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CITY OF DUNDEE

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

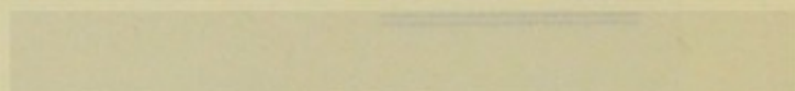
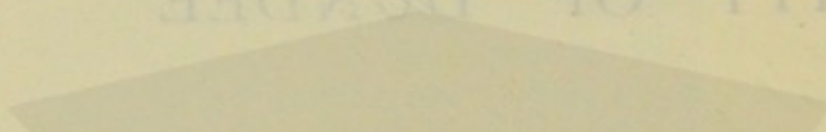
YEAR ENDING 31ST DECEMBER, 1932

DUNDEE

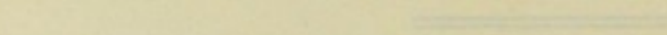
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CITY OF DUNDEE



YEAR ENDING 31st DECEMBER 1932



DUNDEE

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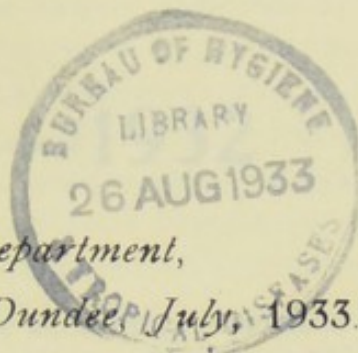
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Annual Report



Public Health Department,

Dundee, July, 1933.

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 1932.

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 wish to make special reference to Mr Duncan Ferguson, Chief Clerk to the Department, who retired in May, 1932, after 45 years' service. During that long period, he gave faithful service to the Department and to the community, and we wish him health and happiness in his well-earned retirement.

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 1930, 1931 and 1932:—

	1930.	1931.	1932.
Population	166,495	176,006	176,833
Number of Deaths (corrected)	2,661	2,445	2,444
Death-rate per 1,000 Population (corrected) ...	16.0	13.9	13.8
Deaths of Infants under 1 year	397	317	236
Infantile Death-rate per 1,000 Births	113	92	72
Marriage-rate per 1,000 Population	8.1	7.2	7.3
Number of Births registered (corrected)	3,506	3,431	3,276
Birth-rate per 1,000 Population	21.1	19.5	18.5
Illegitimate Birth-rate per 100 Births	7.9	7.4	6.9
Number of Deaths from Pulmonary Tuberculosis	126	128	107
Death-rate per 1,000 from Pulmonary Tuberculosis	.76	.73	.61
Death-rate from all forms of Tuberculosis ...	1.05	.95	.78
Death-rate from the Principal Epidemic Diseases	.78	.84	.68
Deaths from Enteric Fever	1	2	0

Annual Report—1932

The health of a community cannot be accurately measured by vital statistics, but these, nevertheless, serve as a useful guide to progress. The figures for a particular year cannot with justice be considered alone. It is necessary to examine the statistics for a period of years in order that a fairly reliable idea may be obtained of the tendency towards health. One might be tempted to emphasise too much the various death-rates, etc., which have emerged during the year 1932 because they are particularly satisfactory when set alongside those for previous years. Nothing of special note happened during the period under review which can be said to be responsible for the satisfactory rates, and one is entitled to assume that the constant pressure of the public health machine is having a very definite effect and will continue to have such an effect so long as the pressure is maintained. The tendency for many years has been for the various death-rates to show a decline, and last year produced the lowest rates ever recorded. It is no doubt tempting to claim as the principal cause of the satisfactory position, the work of the official Public Health Department of Dundee Town Council, but no such claim is made. The public health activities are shared by the Town Council and other official health authorities, e.g., the National Health Insurance Services, which attain their majority this year, and many voluntary health authorities, such as the Royal Infirmary, Infant Hospital, the Sick Poor Nursing Society, etc., etc. The Town Council have been for many years, through their Sanitary and Housing Departments, trying to improve the immediate environment of the citizens. The standard of living of the people themselves is steadily improving as the result, to some extent, of their own enlightenment, to better working conditions, and to the development of social services. An improved public opinion and the organisation of medical services, have succeeded in bringing medical practitioners in contact with disease at a much earlier stage than used to be the case, with the result that remedial measures are exhibited at a time when success is more likely to be achieved. The same causes are leading to a more concentrated search for disease, and routine inspection of the individual is becoming a public health measure of more widely recognised importance. Nowadays, the mother takes it for granted

that she must consult her medical adviser regarding the health of her infant. She does not assume that she knows all about feeding, etc., and certainly when there is the slightest departure from normal health the doctor is immediately consulted. These remarks apply to those sections of the population that are able to pay for the services of a medical practitioner, and they also apply to those sections of the population using the facilities such as child welfare centres, health visitors, etc., provided by the Council. This routine medical inspection is the natural outcome of the earlier public health protective measures, which have shown that by the time a patient is conscious of illness and has called in medical advice, the damage done may be too serious to permit of complete cure. The National Health Insurance system does not provide for the regular inspection of contributors, but only for the treatment of disease when it makes itself known to the victim. The infant welfare and child (including school) welfare schemes, however, aim at a regular examination of infants and children so that the early recognition of departures from normal health likely to lead to serious disability will be repaired while repair is a comparatively easy matter. The public would be well to think along these lines and consider whether they should not arrange with their private medical advisers to be "vetted" at regular intervals. It will mean a saving of money in the end, but the saving in health cannot be measured in terms of money. The dental profession has succeeded in satisfying a large proportion of their clientele that regular examination of the teeth is true economy. Surely the same applies to the physical condition of the body itself. It is not the custom to wait till a piece of machinery breaks down before giving it attention. In the up-to-date establishment, machinery is regularly inspected in order that efficiency may be maintained. The care of the public health may be said to depend on (a) the care of environment including personal hygiene; (b) the search for disease by regular inspection of all persons who believe themselves to be healthy; and (c) the treatment of disease. The need for (c) will steadily diminish as (a) and (b) develop.

To come to the actual rates in Dundee for the year 1932, the one which calls for first mention is the infantile death-rate, which was 72 per 1,000 births, by a long way the lowest figure ever reached in the city, being 20 below the next lowest, viz., 92, which occurred in the preceding year, 1931. No particular explanation can be given for this marked decline, which was shared by all parts of the city, and was not confined to any particular period of the year. There was a definite fall at all ages under one, although

the fall is certainly less marked, but nevertheless quite definite, among infants in the early weeks of life. Very often sudden changes in the infantile death-rate are dependent on the incidence of infectious disease, and to some extent that influence affected the rate in 1932, but nevertheless pneumonia was just as prevalent in the city during the year 1932 as it was in 1931. Measles appeared in epidemic form in the spring of the year, although whooping cough was not so widespread. These three diseases usually take their toll of infant life, but they were not so successful, if one might express it that way, in the year 1932, as they have been in the past. One can only assume that the resisting power of the infant and its mother was greater, and this may have been, and probably was, due to improved nutrition. As already explained, one cannot confine one's attention to the rates for any one year, and one cannot expect the infantile rate to remain as low as 72, and a rise during the present year would not be unexpected. It is hoped that any rise which takes place will not exceed the figure of 92, which occurred in 1931. From the point of view of vital statistics, one year in a community of the size of Dundee is a very short period on which to base conclusions. It is satisfactory to note that Dundee provided the lowest infantile mortality rate of the four principal cities in Scotland, and the Dundee figure of 72 compares very favourably with the figures for the whole of Scotland, which was 86, and with that for the larger Burghs, which was 97. This serves as an effective answer to the statement, which is sometimes made, that Dundee is a black spot so far as infantile mortality is concerned.

Another figure which may be used as a measure of the health of the community is the tuberculosis death-rate, and that also provides a record. The figure was .78 per 1,000 population, compared with .95 for 1931, the previous record. The decline was shared by both pulmonary and non-pulmonary tuberculosis, and if improved nutrition was the important factor in this decline, one must conclude that the improvement has operated over a period of years and not only during the year to which the figures are applicable.

The general death-rate was 13.8 per 1,000 population, a record figure, being just below the 1931 rate, 13.9 per 1,000.

The birth-rate was 18.5 per 1,000 compared with 19.5 in 1931, and 21.1 in 1930.

All these death-rates indicate a higher standard of health, although it is not permissible to interpret them literally. The observations of medical practitioners who are in constant touch with the younger sections of the population are of very great value in this connection. Dr Margaret Scott Dickson, who, as medical officer in charge of the Maternity Services, has ample opportunities of observing the health of the numerous infants attending the clinics, is of opinion that there is a slight falling off in the general standard of nutrition in the infants and toddlers attending the centres. This opinion is based on general observations only, and not on data derived from minute investigation. Nevertheless, it is an important observation. Dr Kidd, who has charge of the School Medical Services, is inclined to support Dr Scott Dickson's view, and records a very slight increase in the "below average" nutrition of school children examined and a corresponding slight decrease in the "above average." At the same time, the incidence of such conditions as rickets and anæmia among school children remains low, although the notifications of non-pulmonary tuberculosis, at ages from 5 to 15 years, showed a tendency to increase last year.

Maternity
Services,
Pre-School and
School Medical
Services,
Infectious
Disease
Control,
Outdoor
Nursing
Services,
Etc., Etc.

On 2nd October, 1930, the Town Council finally signified their approval of the reorganisation made possible by the Local Government (Scotland) Act, 1929, of the maternity services, infant pre-school and school medical services, infectious diseases control (including tuberculosis and venereal disease) and outdoor nursing services. All the changes could not possibly be brought into operation simultaneously, and the Medical Officer of Health was instructed to carry out the reorganisation "in as gradual a fashion as may be necessary in order to avoid interference with the continuity of the work." Over two years have now passed since the changes were initiated, and it seems proper that stock should be taken of what has been done during that time, and consideration given to what has yet to be accomplished to make the reorganisation complete.

The main object of the new proposals is to weld into one unit the various services mentioned, each of which was formerly working very efficiently, but in a somewhat detached manner. The natural tendency has always been for each service to be furnished with its own premises and its own staff, a tendency which inevitably leads to some isolation and a certain degree of overlapping. While each was adequate in itself the same or possibly even better results can be obtained with less specialisation in staff, buildings

and equipment. The machinery is less complicated and the staff, having more variety of work, are less inclined to drop into routine. Further, each official obtains a better conception of what is meant by public health and of the part he or she is called upon to play. The various services have appeared from time to time to meet special needs which were known to be clamant, and each new "scheme" was too often inclined to be an "excrescence" on, rather than a part of and merged in, the general public health work of the community. The effect is that these schemes may not be sufficiently linked up with the main unit or with one another. It is not suggested that mistakes were made. The contrary is the case. We are now in a position to assess the true value of each new service, and experience can now enable us to fit it into its proper place much more accurately than could have been possible at the time it was established. The services provide for various sections of the population defined by age or disease, and while each of these sections undoubtedly presents special problems and may demand special measures of treatment, many of the problems and of the remedies are common to all. The school child is subject to periodical inspection, and any defects found are remedied or efforts made with that object in view. This work is carried out by the staff of the school medical services. But the school child may suffer from tuberculosis or ordinary infectious disease, or even venereal disease, in which cases the other appropriate schemes are called upon to play their parts. The pre-school child, the infant, the expectant and nursing mothers are similarly liable and may be the responsibility of one or several services simultaneously. That is as it should be, but unless very great care is taken the best results will not be obtained. People of all ages and suffering from various diseases are living together. They are exposed to similar influences in their homes, and these influences are largely responsible for producing the material which has to be dealt with by the various services. No doubt there are other influences, but the principal ones are in the home or associated therewith. In any one particular house, possibly an unhealthy house and overcrowded, there may be an infant, a pre-school child, a school child, a tuberculosis patient, and venereal disease patient, and expectant or nursing mother and a patient suffering from one or other of the ordinary infectious diseases. The responsibility for the health supervision of such a household may be shared by almost as many separate services as there are members in the family. Each service no doubt gives due consideration to the other problems in the family, but naturally concentrates on the one which concerns it specially. The house may be visited by several officials each mak-

ing separate enquiries with a special purpose and each will leave with very complete information regarding the subject in which he has particular concern and more or less complete information regarding other difficulties which affect the family. Work is liable to be duplicated, and certainly the family is confused and finds it difficult to understand the position. Without doubt consideration must be given to the individual of whatever age he may be and from whatsoever disease he may suffer from, and the resources of the department applicable to that particular individual must be made available to him. But it would appear that more consideration must be given to the family as a unit than has hitherto been possible at any rate in this area. The problems common to all members of the household and those peculiar to individual members of it are both family problems and should be dealt with as such. Concerted action is necessary and not the fragmentary action which is likely to be taken if each scheme works in a more or less independent fashion. The official link between the home and the public health department with all its activities and schemes is the health visitor, and in my opinion the health visitor should be taught to consider the family as the unit over whose health she must exercise constant supervision. Naturally, she will concern herself especially with those responsibilities which have become the statutory responsibilities of the health department, but she must not confine herself entirely to these. A non-infectious illness in an adult may not concern directly the public health department of a local authority. Nevertheless, such an illness, if it is prolonged in character, may have a very direct bearing on the health of that family, and the health visitor must accordingly keep a careful note of this particular factor. The health visitor should therefore be responsible for the whole household irrespective of age and state of health. It is her duty to see that the various members are placed in contact with the different services of the local authority or of any other authority. The structure of the house must appeal to her as well as the health or ill-health of the inmates. She must be prepared to submit written reports to the executive medical officers working in the various schemes and supplement such reports by verbal comments. From time to time she should make a comprehensive survey of the family circumstances, which survey will be submitted to all the officials in the health department concerned. Such an arrangement is very much more satisfactory from the householders' point of view, and leads to a great deal of saving in official time,

It is, I think, safe to say that the reorganisation in Dundee has developed along sound and enduring lines, and that it not only meet immediate needs, but will fit in to any likely future expansion of public health activities in this country. The taking over of the school medical services by the public health department has made the changes possible. In the future it may be that the medical functions under the National Health Insurance scheme will come over to the public health department. In such a case the health visitor's responsibilities would be considerably increased and especially if the scheme covers wives and dependants, as I hope it will. As pointed out in last year's Annual Report, an extension of the National Health Insurance scheme to children, provided it covers routine inspection of infants and children, would be a great advance and would give a new orientation to the outlook of the private medical practitioner so badly needed these days, and which has been encouraged by the National Health Insurance scheme in the past. That scheme has certainly done a great deal for the health of all sections of the community, and has made it possible for medical practitioners to come in contact more and more with the beginnings of disease, the study of which is so important to preventive medicine. The wage-earner, knowing that he can call in a doctor without cost to himself, is conscious of a great relief, which is reflected in his own health and that of his family. Nevertheless, the scheme has the weakness that the doctor is only called in when illness presents itself. It is to be hoped that the extensions, which will one day cater for infants and children, will provide not only for the treatment of disease but for the regular inspection of the young beneficiaries.

