the work beyond the statutory closing hour behind closed doors. By Section (2) of the local Barbers' and Hairdressers' Closing Order the following is enacted :—

" All shops to which this Order applies shall be closed for serving customers on the several days of the week at and after the following hours respectively, viz. :—Monday, Tuesday, Thursday, Friday, and Saturday, at 8 p.m. ; Wednesday, weekly half-holiday, at 1 p.m."

while Section 1 Sub-Section 3 of the Act of 1928 reads, *inter alia*,

" Nothing in this Act or in any closing order made under the principal Act shall prevent—

(a) The serving of a customer where it is proved that the customer was in the shop before the closing hour, or that reasonable grounds existed for believing that the article supplied after the closing hour to a customer was required in the case of illness."

By the latter it is quite in order to serve a customer who was in the shop prior to the closing hour, but in cases where the service embraces a period of hours, there can be little doubt that while the shopkeepers concerned are keeping within the " letter of the law " they are far from maintaining the " spirit " of it. There would appear, therefore, to be some need for a prescribed measure stating a period beyond the closing hours when **assistants** could not be employed.

The position in regard to shop assistants' weekly half-holiday and evening closing hours during the period at Christmas and New Year time was again brought to the notice of shopkeepers by means of a circular letter issued by this Department. In Scotland

the fact that bank holidays take place in successive weeks, i.e., in the weeks on which Christmas and New Year's Day fall, the question of this half-day is the cause of much confusion with the shopkeepers. This year special reference was made that where assistants were employed during the whole of a week preceding a Bank Holiday it was necessary to give these assistants a half-day in addition to the whole of the bank holiday and that in the week in which the bank holiday occurs.

Notwithstanding the notice given to shopkeepers, it was found necessary to institute proceedings against two large firms who did not carry out the recommendation in our letter. In each case the assistants were employed on what would have been their normal half-holiday, i.e., Wednesday, 20th December, and during that week they did not receive a half-day. The shops closed all day on the bank holiday during the following week, but the assistants did not also get a half-day in addition to the bank holiday during that week.

The cases were the first, I believe, of their kind to be raised in Scotland; while the accused were found guilty, admonitions only were desired.

To the members of the Department of the Chief Constable we are indebted for much assistance in this branch of the service.

Places for Public Refreshment.—In terms of the Burgh Police (Scotland) Act, 1903, and Bye-Laws thereunder, 258 Shops, etc., were on the Register at the end of the year. They have been conducted in a manner considered satisfactory. Two applications for registration of premises, which communicated internally with dwelling-houses, were made, and in terms of Section 4 of the Bye-Laws registration was granted but "only during the pleasure of the Town Council."

Theatres and Cinemas.

The responsibility is borne by the Department, in the interests of patrons attending these places of amusement, of ensuring that their maintenance was on hygienic lines and the means for proper ventilation, water closet and urinal facilities were adequate and evoking no cause for complaint; to that end 166 visits of inspection were carried out. It can be safely said these premises are mainly under the management of persons who make every endeavour to meet the requirements of the Department and generally carry out any necessary improvements without undue delay.

After re-construction, with seating accommodation for approximately 2000 persons, premises formerly occupied as a Drill Hall were fitted out for the purpose of boxing tournaments, and application to the Local Authority was made for a licence accordingly. At the time the application was received we were compelled to raise objection to the granting thereof owing to the lack of proper sanitary accommodation for persons patronising the establishment. This work, however, was carried out to the satisfaction of the Department and the ban on the licence being granted was thereupon lifted.

Offensive Trades.

Trades falling within this category are carried on in premises situated as follows :—

Old Air Station, Stannergate Road—Tallow Melter.

At Public Slaughter-Houses, East Dock Street (Private)—Gut Cleaner (1) and Hide Factors (2).

At Public Slaughter-Houses, East Dock Street (Corporation)
—(a) Slaughterer of Cattle; (b) Tripe Cleaner; (c) Tallow Melter; and (d) Blood Boiler.

These businesses have been conducted in a satisfactory manner, and no complaints arose in connection therewith.

The business of Tanner, formerly carried on at No. 1 Park Street, was removed from the list of Offensive Trades.

Rats and Mice (Destruction) Act, 1919.

In January a letter was submitted to the Public Health Committee from the Department of Agriculture for Scotland intimating a "Scottish Rat Week," commencing on Monday, 2nd April, when intensive measures would again be made towards reducing the population of the vermin, and requesting that this Authority co-operate. It was agreed, as in former years, the Local Authority should not participate, other than by the usual measures which go on from week to week; for by continued action only will the menace from rats be overcome.