To consider more particularly the reorganisation scheme in Dundee, great progress has been made in the matter of buildings. The extended principal child welfare centre at Nelson Street is finished and serves the expectant and nursing mothers and infants and children from birth to school leaving age. The old unsatisfactory shop clinics in Blackness Road and Princes Street have disappeared, their places being taken by up-to-date centres in Isles Lane and Ferry Road respectively. The Lochee shop centre has also been abolished, and that area is now served by an excellent clinic in St Margaret's School, Ancrum Road. Alternative accommodation has not yet been found for the Caldrum Street centre, but it is hoped that suitable premises may be secured for that district a little further north of Caldrum Street, and therefore further away from the principal centre in Nelson Street. The population in the north Hilltown area of the city has increased as the result of new housing schemes, and these areas must be adequately catered

for. The idea of making the various branch centres, as well as the principal centre, available to school children has been put into operation in all centres except that in Caldrum Street. Staff difficulties have prevented the complete realisation of the proposal, but these difficulties will, I hope, be overcome shortly.

When the reorganisation was commenced, it was proposed to attach the infant up to the age of one year to the maternity services, the child over one being attached to the school medical services. It is now considered wiser to keep the infant attached to the maternity service until the age of two years is reached, and thereafter consider him as a pre-school child attached to the school medical services.

The out-door nursing service is working along the lines indicated in previous reports. Naturally, there have been many difficulties to overcome, but not so many as one would expect when it is remembered that many of the health visitors had their activities limited for many years to one particular section of public health work, such as tuberculosis, schools or venereal diseases. There can be no doubt that the training of the health visitor for all-round duties is an exceedingly important matter, and it is all to the good that the Department of Health for Scotland have been able to approve a Course of Training and Examination for a Health Visitor's Certificate, which will be recognised both in Scotland and in England. It is a pity that Scotland should have fallen behind in this matter, but leeway can very soon be made up provided local authorities will make up their minds that they are not to appoint health visitors who do not possess the Health Visitor's Certificate provided suitable applicants are available. As, however, many nurses are studying for the certificate in both Edinburgh and Glasgow, in the course of a very short time, an adequate supply of qualified candidates should be ready to fill any vacancies likely to occur. Certainly it is the policy of this department to encourage nurses to go in for the certificate and when making appointments special consideration will be given to applicants who possess the certificate. The Course of Training arranged for nurses studying for the Health Visitor's Certificate is not quite what I think it should be, but it will serve meantime, and no doubt as time goes on it will improve. Health visiting has become a well defined profession, and although it is not too well paid at the moment it may be that the possession of the Certificate will receive recognition by health authorities.

A great deal of consideration has been given during recent months by the staff of this department to the need for increasing

the time spent by health visitors in the district. There is a tendency for too much of the health visitor's time being spent in indoor clerical and clinic work, whereas the best work of the health visitor is done in the home. One is tempted to ask for additional health visitors, but that request is not likely to be granted these days, and efforts have been made to reduce the health visitors' time spent indoors by transferring work from the health visitors to the clerical staff and by various adjustments at the clinics. The health visitor instead of writing various reports or making various entries on record cards has to write one report each day. This report, known as the "family daily visit sheet," records all her findings during the day's visiting, and is passed round all the medical officers, including the medical officer of health, the tuberculosis medical officer, the venereal diseases medical officer, the school medical services medical officer, and the maternity services medical officer. Each of these officials obtains a bird's eye view of the circumstances affecting a particular family and gives due weight to these circumstances in considering that part of the family problem which affects him. Efforts are also being made to vary the work of the medical officers, particularly the assistant medical officers in the various schemes. It is hoped thereby to stimulate interest and enthusiasm and to give them a better understanding of the whole idea of public health work. Weekly meetings of the senior medical staff further tends to give to the work of the department that force which can only come from unity.

The Day Nurseries are serving their purpose admirably. The number has been reduced by one as the result of the disappearance of the Hillbank Day Nursery in Cotton Road. These premises are under demolition, and it was considered advisable not to obtain alternative accommodation or to provide a new institution meantime as the extended nursery in Lilybank Road is quite near and can provide for all the infants in that district, at anyrate while industry in the city is at its present low ebb. The Dundee Nursery School Committee are proceeding with the erection of a new nursery school in a congested area in Blackness Road. The site was provided by the Town Council, and a section of the building is to be set aside as a day nursery for infants.

It has always been the policy of the Public Health Department to encourage voluntary public health activities. Without the assistance of voluntary effort, the official machine would be hopelessly inadequate. Last year the City of Dundee was very fortunate in the establishment of a new institution provided and maintained entirely from voluntary sources. The institution is known

as the Armitstead Convalescent Home for infants and young children, and was created by the trustees of the late Lord Armitstead. It is not a holiday home, but rather a place of residence for infants and young children, who, by reason of malnutrition, require a prolonged period of stay in a new and healthy environment. Such a home was very badly needed in Dundee, as there was no existing institution catering for the infants and children in need of prolonged treatment of this sort.

The Infant Hospital is continuing its excellent work, and there can be no doubt that that institution has played a very important part in the reduction of infantile mortality and infantile morbidity which has taken place in recent years. This Hospital and the Armitstead Convalescent Home are complementary to one another. The former is a hospital and treats infants suffering from definite ailments requiring hospital treatment; the latter looks after infants and young children who are showing those slight departures from normal health, which, if unattended to, inevitably lead to permanent ill-health, disability and premature death. Not only are the influences of these two institutions direct in the sense that they care for the individual child, but they are indirect in their educational value through the infants under their care, their parents and guardians and through the generations of nurses who receive valuable training in the hygiene of infancy, which will be used in other spheres to improve the health of the community.

pital
cy.

In the Annual Report for 1931, reference was made to a special report on Hospital Services submitted to the Town Council early that year. The recommendations contained in that report which had reference to consultations with the medical profession in the city, the University Court of the University of St Andrews, and the Directors of the Dundee Royal Infirmary, to the preparation of a draft scheme under Section 27 (1) of the Local Government (Scotland) Act, 1929, and to the preparation of a report by the City Chamberlain on the financial position as affected by the proposed scheme have been agreed to by the Town Council. The various consultations with the bodies mentioned were held at different times throughout the year 1932, and the whole question was thoroughly examined. Briefly, the medical practitioners in the city informed the Public Health Committee that in their view there was a shortage of hospital beds in the city and that Maryfield Hospital should be removed from the category of Poor Law Hospitals in order that greater use could be made of the accommodation contained therein. The representatives from the University

Court, headed by Sir James Irvine, intimated their wish to co-operate so far as they could with the Town Council. They explained that from their point of view it would be useful if the material available at Maryfield Hospital could be used for the teaching of students, an arrangement which would be possible if the visiting staff at Maryfield Hospital were members of the teaching staff of the University. The Directors of the Royal Infirmary intimated that the proposal to transfer the administration of Maryfield Hospital from the Poor Law (Scotland) Act, 1845, to the Local Government (Scotland) Act, 1929, did not concern them, but expressed their anxiety lest any steps should be taken which would interfere with the work already being done by the Royal Infirmary. Naturally, this view was in sympathy with that held by the Council, and it was agreed that a Committee of ten—five from the Directorate of the Royal Infirmary and five from the Public Health Committee—with the Lord Provost as chairman be appointed so soon as a scheme had been formulated and approved of by the Department of Health for Scotland to consider what arrangements could be made in order to avoid overlapping.

After these considerations were completed, the Town Council agreed to the recommendations that the Town Clerk and the Medical Officer of Health be instructed to prepare a draft scheme under Section 27 (1) of the Local Government (Scotland) Act, 1929, and that the City Chamberlain should prepare a report of the financial position as affected thereby.

The report by the City Chamberlain is of some importance, and is reproduced in substance as follows:—

The Medical officer of Health in his Memorandum of 1st March, 1932, reviewed the existing Hospital Services of the City, and stressed the need for greater co-operation with voluntary institutions, and for making fuller use of the existing beds in Maryfield Hospital. He recommended, *inter alia*, that a scheme be prepared under Section 27 (1) of the Local Government (Scotland) Act, 1929, with a view to removing Maryfield Hospital from the category of Poor Law Hospitals, and administering it under the Local Government (Scotland) Act, 1929, instead of under the Poor Law (Scotland) Act, 1845.

The other suggestions of the Medical Officer of Health dealing with staff, co-operation with the University, etc., are not conditional on such a scheme being prepared, but are applicable whether or not the Hospital is to be administered under the Local Government Act of 1929, or to continue to be administered by the Public Health Committee as an institution under the Poor Law Act of 1845. In my view, this point is an important one.

ADOPTION OF A SCHEME UNDER SECTION 27 (1) OF THE LOCAL GOVERNMENT (SCOTLAND) ACT, 1929.

The adoption of the draft scheme prepared by the Town Clerk and the Medical Officer of Health would not affect the organisation of Maryfield Hospital as such, but would result in a fuller use of the Hospital, and possibly also of other institutions controlled by the Town Council. From the financial point of view, therefore, one would have to consider:—

- (a) The increase in the cost of maintenance of the Hospital arising solely from an increase in the number of patients under treatment; and
- (b) The effect on annual income of any change in the method of recovering costs from patients or their relatives.

(a) THE INCREASE IN THE COST OF MAINTENANCE OF THE HOSPITAL ARISING SOLELY FROM AN INCREASE IN THE NUMBER OF PATIENTS UNDER TREATMENT.

The Medical Officer of Health has stated that it is not the intention to discharge any of the patients, e.g., old persons, at present under treatment. The Institution must remain open for the care of all persons entitled to benefits under the Poor Law, and who, in the opinion of the medical staff of the Public Health Department, require hospital treatment. The result of the scheme will be that the hospital beds will be more fully occupied, so that in the course of the year the total number of patient days will be higher than formerly. The overhead costs will be distributed over a greater number of units, so that the cost per unit will tend to be a trifle lower, although the total cost of the Institution may be a little higher. The increased expenditure resulting from this cause will, therefore, be very small and, in my view, comparatively unimportant.

(b) RECOVERY OF COSTS FROM PATIENTS OR THEIR RELATIVES—EFFECT ON ANNUAL INCOME.

Section 28 (1) of the Local Government (Scotland) Act, 1929, gives the Town Council power to collect from any patient receiving treatment in any institution (other than in an infectious diseases hospital) or from any person liable to maintain such patient, the full cost of treatment or such part thereof as he is deemed to be able to pay. This provision, together with paragraph 5 (b) of the Corporation's scheme for administration of functions relating to Public Health, appears to give the Public Health Department power of recovery through all the channels at present available to the Public Assistance Department.

The draft scheme prepared by the Town Clerk and the Medical Officer of Health, under Section 27 (1) of the Act, has been so framed that it is applicable only to patients with a settlement in Dundee. Such an arrangement obviates many financial difficulties, as recourse will still be possible against the Council of an area which is responsible under the Poor Law. The Public Assistance Department would, therefore, continue to collect from the Councils concerned the cost of maintenance in Maryfield Hospital of Poor Law patients who had not a settlement in Dundee.

The amounts recovered by the Public Assistance Department in respect of treatment in Maryfield Hospital during the last two years are shown in the following table:—

	Percentage of Total Amount Recovered Cost of Hospital			
	1930-31	1931-32	1930-31	1931-32
From Old Age and Contributory Pensions,	£2,071	£2,281	10.0	11.0
From Other Sources, including direct recoveries from patients or their relatives,	1,165	1,105	5.7	5.3
	£3,236	£3,386	15.7	16.3
From Other Local Authorities,	1,464	2,056	7.1	9.9
Total,	£4,700	£5,442	22.8	26.2
Total Cost of Hospital (including Administration Charges),	£20,612	£20,738	100	100

It will be observed that the sums recovered directly from patients or their relatives are equal approximately to only 5.7% of the full cost of maintenance and treatment in 1930-31 and 5.3% in 1931-32.

I see no reason why there should be any appreciable difference in the total annual amount recovered. The only alteration will be in the manner of collecting. The Public Health Department will become directly responsible for recovery of contributions from patients, including Old Age and Contributory Pensioners, while the Public Assistance Department will collect from the Councils concerned the cost of maintenance of patients who have not a settlement in Dundee and who are Poor Law patients. The necessary adjustments in the machinery of collection will be a matter for arrangement between the two Departments concerned, in collaboration with the Finance Department.

CONCLUSIONS.

So far as can be anticipated, the adoption of a scheme under the Local Government Act, 1929, should cause no appreciable change in the financial position. There can be nothing in such a scheme to influence expenditure, except that the available beds will be more constantly occupied.

In assessing the cost of maintenance the scale of fees should be as moderate as possible, otherwise many deserving persons will fight shy of the facilities offered, and this would tend to make the hospital unpopular with the poorer classes, for whom it is intended. The tendency undoubtedly should be on the side of leniency, and the question of payment of contributions should never be responsible for delay in the admission of a patient.

Alterations in the Institution, appointment of staff, and contact with the University are not in any way related to the removal of Maryfield Hospital from the Poor Law. The Town Council will be asked to consider these matters even although the hospital remains on a Poor Law basis. Actually, the future cost of maintenance and treatment of patients depends on the policy of the Public Health Committee, as approved by the Town Council, and not on the adoption or otherwise of a scheme under the Local Government (Scotland) Act, 1929.

WM. AIKEN,
City Chamberlain.

30th December, 1932

After consideration of this report by the appropriate Committee and the Town Council, the Scheme prepared under Section 27 (1) and (4) of the Local Government (Scotland) Act, 1929, was approved of by the Town Council and is now awaiting the approval of the Department of Health for Scotland.

As it was desirable that the Corporation, as the Parish Council Authority, should continue to have the right of charging in respect of persons having a settlement outwith their area, the Council also approved of the amendment of the Dundee Scheme for the Administration of Functions relating to the Poor Law so as to attain that end. The following are copies of the two draft Schemes:—

HOSPITAL REORGANISATION SCHEME, 1932

MADE BY THE CORPORATION OF THE CITY OF DUNDEE,
UNDER SECTION 27 (1) AND (4) OF THE LOCAL GOVERNMENT
(SCOTLAND) ACT, 1929.

WHEREAS it is enacted by Sub-Section (1) of Section 27 of the Local Government (Scotland) Act, 1929, that it shall be competent for the Town Council of a large Burgh to submit for the approval of the Department of Health for Scotland a Scheme for the reorganisation of the hospital facilities at the disposal of the Council, with a view to the provisions of treatment of sick persons within their area:

AND WHEREAS it is enacted by Sub-Section (4) of Section 27 of the said Act that where a Scheme has been approved by the Department of Health for Scotland it shall be lawful for the Town Council, in accordance with the Scheme as approved, to provide, furnish, and maintain for the accommodation of sick persons residing within their area, hospitals, temporary or permanent, and houses of reception for convalescents, and for that purpose to do such things as are provided in the said Sub-Section (4):

AND WHEREAS the Corporation of the City of Dundee (hereinafter referred to as the Corporation), having reviewed the hospital facilities at their disposal, have resolved to reorganise the facilities provided at the Hospitals and other Institutions aftermentioned, with a view to the provision of treatment for sick persons therein :

NOW, THEREFORE, the Corporation hereby make the following Scheme :—

1. This Scheme may be cited as " The Dundee Corporation Hospital Reorganisation Scheme, 1932."

APPLICATION OF INTERPRETATION ACT, 1889.

2. The Interpretation Act, 1889, will apply to the interpretation of this Scheme as it applies to the interpretation of an Act of Parliament.

COMMENCEMENT.

3. This Scheme shall come into operation on _____

HOSPITAL FACILITIES.

4. Subject to the provisions of Section 27 of the Local Government (Scotland) Act, 1929, and of this Scheme, the Corporation may provide, furnish and maintain the Hospitals and Institutions hereinafter mentioned for the accommodation of sick persons residing within their area, so far as the same are not required for the discharge by the Corporation of any obligation to provide accommodation and treatment under enactments other than said Section 27, that is to say :—

(1) Maryfield Hospital, Dundee,	Normal accommodation	328	beds
(2) King's Cross Hospital (including Smallpox Hospital), Dundee ..	" "	330	"
(3) Ashludie Sanatorium, Monifieth, ..	" "	124	"
(4) Public Health Institute, Dundee.	" "	12	"

PROVIDED THAT proper and sufficient precautions are taken to prevent the spread in any of the said Hospitals or Institutions of any epidemic, endemic, or infectious disease.

5. The hospital facilities provided under this Scheme shall be to the satisfaction of the Department of Health for Scotland.

6. The Corporation may enter into agreements with the voluntary hospitals in the City or any of them with regard to the distribution of patients between them, and for the purpose of securing such measures of co-operation and co-ordination as may be practicable.

MODIFICATION OF SCHEME.

7. This Scheme may, with the approval of the Department of Health for Scotland, be modified, altered or revoked from time to time,

CITY AND ROYAL BURGH OF DUNDEE.

LOCAL GOVERNMENT (SCOTLAND) ACT, 1929.

SCHEME FOR THE AMENDMENT OF THE DUNDEE SCHEME
FOR THE ADMINISTRATION OF FUNCTIONS RELATING TO
THE POOR LAW.

1. In this Scheme "the Principal Scheme" means the Scheme for Administration of Functions relating to the Poor Law made by the Lord Provost, Magistrates and Council of the City and Royal Burgh of Dundee on 1st May, 1930, as amended and approved by the Secretary of State on 10th June, 1930.

2. Paragraph 9 of the Principal Scheme shall be amended by the insertion of the words "having a settlement within the area of the Council" after the words "sick persons" in the sub-paragraph headed "Section 27 of the Act."

3. Effect shall be given to this amendment in any reprint of the Principal Scheme.

DUNDEE, December, 1932.—The foregoing scheme was made by the Lord Provost, Magistrates and Council of the City and Royal Burgh of Dundee of this date.

The above Schemes have been submitted to the Department of Health and their decision will no doubt shortly be intimated. Their coming into operation will mark a point in the history of public health in this city. It means that Maryfield Hospital will become entirely a public health institution and will not be a poor law institution. The inmates can no longer be described as paupers. While that is so the statutory duties of providing hospital treatment at Maryfield Hospital for persons on the Poor Roll requiring such treatment will remain and most of the accommodation will be used in fulfilling this obligation. Indeed, it may be that for a certain portion of the year, all the beds will be required for this purpose. At the same time, when beds are available any member of the community may be admitted for treatment without having to go through the procedure at present necessary of having his or her name entered on the Poor Roll. The inmates will have to pay the cost of their maintenance or a portion of such cost, but in this connection the words of the City Chamberlain are worthy of special note:—"In assessing the cost of maintenance, the scale of fees should be as moderate as possible, otherwise many deserving persons will fight shy of the facilities offered, and this would tend to make the hospital unpopular with the poorer classes for whom it is intended. The tendency undoubtedly should be on the side of leniency, and the question of

payment of contributions should never be responsible for delay in the admission of a patient." The details of the policy to be adopted have still to be considered. As will be observed, the Council will continue to have the right of charging under the Poor Law in respect of persons having a settlement outwith Dundee. The recovery of the cost of maintenance of such "other parish" Poor Law cases will remain a function of the Public Assistance Committee, but for the financial arrangements with all other patients the Public Health Committee will be responsible. Before the appointed day, medical practitioners in the city will be informed of the new arrangements so that they will understand the position and be able to advise their patients. If Maryfield Hospital comes out of the Poor Law the hospital services of the Council will become much more flexible and without the addition of a single bed the useful accommodation will be very markedly increased.

The above is a brief outline of recent developments in hospital policy. Reports of the work of the various institutions are contained in this volume, and reference should be made to them. The extensions at Ashludie Sanatorium were occupied in March, 1932, just in time to permit the vacated pavilion at King's Cross Hospital to be used for the treatment of the tiny victims of an outbreak of measles. That pavilion has proved itself invaluable, and numerous children, suffering from measles and pneumonia, have received open-air treatment therein who would otherwise have had to remain in homes, many of which are unsuitable for healthy inmates apart from ailing ones.

Many alterations at Maryfield Hospital are considered desirable by the staff, and a report on this subject was submitted early this year, and is still under consideration. The new kitchen unit is, however, in use, and has set a standard which, I hope, will be followed in the rest of the institution.

Although no changes have taken place in the institutional treatment of mental illness and mental deficiency, the matter has been under serious consideration by the Council throughout the year. Dr Tuach Mackenzie has submitted several special reports regarding various problems at Westgreen, especially on the difficulties presented by the lack of sufficient accommodation for the staff, the need for a hospital unit and the increased demand on bed accommodation. The proposals for the re-construction of the kitchen and laundry units are still being examined by the works

department, and it is hoped that plans will soon be forthcoming. The annual report of Dr Tuach Mackenzie contained in this volume is full of interest and shows very clearly the difficulties of running the Institution under existing conditions.

The institutional treatment of cases of mental deficiency presents very grave difficulties in this area, and many proposals have been explored by the Committee. The general feeling at the present time is that the Council cannot consider the establishment of a new institution, and efforts are being made to find accommodation in existing institutions throughout the country. The Director of Public Assistance has been successful in finding beds for several of the more urgent cases, although there are many more patients who, in their own interests, and in the interests of their families, should receive indoor treatment.

The observation wards at Maryfield Hospital are still serving a useful purpose although one cannot say that they are entirely suitable for the particular type of case receiving treatment therein.

Infectious Disease.

The infectious disease notifications and intimations totalled 5,698 during 1932, compared with 4,749 in 1931, and 6,192 in 1930. The increase in 1932 is due principally to an epidemic of measles which occurred in the spring of the year.

Very complete figures are given in the statistical section of the report, and some observations on the infections are contained in the following paragraphs.

Measles, Whooping Cough, Pneumonia.

A rather acute epidemic of measles occurred during 1932. The epidemic commenced about the end of January and continued until the end of June. During this period 1,832 cases were reported to the department, and of this number 325 received hospital treatment. For the remainder of the year 173 cases were reported, and 54 of these received hospital treatment. The patients first affected belonged to the better-to-do-class and did not require hospital treatment. The epidemic gradually made itself manifest among children in less fortunate circumstances, and the reserved accommodation for cases of measles at King's Cross Hospital was soon occupied. Additional accommodation, however, was available on account of the transfer of the tuberculosis patients to Ashludie Sanatorium. No restrictions on admissions were imposed. In fact, doctors and health visitors were encouraged to admit cases. During the year there were 48 deaths certified as due to measles,

The type of the disease was not at any time very severe, and the deaths that occurred were principally among under-nourished children living under bad housing conditions.

The highest daily number of cases of measles under treatment in hospital was 84 cases on 30th May. A summary of the cases reported showing incidence age groups, etc., will be found in the statistical section of the report.

239 cases of whooping cough were intimated during the year, and of these 29 were treated in hospital. There were 10 deaths. The disease was spread evenly over the year, and no special remarks are called for.

The total number of notifications of primary pneumonia for 1932 was 851. This number is practically the same as for the preceding two years. Of 851 cases 666, or 78% of the total number, received hospital treatment in Dundee Royal Infirmary (425 cases) and King's Cross Hospital (241 cases).

In last year's Annual Report mention was made of the transfer of tuberculosis patients from King's Cross Hospital to Ashludie Sanatorium. Up to this time there was a serious shortage of accommodation at King's Cross Hospital for the treatment of measles, whooping cough and pneumonia, and after a year's working experience under the altered conditions the advantages which have accrued have been very manifest. Many children were admitted for treatment of the diseases mentioned and were allowed a longer time in hospital to convalesce, whereas, previously such admissions were restricted, as also was the period of convalescence. It is no exaggeration to say that the lives of a goodly number of infants were saved by early hospital treatment.

Only 27 cases of influenzal pneumonia were notified in the course of the year, and, of these, three cases received hospital treatment.

Scarlet fever showed a marked increase in 1932. There were 605 notifications received compared with 246 in 1931. The increased incidence became perceptible when the schools resumed after the summer holidays. Probably during the holidays several mild unrecognised cases occurred, and such cases on returning to school would disseminate the disease. The number of cases gradually increased from August and reached the peak point in December.

ber, in which month 122 cases were notified. Of the 605 cases, 423, or 70%, received hospital treatment. Hospital accommodation was available during the whole year, and no restrictions regarding admissions were imposed. There were three deaths during the year. The certified cause of death in two cases was broncho-pneumonia and scarlet fever, and in the other case scarlet fever: streptococcal septicaemia and pyaemia.

In the course of the year a number of cases of scarlet fever occurred in a children's home, and with a view to preventing the spread of the disease 47 children were protected by scarlet fever anti-toxin. These precautions prevented any further cases. In a residential school for deaf and dumb a case of scarlet fever occurred just previous to the school closing down for the summer vacation, and in this instance 23 scholars were also passively immunised. No further cases occurred.

Testing for susceptibility for scarlet fever and active immunisation against the disease was continued at the hospital. The following is a summary of the work done:—

Age Group	Dick Positive	Dick Negative	Dick Positive and immunised	Total
Under 5 years,	5	15	44	64
5-15 years,	6	38	86	130
Over 15 years,	2	18	7	27
	—	—	—	—
Totals,	13	71	137	221

Smallpox and Chickenpox.

No cases of smallpox occurred. A number of contacts with the disease on board ships were notified to the department, and these were all kept under observation for the quarantine period.

823 cases of chickenpox were notified or otherwise made known to the department in the course of the year, and these were all visited. 14 cases were admitted to hospital. Only three of the cases admitted to hospital suffered from chickenpox alone. In the other 11 cases the patients were admitted on account of the chickenpox complicating other conditions, viz.:—Pneumonia, 4 cases; measles and pneumonia, 1 case; scarlet fever, 3 cases; fractured femur, 1 case; and impetigo, 2 cases.

Diphtheria.

372 cases of diphtheria were notified during the year, and of these 352 (of 94.6%) were removed to hospital. The disease was spread evenly over the year. There were 17 deaths representing a

case mortality of 4.6%. 16 of the deaths occurred in hospital and 1 at home. The certified cause of death in 13 hospital treated cases was diphtheria, and in the other three hospital cases the diphtheria was complicated with pneumonia and measles. The case that died at home was seen after death, and a speculative diagnosis of diphtheria ; diphtheria paralysis ; syncope was made. Nine deaths occurred in children under 5 years of age, 5 in children from 5 to 10 years, and 3 (including the home case) in children over 10 years. The usual enquiries were made into the history of the cases that died, and in all the hospital treated cases very considerable delay occurred before the specific remedy was administered. This is borne out in the following table :—

No. of days ill previous to receiving anti-toxin	2	3	4	5	6	7	8	10	14
No. of cases	1	1	4	3	2	1	1	1	2

The delay in the majority of the cases was due to the parents considering that their children were only suffering from such minor complaints as feverishness, sore throat, sickness, vomiting, etc., and consequently delayed sending for medical aid. Most of the 16 cases were in a moribund condition, and the prognosis at the time of admission to hospital was hopeless. This was particularly so in regard to the children under 5 years of age. In this group of deaths the average period of illness before receiving anti-toxin was $5\frac{1}{2}$ days, and the length of time under treatment in hospital varied from 5 hours to 3 days, or an average period of 31 hours. The following table shows the length of time the 16 cases remained under treatment in hospital :—

	Length of time under treatment in hospital.						
	Up to 1 day	2 days	3 days	7 days	9 days	11 days	15 days
No. of Cases,	7	2	2	1	2	1	1

If parents would summon medical aid when they notice any of the above-mentioned symptoms, or the slightest departure from normal, in their children the case mortality from this disease would be very much reduced or eradicated altogether.

The free supply of anti-toxin was again taken full advantage of during the year. 123 applications were made and a total quantity of 801,000 units was issued. The use of anti-toxin for passive immunisation of contacts appears to be falling off with medical practitioners, and to counteract this an arrangement is now in operation whereby the contacts of a severe case of diphtheria are automatically given a prophylactic dose. If any such contact shows the least clinical sign of the disease they are admitted by the hospital staff,

Very little work was done during the year in connection with active immunisation against diphtheria. 37 persons were dealt with, and of these 13 were Schick negative; 15 were Schick positive and received three immunising doses; and 9 children were immunised without previous Schick testing. In addition to the total of 37 persons there were two defaulters—two children who were Schick tested and only received 1 and 2 immunising doses respectively. There were 18 persons re-tested during the year.

Three persons were admitted to hospital with diphtheria who were previously immunised against the disease. In two of these cases the patients suffered from undoubted diphtheria of moderate severity. In the other case (a nurse) the condition was accepted as diphtheria—clinically positive. The throat condition reacted quickly to anti-toxin treatment. In the last mentioned case the patient had been retested and had a negative reaction. Reference should be made to this subject in the King's Cross Hospital section of the report.

Enteric Fever

Five cases of enteric fever were notified during 1932, and in four of these the diagnosis was confirmed bacteriologically—in the other case the final diagnosis was influenza. Two of the cases suffered from typhoid fever and two from para-typhoid B fever. No deaths occurred. In three cases the source of infection was outwith the city boundary, and in the other case the source was not definitely established, although periwinkles were suspected as being the cause of the infection.

Malaria.

Only two cases were notified to the department in the course of the year, and these were recurring cases that originally contracted the disease abroad.

Cerebro-spinal Meningitis.

16 cases of cerebro spinal fever were notified during the year, and all these were treated in King's Cross Hospital. The final diagnosis in one case was bronchitis, in two cases tubercular meningitis, and in the remaining 13 cases the original diagnosis was confirmed. 7 cases were children under 1 year of age, and of this number 5 died. Five cases were children between the age of 1 and 5, and of this number 1 case died. 2 cases occurred between the ages of 10 and 15, and there were two cases aged 17 years. In these last mentioned two groups there were two deaths.

Erysipelas.

There were 253 cases of erysipelas notified during the year, and of this number 125 or almost 50% were removed to King's Cross Hospital. The incidence of this disease, particularly during

the past four years, shows a marked increase, and the number of cases removed to hospital has increased out of all proportion to the changed incidence. The following table shows the number of cases dealt with each year from 1923 :—

Year	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
No. of Cases ...	165	138	181	168	131	130	215	230	232	253
Removed,	22	21	26	35	33	49	65	114	100	125
Not removed, ...	143	117	155	133	98	81	150	116	132	128

The cases admitted for hospital treatment are generally not of a serious nature, and are discharged in about 10 days. Quite a large number of the cases could reasonably be expected to receive home treatment, and in future it may be necessary to restrict admission to those cases that live under bad housing conditions, or where there are other exceptional circumstances.