With the long continued drought causing the drying up of ditches, springs and wells; rats, which at any time are of a migratory nature, had of necessity in many instances to change their

quarters in search of water, and thus complaints arose in regard to properties which formerly were free from any infestation. In Downfield at a site in the near vicinity to which there is a ditch, complaints arose that infestation was taking place. Alongside was a quantity of rubble and concrete slabs which afforded an excellent harbourage for the vermin. A campaign was inaugurated and with the assistance of a number of "unemployed" success crowned the efforts to eliminate the rats, 46 being killed.

In the Mollison Street district rats were found to be getting access to properties from the sewer by means of an old disused drain, their burrowing proclivities being in evidence under the footways. Poison baits were laid to the number of 118, all of which were taken, and the pavement repaired, since when no further complaints have arisen.

The refuse dump at Broughty Ferry gave rise to a number of complaints that rats were harbouring therein and were invading adjoining areas. At this place the pumping of Cyanide Gas into the holes was employed, and proved a most effective method of dealing with the vermin on this class of ground. It was later found possible for all the household refuse collected in the Broughty Ferry area to be destroyed in the destructor erected at the former Gas Works, and the practice of dumping this class of refuse has been discontinued, thus discouraging to a certain extent the presence of rats at the dump concerned.

Cyanide Gas was also applied on the riverside banks and ground adjoining the area set aside for the "Highland Show;" and in connection with infestation in the grounds of a self-contained house in the east end situated on rising ground overlooking the railway, where complaints were very insistent, this method was also used with devastating results to the vermin. The employment of experienced rat catchers by agents of properties greatly assist towards keeping in check this destructive animal.

We have again to report a freedom from infestation by **Musk Rats**, no evidence has come forward to show that this marauder frequents any area in or around the City.

By a new Order under date 10th March, 1933, the importation and keeping of any animal of the species designated "*Fiber Zibethicus*" or "*Ondatra Zibethica*" and commonly known as the Musk Rat or Musquash is prohibited.

Port Inspection.

During the year ended 31st December, 1933, the number of ships arriving at the Port was 1019, being an increase over the previous year of 80. 326 were from Foreign Ports—23 more than last year—and to them 642 visits were made. The number of vessels arriving direct from Foreign Ports was 127, while 199 called at Ports in this Country before arriving at Dundee. 100 vessels were from Infected Ports, 13 direct and 87 indirect.

The cargoes consisted of Jute, Gunnies, Linseed and Oilcake from India; Esparto Grass, Phosphates, Pyrites, Cork and Oilcake from Mediterranean Ports; Timber, Flax, Paper, and Slates from Baltic Ports; Fancy Goods, Fertilizers, Moss Litter, Steel and Iron Bars and Electric Cables from other Continental Ports; Foodstuffs, Pitch, Ochre, etc., from North American Ports; and Crude Oil and Sugar from West Indies. Two of the sugar cargoes were old crop, and the bags, in a semi-rotten condition, gave way when handled. Several large cargoes of Crude Oil arrived during the year. This Oil is pumped from the ship by way of flexible tubing fixed to a permanent pipe laid to the works, thus preventing nuisance caused by oil escaping on to the surface of the water.

Nuisances.—Inspection of vessels revealed 282 nuisances and defects, all of which received attention immediately they were brought to the notice of the Chief Officers concerned. The nature of the complaints will be found in tabular form at the end of this Report. There was no outstanding nuisance or defect.

An unusual visitation which caused considerable interest was the presence of **Scorpions** on board an Indian Trader. About 20 of these pests were caught and handed over to the University College Authorities for research purposes. The holds of this ship were also heavily infested with cockroaches, but as it was to proceed direct to Middlesbrough for fumigation no local action was taken.

Deratisation.—Deratisation Exemption Certificates were issued in respect of 21 ships which on inspection were found to be free of rats, or where the number of rats was kept at a minimum by efforts of the crew.

The sheds, warehouses and other premises within the Docks area provide good harbourage and feeding ground for rats, and only constant action by the responsible staff of the Harbour Trustees will produce satisfactory results.

All ships from Foreign Ports must have metal guards or tarred canvas placed on mooring ropes to prevent the passage of rats between ships and quay, and verbal or written instructions as to precautions to be taken are given to the responsible Ships Officers.

The Port Sanitary Regulations (Scotland), 1933, giving legal effect to the International Sanitary Convention of Paris, 1926, became operative on 1st May, 1933. By these Regulations the powers of Port Sanitary Authorities were strengthened and consolidated, and the following Regulations were revoked, viz. :—

- (a) " Regulations as to Cholera, Yellow Fever and Plague, Ships arriving from Foreign Ports."
- (b) " Regulations as to Cholera and Plague; Coasting Ships."
- (c) " Regulations as to Cholera and Plague; Outward Bound Ships. Specified Articles."
- (d) " The Public Health (Deratisation of Ships) Regulations (Scotland), 1929."
- (e) " The Public Health (Port Administration Infectious Diseases) Regulations (Scotland), 1930."