20 cases of dysentery were notified, and in 16 the diagnosis was confirmed bacteriologically. In the remaining 4 the ultimate diagnosis was enteritis. Two deaths occurred—a child of 9 years and an adult.

12 cases occurred in two institutions. In one institution a girl of 9 years was admitted with a provisional diagnosis of gastro-enteritis and she died half an hour afterwards. Post-mortem specimens were submitted for bacteriological examination, which revealed the presence of flexneroid bacilli, containing the V antigen and the Y antigen of that group. The source of infection was not established. One of the nurses of the institution subsequently developed dysentery, and the bacteriologist was of opinion that the source of infection was the girl of 9 years. In the same institution five months later other three nurses contracted the disease, but in these cases no definite source of infection was established. In another institution in the city 11 cases were notified—4 of which were not accepted as bacillary dysentery. In one case the source of infection was outwith the institution and had no connection with subsequent cases. 6 confirmed cases occurred in one ward, and the infection was introduced by a patient who at some time had either an infection with a true Sonne III. bacillus, or with some organism allied thereto—probably the latter. Precautionary measures were taken, and no further cases occurred. In connection with this last mentioned series the assistant bacteriologist contracted the disease through working with infected material.

There were three isolated cases in the city, and the diagnosis was confirmed bacteriologically. The source of infection in one case was not established; in another fatal case the infection was

contracted abroad; and in the third the patient previously had the disease abroad.

Other
Diseases.

There were 5 cases of encephalitis lethargica notified during the year. The dates of onset were as follows:—2 cases in 1924; 1 in 1925; 1 in 1927; and 1 in 1929.

There was one case of poliomyelitis and one of polio-encephalitis notified in the course of the year.

Ophthalmia
Neonatorum.

56 notifications of Ophthalmia Neonatorum were received during the year, and of these 5 were classified as severe cases. Smears from the infected eyes were taken in 49 cases, of which 40 were negative, 3 were positive, and 6 were suspicious. Institutional treatment was provided for 15 cases (12 in King's Cross Hospital, 2 in Maryfield Hospital, and 1 in D.R.I.). No permanent interference with vision resulted.

Puerperal Fever,
Puerperal
Pyrexia.

59 notifications of these two conditions were received—the same number as last year. 17 cases were notified as puerperal fever and 42 as pyrexia. Of the total 48 received hospital treatment—35 in King's Cross Hospital and 13 in Dundee Royal Infirmary.

In the King's Cross Hospital section of this report the senior resident medical officer deals with puerperal fever and puerperal pyrexia on the same lines as in previous reports. There were 57 cases admitted to King's Cross Hospital from Dundee and neighbouring districts.

Diabetes and
Supply of
Insulin.

There were 21 patients on the register receiving insulin at the end of 1931 in terms of the Public Health (Scotland) Amendment Act, 1925. During 1932 16 new applications were received, and these were all granted. Insulin was also supplied to two patients in King's Cross Hospital and one patient in Ashludie Sanatorium.

Five patients died in the course of the year, thus leaving 32 patients on the register at the end of 1932.

The total amount of insulin issued was 1141 bottles of 5 c.c.'s (100 units each) and 342 bottles of 5 c.c.'s (200 units each). Three syringes were issued on loan to necessitous cases. The sum of £32 10s was collected from ten patients who were able to pay a proportion of the cost of the insulin supplied.

Reference has already been made to various points in regard ^{Tuberculosis} to the incidence of tuberculosis during the year 1932, and Dr Hunter describes fully in his report the work done in the various institutions comprising the Tuberculosis Scheme. The death-rate continues to decline, but there was a slight increase in the total number of notifications from 332 in 1931 to 358 last year. This is due to a very definite increase in the non-pulmonary notifications from 87 to 129, that increase being modified by a fall in the notifications of pulmonary tuberculosis from 245 to 229. Except for the year 1931, the notification rate is the lowest recorded, and no doubt accidental causes contributed to the rise last year. Nevertheless the figures require to be carefully examined as they form a useful indirect guide to the health of the community.

The Venereal Diseases Scheme was carried on as usual, and ^{Venereal Diseases.} Dr Averill submits a very interesting account of the year's work in his report. The attendances are well maintained and show a satisfactory increase in the number of new cases of gonorrhoea in women. This section of the work has tended to be rather weak in the past.

The Dundee Corporation Order Confirmation Act, 1932, inter ^{Cleaning of Verminous Persons.} alia, gives the Town Council powers to cleanse the person and clothing of adults who are in a filthy and verminous state. Previous to the passing of this Act the Local Authority had only powers to deal with verminous school children, verminous persons on board ship, and the contacts of lice-borne disease.

A large number of verminous children are treated every year at the cleansing stations, and in quite a number of cases the work done by the department was nullified on account of the cleaned child coming in contact with adults who were verminous. The section in the 1932 Act was introduced to deal with such cases.

In his section of this report, the Chief Sanitary Inspector has ^{Housing.} given a very full account of the progress in housing matters during the year 1932. Details are given regarding the number of new houses erected, the number of houses demolished or otherwise ceasing to be houses, and the stages reached in the various areas dealt with or being dealt with as unhealthy areas under the Housing Acts. It is needless to repeat here what he has so well recorded and reference should be made for particulars to his report. It would appear that in 1932, 754 houses were made available for occupation by the Corporation, private enterprise, and the Flem-

ing Trust. On the other hand, 472 houses ceased to be houses for various reasons. The net addition to the number of houses in the city was therefore 282. The net increase in houses is, however, not the only significant matter. It must be noted that 754 up-to-date dwellings of various sizes were produced, while 472 unsatisfactory dwellings, most of them unfit for human habitation, were got rid of. Further, the effect of the abatement of overcrowding must be greater than a superficial consideration of the figures might indicate, for in the 754 new houses provided there were 2013 rooms, while in the 472 vanished houses there were 840 rooms. The same argument may be applied to the tables in Mr Mitchell's report showing the houses provided and the houses which have disappeared during the last 14 years. In that period, 6,772 new houses, with approximately 19,540 rooms, have been erected, while 2,158 houses with 4,077 rooms are no longer used as dwellings. Leaving out of count the tremendous amount of work which has been carried out in the repair of houses, the year 1932 must be considered as a very satisfactory one from the housing point of view.

Food Supply.

The report of the Chief Sanitary Inspector contains full details of the routine measures taken to safeguard the city's food supply.

Meat and milk, as foods which are particularly liable to transmit infection, have as usual received special attention. No recognised outbreak of food poisoning occurred in the city in 1932.

During the year, the Public Health (Meat) Regulations (Scotland), 1932, came into operation to replace the existing regulations, but these entail no important change in the present procedure. The slaughterhouse has undergone great improvements during the past few years, both as regards premises and equipment and will now bear favourable comparison with those in other parts of the country. The tables submitted by the Superintendent will be found in the statistical section of this report, and contain a full account of the work done at the Slaughterhouse during the year. In connection with meat supply, it may be mentioned that the Dundee Corporation Order Confirmation Act, 1932, contains a section which prohibits the transport of meat through the streets unless it is properly covered to prevent contamination.

The routine bacteriological examination of milk samples has been continued with a view to gauging the frequency and degree of unnecessary bacterial contamination. Where the results have been unsatisfactory, an attempt has been made to get at the source of the trouble and ensure that further supplies will be wholesome in all respects.

During the year 80 samples of milk taken in the course of distribution were reported on by the bacteriologist; 50 were of ungraded milk, while 30 were of designated milks:—Pasteurised, 15; Grade A (Tuberculin Tested), 9; Certified, 6. The certified milks all conformed to the official standard, but one specimen of Grade A (Tuberculin Tested) milk failed to do so. Twelve milk samples from tuberculin tested herds were examined for tubercle bacilli, with negative results in every case. Of the 15 "Pasteurised" milks, one did not come up to standard. As regards the 50 ungraded milks (of which 10 were known to have been pasteurised although not sold as such) 29 (58 per cent.) might be considered clean milks, since they conformed to the bacteriological standards laid down for Grade A milk, 8 (16 per cent.) were of doubtful quality, while in 13 (26 per cent.) there was evidence of excessive contamination. Four out of 16 samples of ordinary milk, specially examined for tubercle bacilli, gave a positive result—an unusually high proportion. The figures for the designated milks show a marked improvement as compared with the previous year, but there is no corresponding improvement in the ungraded milks.

Details regarding the shipping at the Port of Dundee during the year 1932 and of the activities of the department in carrying the various Regulations concerned into effect will be found in Tables XXXVII., XXXVIII., and XXXIX. Few cases of infectious disease were met with aboard ships in the Port. One case of typhoid fever and one of measles were removed to King's Cross Hospital, and one seaman suffering from pneumonia was admitted to the Royal Infirmary. Several cases of venereal disease occurring among ships' crews were treated at the Treatment Centre. Two of these it was found necessary to admit to the ward for indoor treatment. Six ships arrived direct from infected ports. On arrival in each instance, a medical officer made a visit of inspection and examined the crews and their quarters. No cases of illness were found at these inspections. During the year no deratisation certificates were issued under the Public Health (Deratisation of Ships) Regulations (Scotland), 1929, but 25 exemption certificates were granted. Since the end of the year, the Department of Health for Scotland have issued new Regulations which will supersede and consolidate the various Regulations relating to port sanitary control in force at the present time. They will also make provision for carrying out obligations assumed by the Government under the International Sanitary Convention of Paris, 1926, an agreement by which the nations are pledged to take certain measures for the prevention of the spread of sea-borne disease. In our

Port Sanitary
Administration.

next report, it will be possible to give an account of the work of the Regulations in the light of fuller experience.

**Bacterio-
logical
Laboratory
Services.**

The number of bacteriological examinations carried out on behalf of the department by Professor Tulloch at University College was 9,980 as compared with 9,563 in 1931. In addition, the special investigation into the incidence of tuberculous infection of milk, which was sponsored by the Empire Marketing Board and the Department of Health for Scotland and concluded during the year, entailed a further 370 examinations. Professor Tulloch's report is included in a separate section and shows in detail the various kinds of investigations undertaken with his observations thereon. We would again express our grateful appreciation of the excellent services rendered by him and by his staff.

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TABLE I.

AGE and DISTRIBUTION of POPULATION, 1932.

Population (estimated by Registrar-General), 176,833.

Percentage of Males to total population (Census, 1931)	...	44.9%
" " Females " " " "	...	55.1%
Estimated Sex Distribution for 1932—Males	...	79,398
Females	...	97,435

Age Groups.	Percentage to total at all ages (Census 1931).		Estimated Age and Sex Distribution for 1932.		
	Males.	Females.	Males.	Females.	Both Sexes.
0-5	9.7	7.7	7,702	7,502	15,204
5-10	10.2	8.5	8,099	8,282	16,381
10-15	8.9	7.3	7,066	7,113	14,179
15-25	18.1	17.2	14,371	16,759	31,130
25-35	15.2	15.8	12,069	15,395	27,464
35-45	11.9	13.2	9,448	12,861	22,309
45-55	10.7	11.8	8,496	11,497	19,993
55-65	9.1	9.9	7,225	9,646	16,871
65-75	4.8	6.1	3,811	5,944	9,755
75-85	1.3	2.2	1,032	2,144	3,176
85 and over	.1	.3	79	292	371
All Ages	100.0	100.0	79,398	97,435	176,833

TABLE II.

Estimated Population in various Wards, 1932.

WARD.	Population (Census 1931).	Percentage to total Population (Census 1931).	Estimated Population for 1932.
I. ...	16,846	9.6	16,976
II. ...	11,698	6.7	11,848
III. ...	16,499	9.4	16,622
IV. ...	17,428	9.9	17,506
V. ...	24,720	14.1	24,933
VI. ...	17,240	9.8	17,330
VII. ...	22,355	12.7	22,458
VIII. ...	18,975	10.8	19,098
IX. ...	19,092	10.9	19,275
X. and XI.	10,732	6.1	10,787
Totals	175,585	100.0	176,833

TABLE III.

Return Showing the Causes of Death (Corrected for Transfers) at the Different Age periods during 1932:—

CAUSE OF DEATH.	ALL AGES.			AGE.												85 & Over
	Total.	Males.	Females.	—1	1—	5—	10—	15—	25—	35—	45—	55—	65—	75—		
Typhoid Fever (including Paratyphoid)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	48	25	23	13	34	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	3	1	2	1	2	...	...	...	...	...	1	...	...	...	...
Whooping Cough	10	3	7	2	8	...	...	...	...	...	...	...	...	...	...
Diphtheria	17	3	14	1	8	...	3	...	...	...	...	...	...	...	...
Influenza	24	9	15	1	...	...	1	...	2	2	2	4	5	4	3
Cerebro-Spinal Fever	5	2	3	3	1	...	...	1	...	...	...	...	...	...	...
Other Epidemic Diseases	13	7	6	2	2	1	...	...	...	3	2	1	2	...	...
Tuberculosis of Respiratory System	107	55	52	...	2	2	3	28	21	25	15	9	1	1	...	
Other Tuberculosis Diseases	31	9	22	5	6	3	4	5	3	3	...	1	...	1	...	
Cancer, Malignant Disease	297	129	168	...	1	...	...	2	9	13	36	72	110	45	9
Diabetes Mellitus...	19	3	16	...	1	...	...	...	...	...	2	7	8	...	1
Diseases of Nervous System	337	157	180	12	5	1	1	2	4	14	30	68	109	79	12	
Diseases of Circulatory System	524	260	264	2	...	2	2	6	14	18	30	115	165	135	35	
Bronchitis...	118	51	67	5	...	...	...	1	3	3	9	17	40	33	7
Pneumonia (all forms)	225	135	90	52	45	5	2	8	12	14	19	20	31	14	3	
Other Respiratory Diseases	47	18	29	...	1	1	...	1	2	3	4	3	13	16	3	
Diarrhoea, etc. (all ages)	41	19	22	20	3	4	...	...	...	2	1	6	...	3	2
Appendicitis	29	15	14	...	3	3	1	2	5	7	7	3	1	...	...
Other Digestive Diseases	63	32	31	3	...	2	...	2	...	7	7	24	14	2	2	
Acute and Chronic Nephritis	51	21	30	...	1	...	...	1	5	6	6	11	15	6	...
Other Diseases of Genito-Urinary System	24	19	5	...	...	...	...	...	1	1	3	3	11	4	1
Puerperal Sepsis...	7	...	7	...	...	...	...	2	2	3	...	...	...	...	...
Other Puerperal Causes	8	...	8	...	...	...	...	2	2	4	...	...	...	...	...
Congenital Debility, Premature Birth, Malfor-	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...
mations, etc.	107	58	49	107	...	...	...	...	...	...	...	...	...	...	...
Old Age	97	26	71	...	...	...	...	...	...	...	...	...	14	59	24
Violent Deaths	102	62	40	3	8	4	2	9	9	14	13	19	12	5	4	
All other Causes...	90	43	47	4	3	4	4	5	8	3	11	21	18	8	1	
All Causes	2444	1162	1282	236	131	37	23	77	102	145	198	404	569	415	107	

TABLE IV.

Death Rates at various age-periods (from all causes)
each year.
1928-1932.

	1928.		1929.		1930		1931.		1932.	
Ages. Periods.	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 age	2598	15.1	2670	16.0	2661	16.0	2445	13.9	2444	13.8
0-5 years	509	33.9	513	35.2	572	39.4	437	28.9	367	24.1
5-10 ..	58	3.7	35	2.3	45	3.0	44	2.7	37	2.3
10-15 ..	26	1.6	24	1.5	24	1.5	17	1.2	23	1.6
15-25 ..	92	2.8	104	3.3	101	3.2	91	2.9	77	2.5
25-35 ..	118	4.7	121	5.0	98	4.0	125	4.6	102	3.7
35-45 ..	141	6.4	167	7.8	166	7.7	127	5.7	145	6.5
45-55 ..	238	11.5	229	11.5	229	11.5	212	10.7	198	9.9
55-65 ..	414	29.4	407	29.7	387	28.4	371	22.1	404	23.9
65-75 ..	523	68.0	565	75.7	551	74.1	526	54.2	569	58.3
75-85 ..	381	153.1	414	171.5	412	171.3	394	124.6	415	130.7
85 and over	98	367.0	91	350.0	76	293.4	101	273.0	107	288.4

TABLE V.

Death Rate (from all causes) each month during the years
1928-1932.

(From Registrar General's monthly returns.)

Month.	1928	1929	1930	1931	1932
January ...	18.9	21.7	16.6	17.4	13.1
February ..	15.0	31.2	17.2	17.0	15.2
March ...	17.1	17.3	21.2	20.7	15.5
April...	17.9	15.1	20.3	17.9	17.0
May ...	14.9	14.9	18.3	15.2	14.6
June...	13.3	12.6	13.2	12.5	13.3
July ...	13.1	12.1	14.0	10.8	11.4
August ...	13.4	10.6	12.7	10.8	12.3
September ...	12.8	11.3	11.9	10.4	12.4
October ...	13.4	13.6	12.3	9.7	12.5
November ...	13.0	13.5	16.9	14.1	13.2
December ...	15.4	12.5	16.4	15.2	15.3

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

TABLE VII.

Birth-rate each year 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

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	183	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

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	.99	.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

*NOTE.—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	.86	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	.61	.81	.93	.79	.68	.28
1932	.61	.65	.68	.54	.63	.60	.40	.31	1.35	.52	.09

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	1.33	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	1.42	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	1.12	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	.52	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

TABLE XII.

Certified causes of death at the various ages
under 1 year for 1932.

CAUSE of DEATH.	Under 1 week	1 and under 2 weeks	2 and under 3 weeks	3 and under 4 weeks	Total under 4 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 ...	...	...	...	...	...	...	...	1	3	9	13
Scarlet Fever ...	...	...	...	...	...	...	...	1	...	...	1
Whooping Cough ...	...	...	...	...	...	...	...	...	1	1	2
Diphtheria ...	...	...	...	...	...	...	...	...	...	1	1
Infantile Paralysis ...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis ...	...	...	...	...	...	1	...	2	...	...	3
Tuberculosis { Lung ...	...	...	...	...	...	...	...	...	...	...	...
General ...	...	...	...	...	...	...	...	...	...	...	...
Abdominal ...	...	...	...	...	...	...	...	...	...	...	...
Brain ...	...	...	...	...	...	...	...	2	...	2	4
Other Forms ...	...	...	...	...	...	...	...	1	...	...	1
Influenza ...	...	...	...	...	...	...	...	...	1	...	1
Other Infectious Diseases ...	...	...	...	...	...	...	...	...	2	...	2
Pneumonia (all forms)	5	3	2	1	11	5	3	14	9	9	51
Bronchitis ...	...	...	...	...	...	2	1	1	2	...	6
Laryngitis ...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Respirat'y System	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis ...	1	...	...	...	1	3	1	8	4	3	20
Other Diseases of Digestive System	...	...	...	...	...	...	1	1	...	1	3
Meningitis (not T.B.)	...	1	...	...	1	...	...	1	1	1	4
Convulsions ...	2	...	1	...	3	...	1	...	3	1	8
Other Diseases of Nervous System	...	...	...	...	...	...	...	...	...	1	1
Congenital Malformations ...	10	...	1	...	11	3	...	1	...	...	15
Congenital Debility, Icterus, Sclerema, Marasmus ...	6	2	1	...	9	9	...	6	1	...	25
Premature Birth ...	42	5	3	...	50	...	1	...	...	...	51
Injury at Birth ...	4	1	1	...	6	...	...	...	...	...	6
Other Diseases peculiar to Early Infancy ...	4	2	1	...	7	...	...	...	...	...	7
Suffocation, Overlaying ...	...	...	...	...	...	...	...	...	...	...	...
Rickets ...	...	...	...	...	...	...	...	...	...	...	...
Syphilis ...	...	...	...	...	...	...	...	...	1	...	1
Violence ...	...	...	...	...	...	...	...	...	1	2	3
All Other Causes ...	1	1	...	1	3	1	...	...	2	1	7
Totals ...	75	15	10	2	102	24	8	39	31	32	236

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

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

TABLE XV.

Deaths and Death-rates from various groups of causes,
each year since 1928 (all ages).

DISEASE GROUP.	1928		1929		1930		1931		1932	
	Pop.		Pop.		Pop.		Pop.		Pop.	
	172,214		167,109		166,495		176,006		176,833	
	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 ...	164	.95	170	1.02	198	1.19	144	.82	107	.61
Digestive ...	128	.74	136	.81	114	.68	134	.76	133	.75
Respiratory ...	471	2.73	607	3.63	522	3.14	429	2.44	390	2.21
Infectious ...	305	1.77	306	1.83	346	2.08	325	1.85	272	1.54
Circulatory ...	403	2.34	410	2.45	438	2.63	447	2.54	524	2.96
Genito-Urinary ...	78	.45	106	.63	100	.60	72	.41	75	.42
Malignant ...	338	1.96	280	1.68	311	1.87	276	1.57	297	1.68
Nervous ...	283	1.64	281	1.68	310	1.86	301	1.71	337	1.91
Other Causes ...	428	2.49	374	2.24	322	1.93	317	1.80	309	1.75
	2598	15.09	2670	15.98	2661	15.98	2445	13.89	2444	13.82

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

TABLE XVII.

Five-yearly average annual death-rates per 100,000 population from certain of the Infectious Diseases, 1876-1925, 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.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.	No. of Deaths.	Death-rate per 100,000.
1876-1880	—	.1	—	26.5	—	22.3	—	10.4	—	29.1	—	52.7	—	84.4
1881-1885	—	.1	—	14.7	—	14.1	—	5.3	—	40.0	—	33.0	—	86.1
1886-1890	—	0	—	33.0	—	10.5	—	2.8	—	20.0	—	32.7	—	67.3
1891-1895	—	.2	—	5.7	—	17.6	—	4.0	—	19.7	—	51.5	—	64.4
1896-1900	—	0	—	14.5	—	10.4	—	2.5	—	16.1	—	36.5	—	43.9
1901-1905	—	1.5	—	4.1	—	10.8	—	.6	—	12.7	—	42.5	—	55.5
1906-1910	—	.1	—	14.5	—	3.7	—	.7	—	25.9	—	60.8	—	42.1
1911-1915	—	.5	—	10.9	—	3.6	—	.5	—	21.0	—	41.7	—	61.2
1916-1920	—	.1	—	2.7	—	2.8	—	.2	—	18.5	—	33.1	—	15.3
1921-1925	—	—	—	13.3	—	.6	—	—	—	22.8	—	40.5	—	25.7
1926	0	—	28	16.5	1	.6	0	—	66	38.8	1	.6	4	2.4
1927	0	—	9	5.2	0	—	0	—	69	40.0	76	44.1	48	27.8
1928	0	—	0	—	0	—	0	—	30	17.4	16	9.3	36	20.9
1929	0	—	3	1.8	2	1.2	0	—	13	7.8	1	.6	7	4.2
1930	0	—	0	—	1	.6	0	—	13	7.8	65	39.0	29	17.4
1931	0	—	0	—	2	1.1	0	—	17	9.7	14	8.0	44	25.0
1932	0	—	3	1.7	0	—	0	—	17	9.6	48	27.1	10	5.7

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

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

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	15.81
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

TABLE

Age and Sex Distribution of Deaths from Malignant Diseases

AGE GROUPS.		BUCCAL CAVITY						PHARYNX, OESOPHAGUS, STOMACH, LIVER and ANNEXA						PERITONEUM, INTESTINES and RECTUM							
		Jaw	Lip	Mouth	Soft Palate	Tongue	Tonsil	Gall Bladder	Liver	Oesophagus	Pharynx	Pylorus	Stomach	Ventriculi	Bowel	Caecum	Colon	Pelvic Colon	Transverse Colon	Intestine	Rectum
Under 20	M	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20-25	M	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25-35	M	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
35-45	M	..	..	..	..	..	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..
45-55	M	..	..	..	..	..	..	..	..	2	..	..	6	..	1	..	..	..	..	..	..
	F	..	..	..	..	..	..	..	1	1	..	..	3	..	..	..	3	..	1	1	1
55-65	M	1	..	..	..	1	..	..	..	2	..	1	6	..	1	1	4	1	1	1	1
	F	..	..	..	..	..	..	1	..	1	..	..	7	1	2	..	1	..	..	3	2
65-75	M	..	1	3	..	3	..	1	4	3	..	..	13	..	2	1	3	..	..	1	2
	F	..	..	..	..	..	1	3	3	2	1	2	11	..	..	2	4	..	..	..	2
75 and up	M	..	..	..	1	2	1	1	..	2	..	..	4	1	2	..	1	..	..	1	1
	F	..	..	..	..	..	..	..	2	3	..	1	8	1	1	..	6	1	1	..	1
Totals		1	1	3	1	6	2	6	12	17	1	4	60	3	10	4	19	5	2	8	12

XXI.

during 1932, showing parts of the body affected

FEMALE GENITAL ORGANS				BREAST	SKIN			OTHER OR UNSPECIFIED ORGANS																TOTALS	
Cervix	Ovary	Uterus	Vulva		Face	Penis	Scalp	Abdomen	Bladder	Eye	Kidney	Larynx	Lung	Mediastinum	Neck	Pancreas	Pelvis	Prostate	Spine	Testicle	Thyroid	Other Parts	Not Specified		
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
..	2	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	4	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	9
..	..	4	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	4	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	13
..	1	5	..	4	1	..	..	..	1	..	..	..	4	..	..	..	..	..	..	..	..	1	..	15	37
..	..	..	..	..	..	..	..	3	1	..	1	..	2	1	1	..	..	2	2	1	..	2	1	38	72
13	1	..	..	4	1	..	..	..	..	..	1	..	1	2	..	1	..	..	..	..	..	1	1	34	72
..	..	..	..	..	1	..	..	1	2	1	1	..	1	..	..	..	..	2	..	..	1	..	..	47	106
2	..	4	2	6	2	..	..	..	1	..	..	..	1	1	1	4	2	..	1	..	..	..	1	59	106
..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	20	53
..	..	..	..	4	2	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	33	53
5	4	14	2	20	7	1	1	5	6	1	5	1	11	5	2	6	2	5	3	1	1	5	3	293	

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

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

TABLE XXIV.

INFLUENZA.

Deaths in which Influenza was given as a cause each month
January 1923—December 1932.

MONTH.	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
January ...	2	0	5	1	6	1	6	2	0	1
February ...	0	2	2	0	14	0	55	1	4	6
March ...	0	7	3	0	27	3	4	3	20	7
April ...	2	8	3	14	3	1	1	3	11	1
May ...	1	2	0	8	0	0	0	0	2	3
June ...	1	1	0	1	2	0	1	1	1	0
July ...	0	0	0	0	0	0	2	1	0	0
August ...	0	0	0	2	0	0	0	0	0	2
September ...	1	3	3	1	3	1	0	1	2	0
October ...	0	0	1	2	6	2	0	1	0	0
November ...	1	10	1	5	4	3	2	1	1	2
December ...	4	6	2	2	4	7	1	2	3	2
Totals ...	12	39	20	36	69	18	72	16	44	24

TABLE XXV.

Deaths in which Influenza appears as a cause in death certificate
1923-1932 classified in age periods.

AGE PERIODS.	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Under 1 year	0	1	0	1	3	1	6	0	1	1
1-5 years	0	1	2	2	4	0	3	0	0	0
5-15 "	0	1	0	1	3	0	2	1	0	1
15-25 "	0	1	0	3	3	1	2	0	0	0
25-45 "	2	8	3	4	11	4	12	1	5	4
45-65 "	2	12	7	8	21	4	14	6	17	6
65 and upwards	8	15	8	17	24	8	33	8	21	12
Totals	12	39	20	36	69	18	72	16	44	24

During 1932, 3 deaths were certified as due to Influenza alone,
while in 21 cases it was associated with :—

Bronchitis	...	...	...	3
Pneumonia	...	...	...	8
Other Respiratory Disease	...	...	...	1
Other causes	...	...	...	9

TABLE XXVI.

INFECTIOUS DISEASES.—Number of Cases of each disease notified and reported in Dundee during the Year 1932. 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	5	...	...	...	1	4	...	...	4	1
Scarlet Fever ...	605	5	180	354	40	20	6	...	423	182
Diphtheria ...	372	5	117	190	29	24	6	1	352	20
Erysipelas ...	253	8	3	13	19	67	108	35	125	128
Puerperal Fever	17	...	...	...	4	13	...	...	15	2
Puerperal Pyrexia	42	...	...	...	15	27	...	...	33	9
Ophthalmia Neonatorum ...	56	56	...	...	...	...	...	...	15	41
Malaria ...	2	...	...	...	...	2	...	...	...	2
Dysentery ...	20	...	1	1	4	7	...	7	15	5
Infantile Paralysis	1	...	1	...	...	...	...	...	1	...
Polio-Encephalitis	1	...	...	1	...	...	...	...	...	1
Encephalitis Lethargica ...	5	...	...	2	1	2	...	...	...	5
Acute Primary Pneumonia ...	851	165	325	187	58	58	39	19	666	185
Acute Influenzal Pneumonia ...	27	1	...	4	6	6	8	2	3	24
Pulmonary Tuberculosis ...	229	...	4	55	46	80	37	7	177	52
Non-Pulmonary Tuberculosis...	129	5	24	49	30	17	4	...	100	29
Cerebro-Spinal Fever...	16	7	5	2	2	...	...	...	16	...
Chickenpox ...	823	51	230	534	6	2	...	...	14	809
*Measles ...	2,005	133	723	1,140	6	3	...	...	379	1,626
*Whooping Cough	239	36	101	101	...	1	...	...	29	210
Totals ...	5698	472	1714	2633	267	333	208	71	2367	3331

*Not notifiable in Dundee during 1932.

Tuberculosis—cases notified in a previous year and removed to Hospital for the first time during 1932—

Pulmonary, 26 ; Non-Pulmonary. 5 ; Total, 31.

TABLE XXVII.
Monthly Notifications and Intimations of Infectious Disease,
Dundee, 1932.