The addition of Smallpox and Typhus to the list of diseases in which prescribed measures ought to be taken has had the effect of practically doubling the number of infected parts, thereby adding considerably to the volume of work that falls to the lot of the Port Medical Officer, but giving to the community a greater measure of protection against the importation of the more dangerous infectious diseases. The master of a foreign-going ship coming from a Foreign Port must now complete a Health Declaration Form for transmission to the Medical Officer of Health. With the willing co-operation of the local Customs Officers and Pilots, these Regulations are being carried out very smoothly.

The Parrots (Prohibition of Import) Regulations (Scotland), 1930.—Two cases came under the above Regulations. In one instance a written undertaking not to land the bird at this port was received, while in the other the bird was destroyed by its owner in the presence of a Customs Officer.

A reduction in dock charges has had the effect of increasing the number of ships to this Port, particularly Indian Traders. Vessels with small cargoes for Dundee formerly transhipped these cargoes at London; but it is now a sound economical policy for them to call and discharge at this Port.

The year closed with no laid up ships at this port. Two vessels which had been laid up for some time were sold, one to foreign owners and the other for breaking up in this country.

Total number of Verbal Intimations	195
Total number of Rat Notices issued	131
Total number of Visits to Ships	642
Number of Ships from Infected or Suspected Ports (direct)	13
Number of Ships from Infected or Suspected Ports (indirect)	87
Number of Ships from Free Ports (direct)	114
Number of Ships from Free Ports (indirect)	112
Total number of Ships from Foreign Parts	326
Nuisances and Defects attended to	282
Forecastles Cleaned	39
Messrooms Cleaned	19
Galleys and Store-Rooms Cleaned	30
Accumulations of Food Refuse	13
Choked or Defective W.C.'s	21
Dirty W.C.'s	38
Discharge of Foul Water on Quay	53
Ventilators Obstructed	69
—	282

In addition the following work was carried out while the vessels were in Port :—

Fresh Water Tanks Cleaned Out	37
Forecastles Washed or Painted	19
Bathrooms or Wash-Places Painted	24
Galleys Washed or Painted	25
W.C.'s Painted	29

1. Amount of Shipping entering the Port in 1933 :—

	Number	Tonnage
(1) Foreign	326	611,841
(2) Coastwise	693	267,209
	—	—
Total	1,019	879,050

2. No. of Vessels subjected to measures of Rat Destruction in 1933 :—

“A.”

No. of Vessels subjected to measures of Rat Destruction ...	23
On Ships—*No. of dead rats recovered	29
No. of rats examined bacteriologically	Nil
No. of rats found infected with Plague	Nil
On Shore—*No. of rats destroyed (other than on ships) ...	387
No. of rats examined bacteriologically	Nil
No. of rats found infected with Plague	Nil

*Species of rats recovered—Common Grey Rat,

"B."

No. of Vessels fuimgated by SO ₂	Nil
No. of dead rats recovered	Nil
No. of Vessels fumigated by H.C.N.	Nil
No. of dead rats recovered	Nil
No. of Vessels in which poisoning, etc., was employed ...	23
No. of dead rats recovered	29
No. of Deratisation Certificates issued	Nil
No. of Deratisation Exemption Certificates issued	21
3. No. of Vessels (included in (2) above) deratised before discharge of Cargo	Nil

Section 164 of the Burgh Police (Scotland) Act, 1892.

PROVISION AND RENEWAL OF RAIN WATER SPOUTS AND DOWNPIPES.

Under the above Section the following work was executed, viz. :—

Number of Properties where the rain water spouts and conductors have been overhauled, renewed or otherwise repaired.	Lineal feet of new rain water conducting channel rhones or gutter pipes used in the renewing or repairing of the same.	Lineal feet of new rain water conducting or downfall pipes used in the same way at the different properties.
541	6,617	4,319

General Prosecutions.

The prosecutions for the year were as under :—

Milk & Dairies (Scotland) Act (Cream)	Preservative in Food (Sausages)	(Mince)	Shops Acts	Food and Drugs (Adulteration) Act (Milk)
1	2	4	14	2
Total				23

Three cases reported for prosecution in terms of the Shops Acts (2) and Food and Drugs (Adulteration) Act (1) were withdrawn.

Detailed particulars of each are given under the various heads.

I am, Gentlemen,

Your obedient Servant,

ROBERT MITCHELL,

Chief Sanitary Inspector.