DISEASE	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Typhoid Fever ...	...	...	...	1	...	2	...	...	1	1	...	...	5
Scarlet Fever ...	24	32	22	34	23	28	34	45	61	78	102	122	605
Diphtheria ...	29	40	38	22	18	38	22	21	28	35	40	41	372
Erysipelas ...	20	21	23	12	28	18	11	12	19	17	36	36	253
Puerperal Fever ...	...	1	1	1	1	3	2	1	...	4	2	1	17
Puerperal Pyrexia ...	1	1	5	6	3	5	7	3	2	2	2	5	42
Ophthalmia Neonatorum	4	6	1	4	5	8	6	3	4	8	4	3	56
Malaria ...	...	...	...	...	...	1	...	...	1	...	...	...	2
Dysentery ...	...	...	...	...	2	...	...	...	...	6	6	6	20
Infantile Paralysis ...	...	...	...	...	...	1	...	...	...	...	...	...	1
Polio-encephalitis ...	1	...	...	...	...	...	...	...	...	...	...	...	1
Encephalitis Lethargica	1	...	...	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia	85	63	89	57	61	62	67	36	55	71	60	145	851
Acute Influenzal Pneumonia	2	5	11	2	3	...	1	...	...	1	1	1	27
Pulmonary Tuberculosis	20	27	20	27	10	20	18	10	22	15	25	15	229
Non-Pulmonary Tuberculosis	8	11	9	19	8	20	11	5	10	10	10	8	129
Cerebro-Spinal Fever ...	1	1	1	2	2	...	...	1	1	1	4	2	16
Chickenpox ...	106	67	94	86	85	75	38	20	32	33	60	127	823
*Measles ...	8	228	343	447	529	277	40	8	4	15	25	81	2005
*Whooping Cough	37	38	24	12	16	21	6	5	21	13	19	27	239
Totals ...	347	541	681	732	795	580	263	170	261	311	397	620	5698

*Not Notifiable in Dundee during 1932.

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.														
	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	160	3.19	79	2.58	7	.71	54	2.75	46	1.25	34	.97	30	.60	6	.19	1	.10
	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	12	.39	3	.31
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	13	.42	5	.50
	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	9	.29	2	.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	10	.32	3	.30
	Deaths	4	.19	8	.21	38	1.11	71	1.35	37	1.19	7	.69	24	1.19	19	.50	13	.37	11	.21	8	.25	8	.79
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	5	.16	0	—
	Deaths	1	.05	7	.19	38	1.20	73	1.29	56	1.81	8	.84	31	1.61	16	.43	9	.23	8	.14	5	.16	0	—
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	5	.14	2	.19
	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	4	.12	3	.29
1922	Notifications	15	.99	66	2.05	109	3.34	130	2.75	73	2.10	3	.76	49	3.26	54	1.63	40	1.23	12	.25	7	.66	0	—
	Deaths	0	—	10	.31	36	1.10	64	1.35	53	1.53	5	.47	26	1.73	15	.46	19	.58	0	—	6	.17	1	.09
1923	Notifications	20	1.34	50	1.56	72	2.23	97	2.07	60	1.74	10	.95	50	3.35	70	2.19	52	1.61	27	.53	12	.34	5	.47
	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	5	.14	3	.23
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	7	.20	2	.19
	Deaths	1	.06	8	.25	44	1.36	55	1.17	33	.96	5	.47	23	1.87	14	.44	9	.23	6	.13	7	.20	1	.09
1925	Notifications	8	.54	49	1.55	72	2.25	100	2.15	42	1.23	9	.88	56	2.44	32	1.01	27	.84	17	.37	5	.15	4	.39
	Deaths	4	.27	6	.19	39	1.22	57	1.23	36	1.05	6	.53	18	1.22	9	.23	15	.47	10	.32	4	.12	3	.29
1926	Notifications	3	.20	67	2.10	72	2.24	107	2.29	53	1.55	6	.53	37	2.49	41	1.29	22	.63	13	.23	7	.20	3	.29
	Deaths	0	—	4	.13	34	1.06	60	1.29	35	1.02	5	.43	20	1.35	12	.38	8	.25	7	.15	3	.09	2	.19
1927	Notifications	7	.47	80	2.48	76	2.33	80	1.69	40	1.15	5	.48	33	2.53	23	.87	13	.40	23	.40	6	.17	4	.33
	Deaths	3	.20	6	.19	45	1.38	70	1.48	26	.75	3	.29	21	1.40	5	.15	6	.18	8	.17	3	.09	4	.33
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	8	.23	4	.33
	Deaths	3	.20	5	.16	34	1.04	59	1.25	33	.95	4	.38	15	1.00	12	.37	7	.21	4	.08	2	.06	2	.19
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	4	.12	0	—
	Deaths	3	.21	3	.10	27	.85	64	1.40	27	.80	6	.59	18	1.24	5	.16	10	.32	9	.20	3	.09	0	—
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	5	.15	2	.20
	Deaths	1	.07	3	.10	30	.95	54	1.18	33	.98	5	.49	22	1.52	5	.16	9	.29	7	.15	4	.12	2	.20
1931	Notifications	5	.33	65	2.14	62	2.00	85	1.72	25	.68	5	.23	21	1.39	28	.92	19	.61	16	.32	2	.05	1	.08
	Deaths	0	—	0	—	29	.94	66	1.33	29	.79	4	.30	12	.79	7	.23	8	.26	8	.16	4	.11	0	—
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	1	.03	1	.08
	Deaths	2	.13	5	.16	28	.93	46	.92	24	.65	2	.15	11	.72	7	.23	5	.16	6	.13	1	.03	1	.08

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		Non-Pulmonary		Pulmonary		Non-Pulmonary	
		Tuberculosis.		Tuberculosis.		Tuberculosis.		Tuberculosis.	
		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

TABLE XXX.

TUBERCULOSIS.—Notifications and Deaths with corresponding rates per 1,000 population in various wards, 1932.

WARD.	NOTIFICATIONS AND CASE RATES.			DEATHS AND DEATH - RATES.		
	Pulmonary Tuberculosis.	Per Non-Pulmonary Tuberculosis.	Per Tuberculosis (all forms).	Per Non-Pulmonary Tuberculosis.	Per Tuberculosis (all forms).	Per Tuberculosis (all forms).
I. ...	16	.94	32	11	.65	17
II. ...	17	1.43	23	8	.68	10
III. ...	16	.96	29	9	.54	13
IV. ...	18	1.03	28	11	.63	12
V. ...	32	1.28	49	15	.60	22
VI. ...	28	1.62	42	7	.40	10
VII. ...	20	.89	29	7	.31	12
VIII. ...	45	2.36	66	26	1.36	28
IX. ...	28	1.45	46	10	.52	11
X. and XI. ...	7	.65	12	1	.09	1
No fixed abode	2	—	2	2	—	2
Totals ...	229	1.30	358	107	.61	138
					.18	.78

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

TABLE XXXII.

Pulmonary Tuberculosis—Deaths in Institutions each year since 1923.

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Total Deaths from Pulmon. T.B. -	167	147	148	138	153	138	130	126	128	107
No. of Deaths from Pulmon. T.B. in Institutions -	75	62	66	77	70	74	70	64	71	58
Percentage of Total Deaths from Pul. T. B. dying in Institutions	44.9	42.1	44.6	55.8	45.8	53.6	53.8	50.8	55.5	54.2

TABLE XXXIII.

MATERNAL MORTALITY.

Certified causes of deaths of women from diseases and accidents connected with pregnancy and child-birth during 1932

Accidents of pregnancy	...	...	...	3
Puerperal hæmorrhage	...	...	...	2
Puerperal septicæmia, including post-abortive sepsis	..			7
Toxæmias of pregnancy, albuminuria, convulsions	...			1
Other puerperal diseases	...	...	...	2
				—
				15

TABLE XXXIV.

Maternal Mortality Rates—number of deaths per 1,000 registered births each year, 1923-1932.

1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
4.76	3.88	4.60	8.86	7.96	6.86	6.88	4.28	5.25	4.58

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

TABLE XXXVI.
VACCINATION—1921–1931.

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	65	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

TABLE XXXVII.

The Public Health (Port Administration Infectious Diseases) Regulations (Scotland) 1930.

DETAILS OF VESSELS ENTERING THE PORT DURING 1932.

	No. of Arrivals.	Tonnage.	No. Inspected by Medical Officer.	No. Inspected by Sanitary Inspector.	No. Reported Defective.	No. of Orders Issued.
From Foreign—						
Steamers	298	496,908	6	298	143	259
Motor Ships ...	5	11,876	...	5	...	...
Coastwise ...	636	240,250	...	...	...	...
	939	749,034	6	303	143	259

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.)	65	Jute, Gunnies, Linseed, Desiccated Cocanut.
Hamburg	54	Sugar, Potatoes, Farina Phosphates, Fancy Goods.
Rotterdam, Ghent and Dunkirk	29	Sugar, Milk, Cheese, Fruit, Vegetables, Moss, Litter, Steel Plates and Tubing.
Antwerp	27	Vegetables, Iron, and Steel.
Gothenburg	13	Paper, Paper Pulp, Box Boarding.
U.S.A. and Canada	37	Flour, Sugar, Pitch, Ochre.
Baltic Ports, ...	19	Timber, and Flax.
Norway	17	Paper and Paper Pulp.
Algeria and Tunis	10	Esparto Grass and Phosphates
West Indies, etc.	7	Sugar and Oil.
South Africa	1	Sugar.
Soviet Russia	16	Timber and Flax.
Other European Ports	8	Timber, Cork, Pyrites, Phosphates, Oilcake, Grain and Vegetables.

TABLE XXXIX.

Port Sanitation.

Details of Action taken:—

Total Number of verbal intimations	157
Total Number of rat notices issued	102
Total Number of visits to ships	796
Total Number of ships from infected or suspected ports	81
Do. (direct)	6
Do. (Indirect)	75
Nuisances and defects attended to:—257	
Forecasts cleaned out	51
Messrooms cleaned	27
Galleys and store-rooms cleaned	32
Accumulation of food refuse	18
Choked or defective W.C.'s	32
Dirty W.C.'s	46
Discharge of foul water on quay	45
Bugs in fore-castle or other accommodation	6
	<hr/> 257

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

Fresh water tanks cleaned out	24
Forecasts Washed or painted	25
Bathroom or wash-places painted	23
Galleys washed or painted	30
W.C.'s painted	21
Fore-castle disinfected	2

TABLE XL.

BACTERIOLOGICAL LABORATORY.

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

	1924	1925	1926	1927	1928	1929	1930	1931	1932
Wassermann Tests	3261	3513	3660	3619	4107	4177	4588	4419	4053
Microscopical and other examinations under V.D. Scheme for—									
Syphilis	68	33	35	42	31	36	109	51	56
Gonorrhoea	1589	1690	1863	2227	2933	3301	3019	2779	3714
Swabs for diphtheria	1188	2027	1980	2560	1898	1500	1197	962	823
Widal tests for enteric fever	158	140	220	236	106	228	206	212	150
Sputum examinations	334	385	320	299	310	302	261	291	300
Examination of faeces, blood cultures, etc., for—									
Enteric fever	64	80	91	47	26	131	100	214	63
Dysentery	0	13	6	2	11	37	70	50	112
Infantile Diarrhoea	11	8	4	3	7	—	—	—	—
Puerperal Fever	—	—	—	—	—	90	166	180	210
Milk examinations	96	97	101	97	75	74	105	11220	1481
Food Poisoning—									
No. of outbreaks	(4)	(2)	(3)	(2)	(2)	(1)	(2)	(0)	(0)
No. of examinations	146	7	71	44	27	14	11	0	0
Cerebro spinal meningitis	1	0	8	10	16	13	23	12	15
Other examinations	27	*78	*60	45	35	19	105	303	367
Totals	69 3	8071	8419	9231	9582	9922	9960	10693	10350

*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 XLI.
DISINFECTION. 1932.

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	Hdkerchiefs	Table Cloths	Towels	Wearing Apparel	Miscellaneous Articles	Total No. of Articles	No. of Houses from which clothes were removed
January	1	...	14	142	124	180	...	31	16	133	...	...	27	3	24	393	144	1232	106
February	2	...	16	209	153	142	...	31	15	113	...	1	11	...	18	501	138	1350	139
March	...	...	31	212	161	110	...	47	19	68	...	1	10	...	16	661	196	1532	192
April	3	...	16	181	106	127	1	30	16	94	2	1	12	...	12	609	159	1369	176
May	...	...	14	164	115	113	3	21	15	97	...	1	40	...	14	836	411	1844	208
June	32	...	31	174	119	123	...	26	15	76	...	...	16	3	54	618	334	1621	176
July	65	...	17	199	136	143	...	33	28	110	...	1	4	1	59	380	179	1355	122
August	278	...	7	161	406	156	2	34	4	126	1	3	11	...	41	295	176	1701	110
September	...	...	10	176	141	176	...	38	15	139	1	...	15	1	39	398	199	1348	126
October	...	...	13	209	199	191	4	47	14	166	...	...	18	1	28	538	438	1866	182
November	1	...	18	277	254	261	...	57	23	174	...	...	25	...	34	686	527	2337	194
December	3	...	5	295	267	256	...	63	6	180	...	...	22	...	23	1073	517	2710	270
Totals	385	...	192	2399	2181	1978	10	458	186	1476	4	8	211	9	362	6988	3418	20265	1981

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

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

TABLE XLII.

FACTORIES, WORKSHOPS AND WORKPLACES.
YEAR 1932.

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

PREMISES		NUMBER OF		
		Inspection	Written Notices	Occupiers Prosecuted
Factories (including factory laundries)	...	518	0	0
Workshops (including workshop laundries)	...	769	0	0
Workplaces (other than outworkers' premises)	...	604	2	0
		1,891	2	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	57	57	...	...
Want of ventilation	1	1	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other nuisances	...	...	...	...
Sanitary accommodation—				
Insufficient	1	1	...	...
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	59	59	...	...

†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, 1932.

In Hospital, 1st January, 1932	...	...	...	34
Admitted in 1932	...	...	...	120
				<hr/> 154
DISCHARGED—				
Relieved	...	...	88	
Unrelieved	...	...	1	
Taken home against advice	...	...	8	
Sent to Royal Infirmary	...	...	3	
Sent to King's Cross Hospital	...	...	3	
Sent home for disinfection	...	...	5	108
				<hr/> 46
DIED—				
Abdominal Tuberculosis	...	...	1	
Acute Miliary Tuberculosis, Brain	...	...	1	
Congenital Heart	...	...	1	
Broncho-pneumonia	...	...	1	
Gastro-enteritis	...	...	3	
Marasmus	...	...	5	12
				<hr/> 34
In Hospital, 31st December, 1932				...
				34
THE CASES TREATED WERE—				
Marasmus	...	...	65	
Debility	...	...	24	
Broncho-Pneumonia	...	...	4	
Abdominal Tuberculosis	...	...	1	
Miliary Tuberculosis, Brain	...	...	1	
Gastro-Enteritis	...	...	11	
Pyloric Stenosis	...	...	1	
Bronchitis	...	...	2	
Congenital Heart	...	...	2	
Anaemia	...	...	1	
Debility and Rickets	...	...	8	120
				<hr/>
Highest Daily Number	...	...	...	35
Lowest Daily Number	...	...	...	26
Average	...	...	...	32.83

TABLE XLIV.

VENEREAL DISEASES SCHEME, 1923-24 to 1932.

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.
	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.			
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	346	137		
1924-5	179	23	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		
1925-6	233	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		
1926-7	216	32	83	24	123	41	104	15	38	10	66	21	83	13	64	18	24	8	268	40	174	48	94	30	676	364	312		
1927-8	160	24	53	15	102	33	86	13	48	12	38	14	109	17	77	20	32	12	306	46	209	53	97	36	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		
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		
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		
1931	150	19	56	11	94	32	118	15	57	11	61	21	141	17	94	19	47	16	387	49	300	59	89	31	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		

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

TABLE XLVIII.

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

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Wassermann Tests	3,418	3,261	3,513	3,660	3,619	4,107	4,177	4,588	4,419	4,053
Microscopical and other Examinations	1,535	1,657	1,723	1,898	2,269	2,964	3,337	3,128	2,830	3,770
	4,973	4,918	5,236	5,558	5,888	7,071	7,514	7,716	7,249	7,823

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, 1932.

DISEASE	BEEF		MUTTON		PORK		TOTAL	
	Number	Weight	Number	Weight	Number	Weight	Number	Weight
(a) Tuberculosis	...	2,255	...	172,828	92	2,546	2,347	175,374
(b) Other Diseases :—								
Abscesses, Tumours, and Cysts	...	336	58	970	69	...	463	1,088
Actinomycosis	...	163	1	1,459	...	...	164	1,463
Asphyxiation	1	...	...	...	1	81
Decomposition	...	5	17	1,700	1	46	23	1,966
Dropsical Conditions	...	20	111	2,747	3	126	134	4,797
Fevered Conditions	...	58	142	11,001	32	747	232	13,693
Fractures and Bruises	...	80	28	4,370	15	454	123	5,141
Inflammation of Abdominal Organs	...	159	34	2,179	2	22	195	2,475
Jaundice	...	1	...	532	1	82	2	614
Melanosis	...	1	...	280	...	...	1	280
Pneumonia	...	53	39	1,128	19	2	111	1,543
Rheumatism	...	22	11	1,613	5	67	38	1,736
Septic Conditions	...	12	10	4,995	1	116	23	5,694
Swine Erysipelas	4	168	4	168
Wasted Conditions	...	5	13	615	1	...	19	713
Totals	...	3,170	465	206,417	245	4,376	3,880	216,826

TABLE L.

Shows the number of the different kinds of Animals Slaughtered at the Public Slaughter-houses each month during 1932, 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
1932													
January ...	1,050	3	1,856	354	254	1	135	9	11,853	78	175	219	12,325
February ...	1,066	11	2,077	347	282	1	245	13	12,527	43	332	209	13,111
March ...	1,163	3	2,130	407	381	...	209	22	17,060	...	244	223	17,527
April ...	1,101	6	1,919	292	403	2	197	18	11,195	28	383	91	11,697
May ...	1,161	3	2,030	252	440	1	149	36	19,326	7	491	218	20,042
June ...	1,095	5	2,023	177	395	1	123	16	18,176	...	307	467	18,950
July ...	989	5	1,858	130	359	1	107	12	12,270	...	102	171	12,543
August ...	1,177	9	2,446	159	446	...	146	17	20,723	...	245	159	21,127
September ...	1,107	7	2,504	368	590	..	154	20	16,001	...	210	328	16,539
October ...	1,151	2	2,753	366	437	...	213	20	21,042	...	221	307	21,570
November ...	1,157	8	3,630	530	411	...	354	30	14,350	...	393	641	15,384
December ...	1,199	8	2,673	501	431	2	367	20	15,231	35	441	246	15,953
Totals ...	13,416	70	27,879	3,883	4,629	9	2,399	233	189,754	191	3,544	3,279	196,768

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 ...	876	Livers ...	147	Udders ...	21
Livers ...	2,890	Plucks ...	643	Plucks ...	91
Lungs ...	2,498	Kidneys ...	647	Kidneys ...	139
Hearts ...	887	Lungs ...	1,565	Livers ...	66
Kidneys ...	2,129			Lungs ...	26
Heads ...	847	Total ...	3,002	Total ...	343
Tongues ...	894				
Skirts ...	2,114				
Total ...	13,135				

TINNED AND FROZEN MEAT SEIZED FOR DECOMPOSITION.

Tinned Meat ...	32 lbs.
Frozen Ox Livers ...	15 „
Frozen Ox Kidneys ...	8 „
Frozen Meat ...	41 „
Total ...	96 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
1928	170	943	16	571	2	...	158	1,860
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

Statement shewing number of Animals Slaughtered, Wholly Condemned, Partially Condemned, and Weight (in lbs.) of Meat Condemned during the year 1932 :—

Class of Animal.	NUMBER OF ANIMALS.			Weight (in lbs.) of Condemned Meat.
	Slaughtered.	Wholly Condemned.	Partially Condemned.	
Cattle ...	13,486	179	4,459	189,945
Sheep ...	27,879	51	2,348	3,544
Pigs ...	3,883	12	221	3,279

TABLE. LIII.

The totals for the years 1912 to 1931 (excluding 1915 to 1918) were:—

Year.	Carcases 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.
1912	18,836	574	38,896	4,339	573	39	173	71	150,502	2,194	7,160	7,106	166,962
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	19,528	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

CITY OF DUNDEE

1

DEATH RATE per 1000 Population
(at all ages and from all causes)

1883-1932

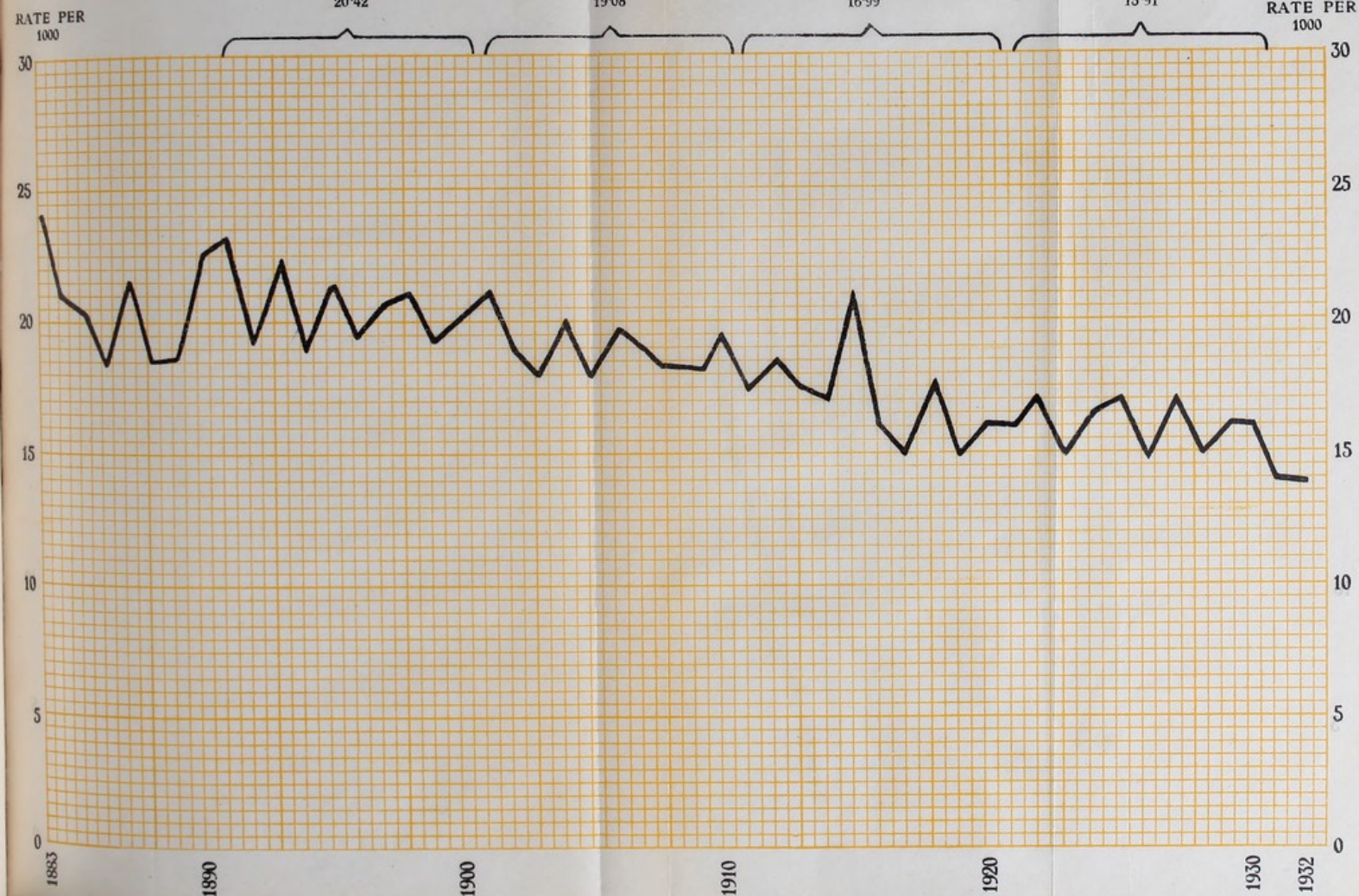
AVERAGE DEATH-RATE
1891-1900
20.42

AVERAGE DEATH-RATE
1901-1910
19.08

AVERAGE DEATH-RATE
1911-1920
16.99

AVERAGE DEATH-RATE
1921-1930
15.91

RATE PER
1000

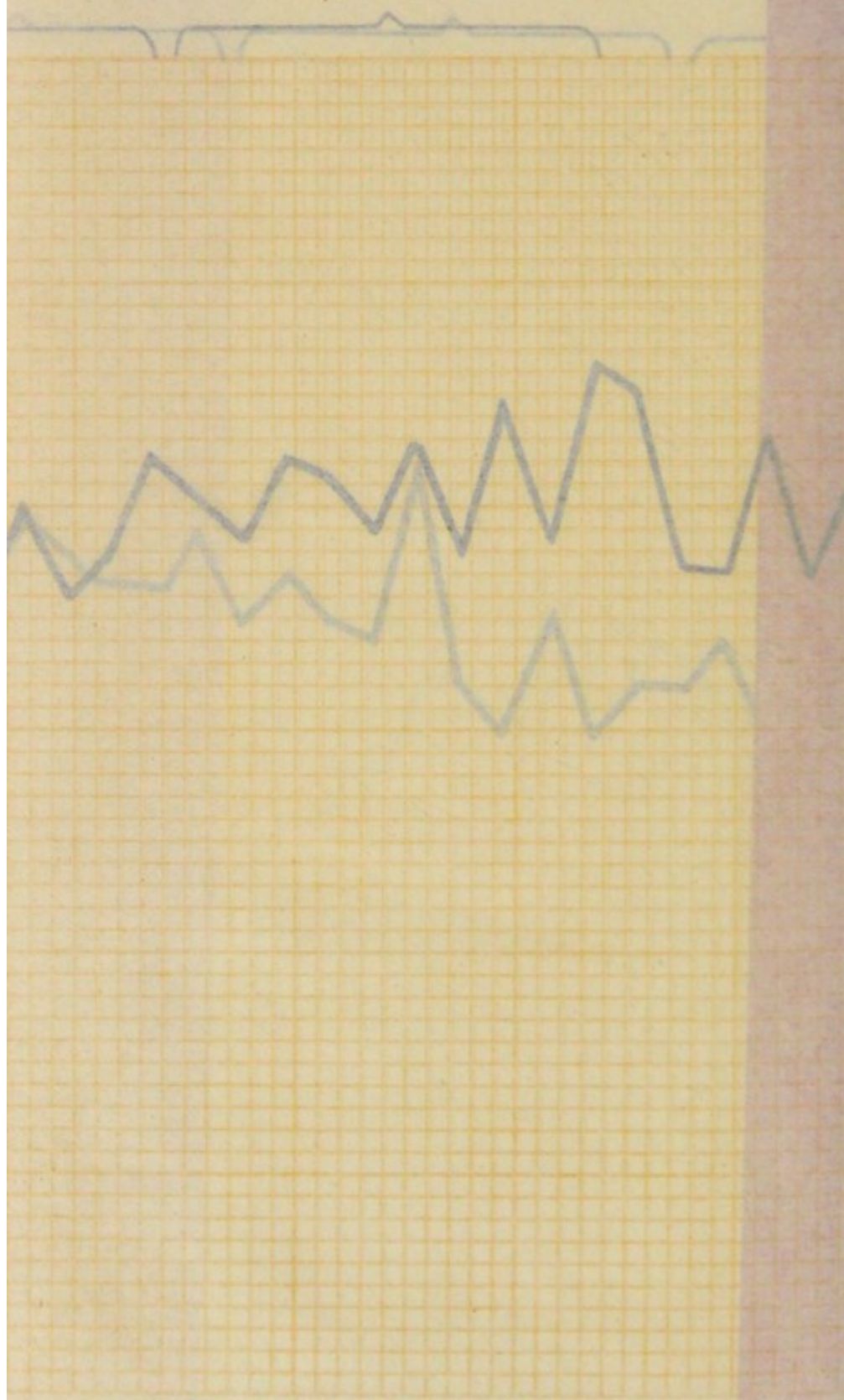


Population

(all causes)

1932-1933

DEATH-RATE-AVERAGE
 1901-1920 20.45
 1921-1930 16.99



CITY OF DUNDEE

2

INFANT MORTALITY

INFANT DEATHS (under 1 Year) PER 1000 BIRTHS

1883-1932

Average Infant Death-Rate
1891-1900

176

Average Infant Death-Rate
1901-1910

155

Average Infant Death-Rate
1911-1920

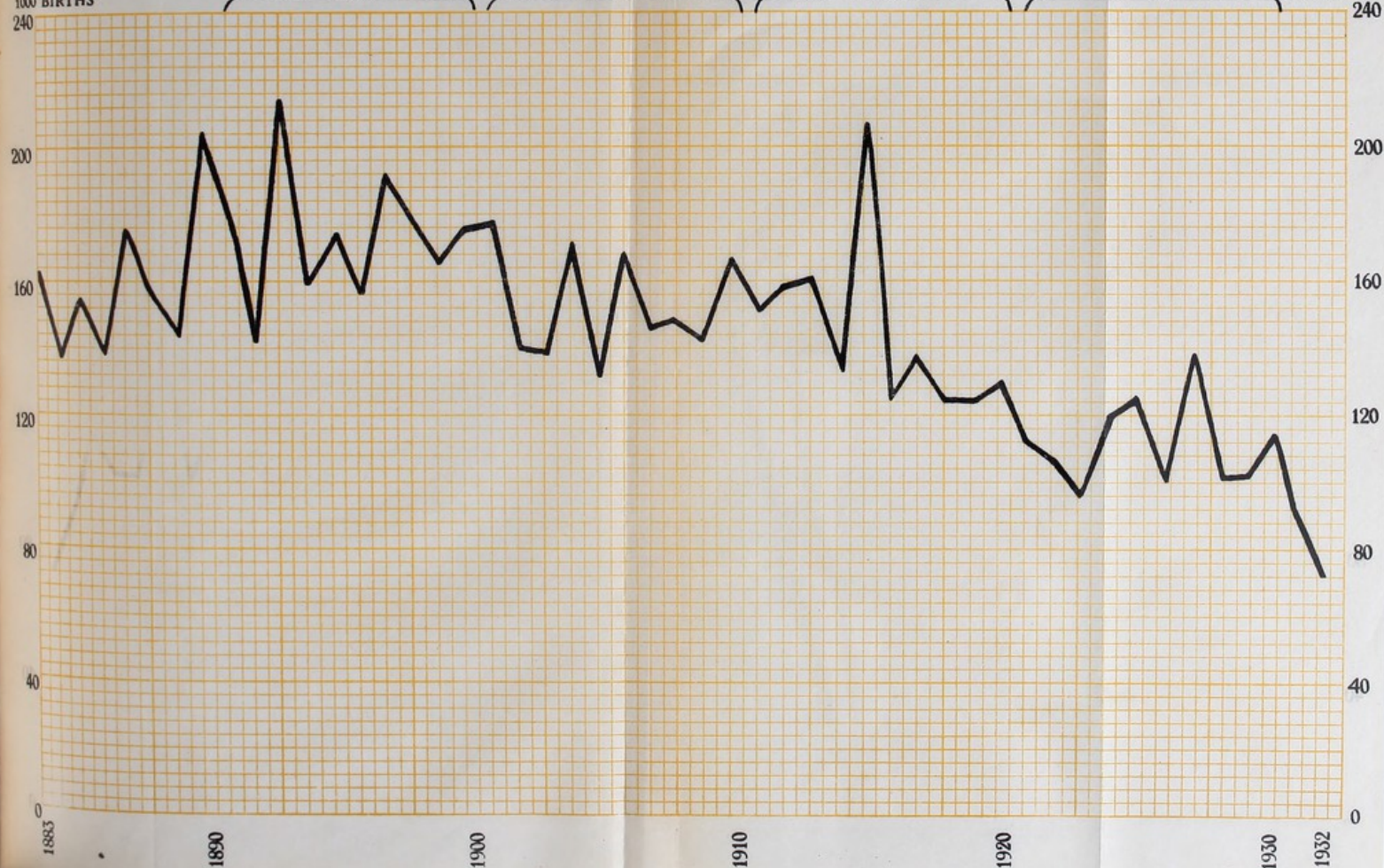
146

Average Infant Death-Rate
1921-1930

113

RATE PER
1000 BIRTHS

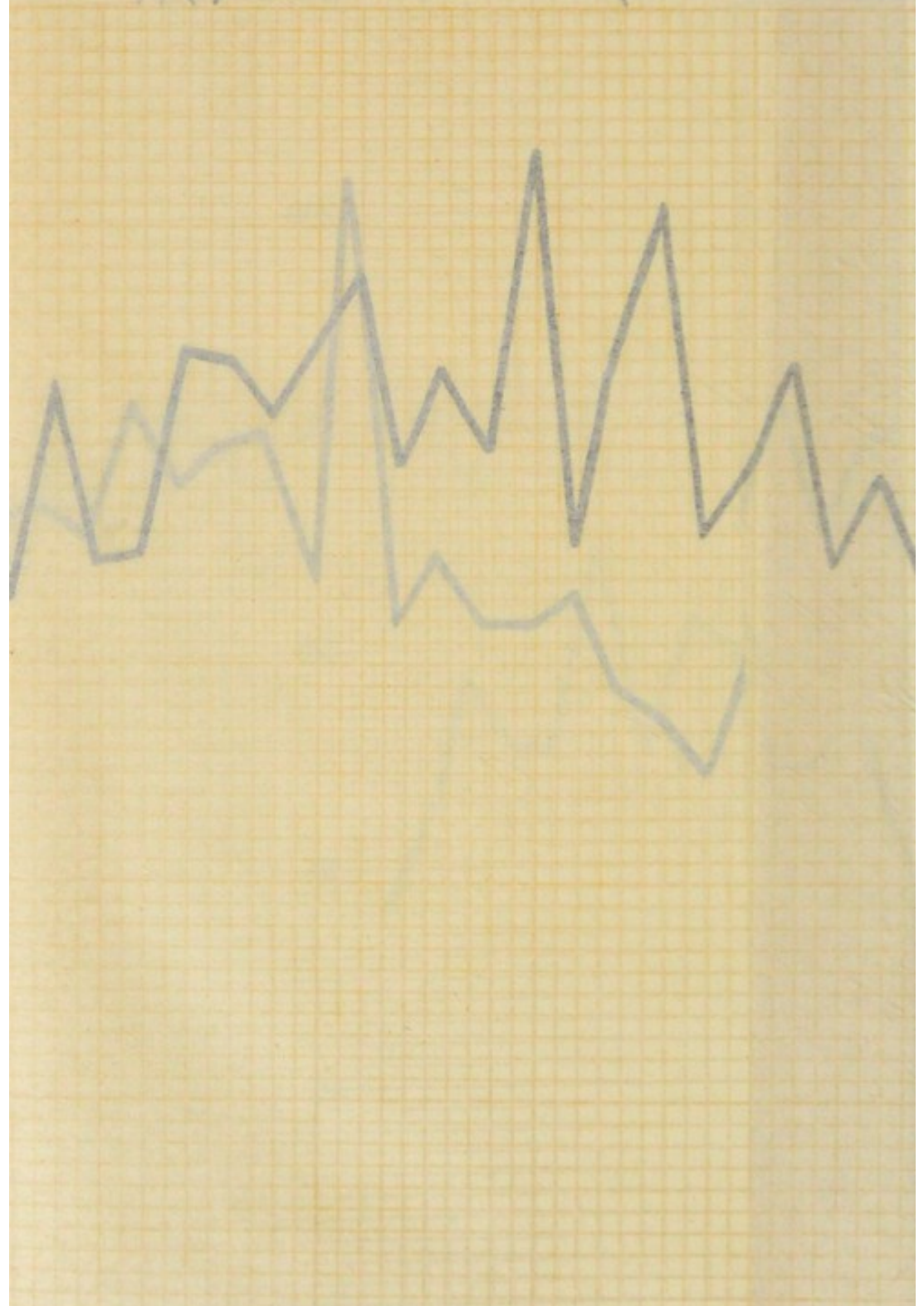
RATE PER
1000 BIRTHS



CITY OF
 YOUNG INFANTS
 INFANT DEATHS (in)

1932

Average Infant Death Rate
 Average Infant Death Rate
 1891-1900
 1901-1910
 1911-1920
 1921-1930
 1931-1932



100
 200
 300
 400
 500
 600
 700
 800
 900
 1000

CITY OF DUNDEE

3

PULMONARY TUBERCULOSIS

DEATH RATE per 1000 Population

1884 - 1933

AVERAGE DEATH-RATE
1891-1900
2.26

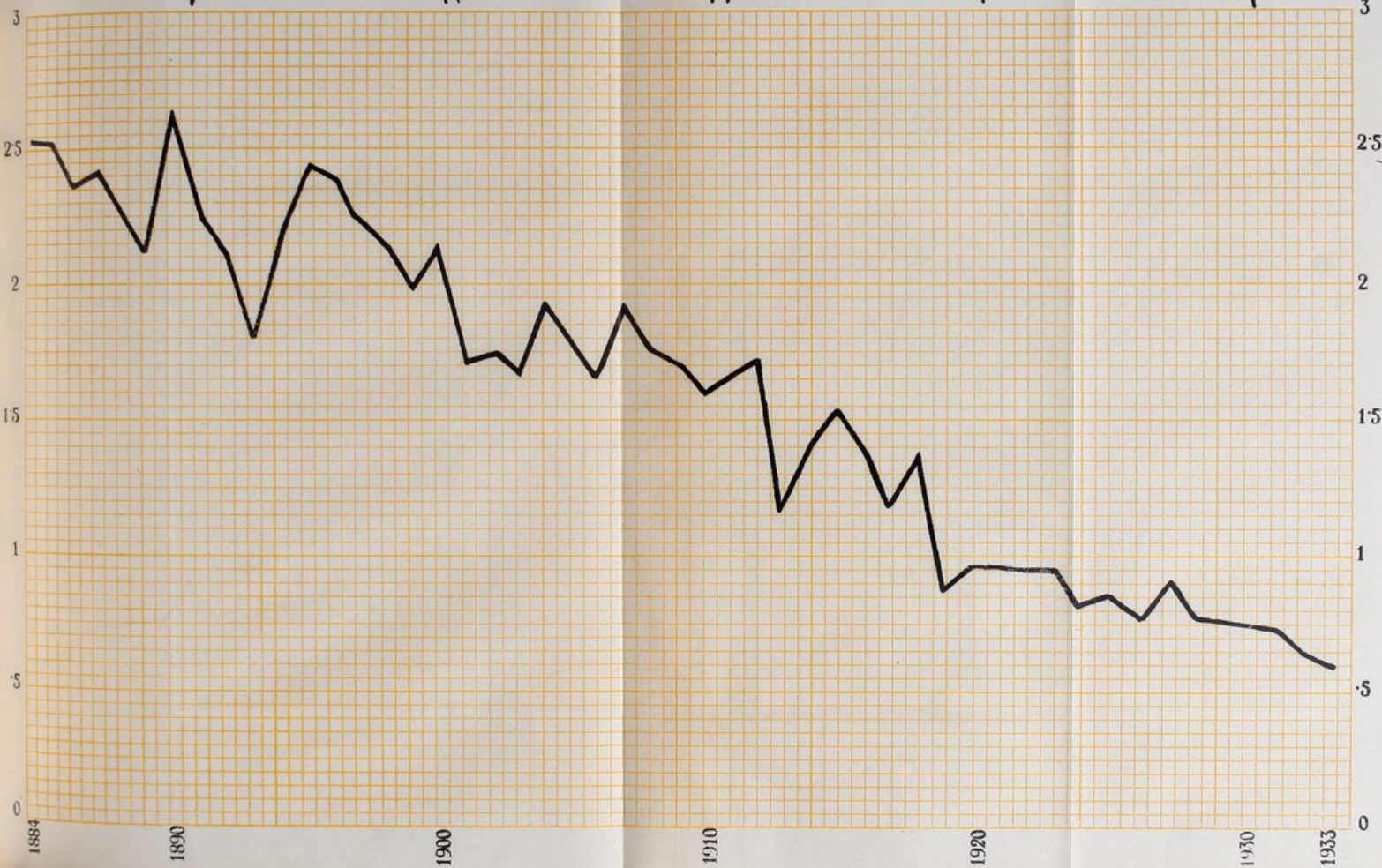
AVERAGE DEATH-RATE
1901-1910
1.84

AVERAGE DEATH-RATE
1911-1920
1.34

AVERAGE DEATH-RATE
1921-1930
.87

RATE PER
1000

RATE PER
1000

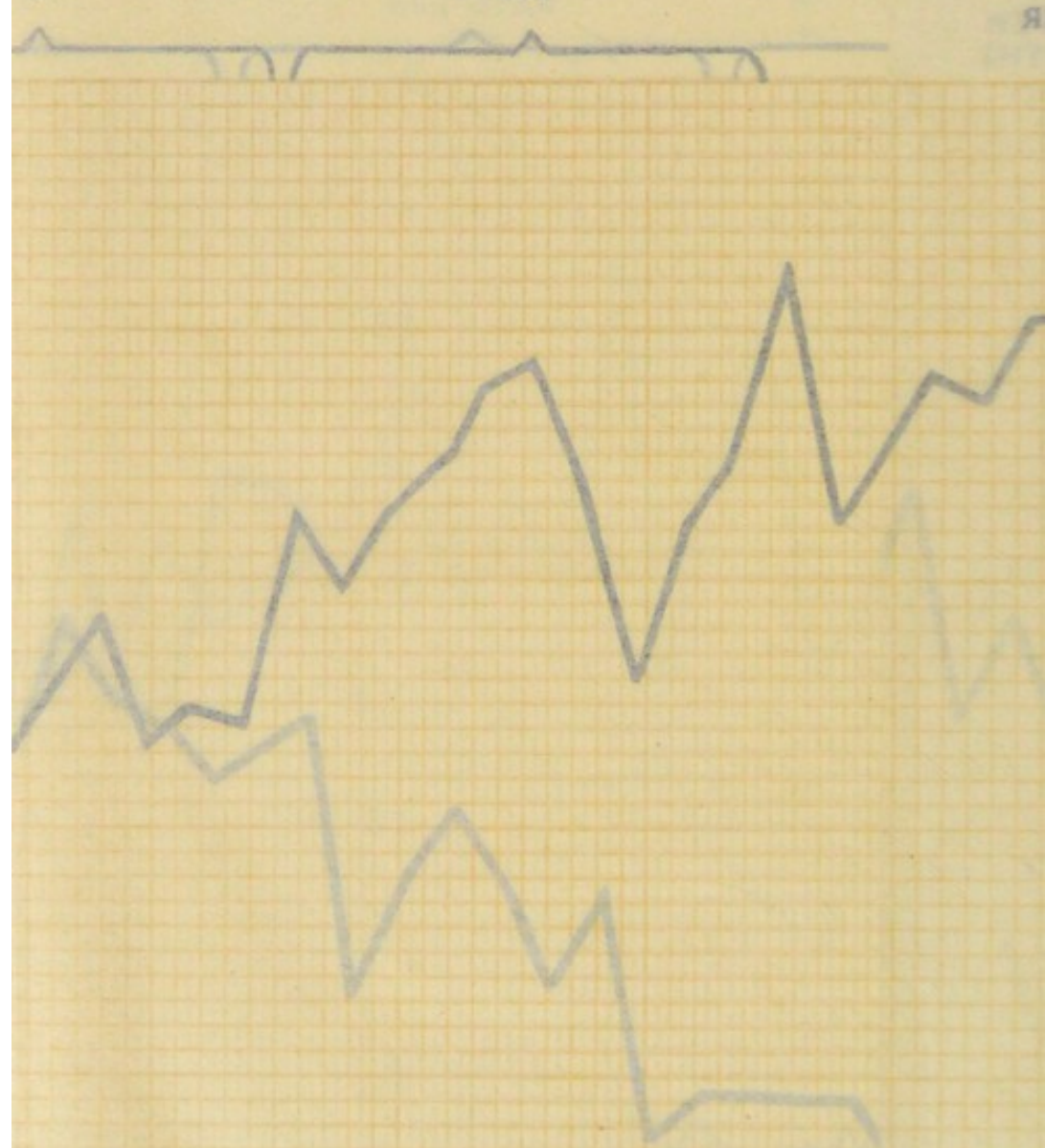


SISOLBUBMONARY

DEATH RATE

1932-1933

AVERAGE DEATH RATE
1891-1900 1911-1920 1921-1930
1.84 2.28 2.1



1931

1931

CITY OF DUNDEE

4

BIRTH RATE per 1000 Population

1883-1932

AVERAGE BIRTH-RATE
1891-1900
29.96

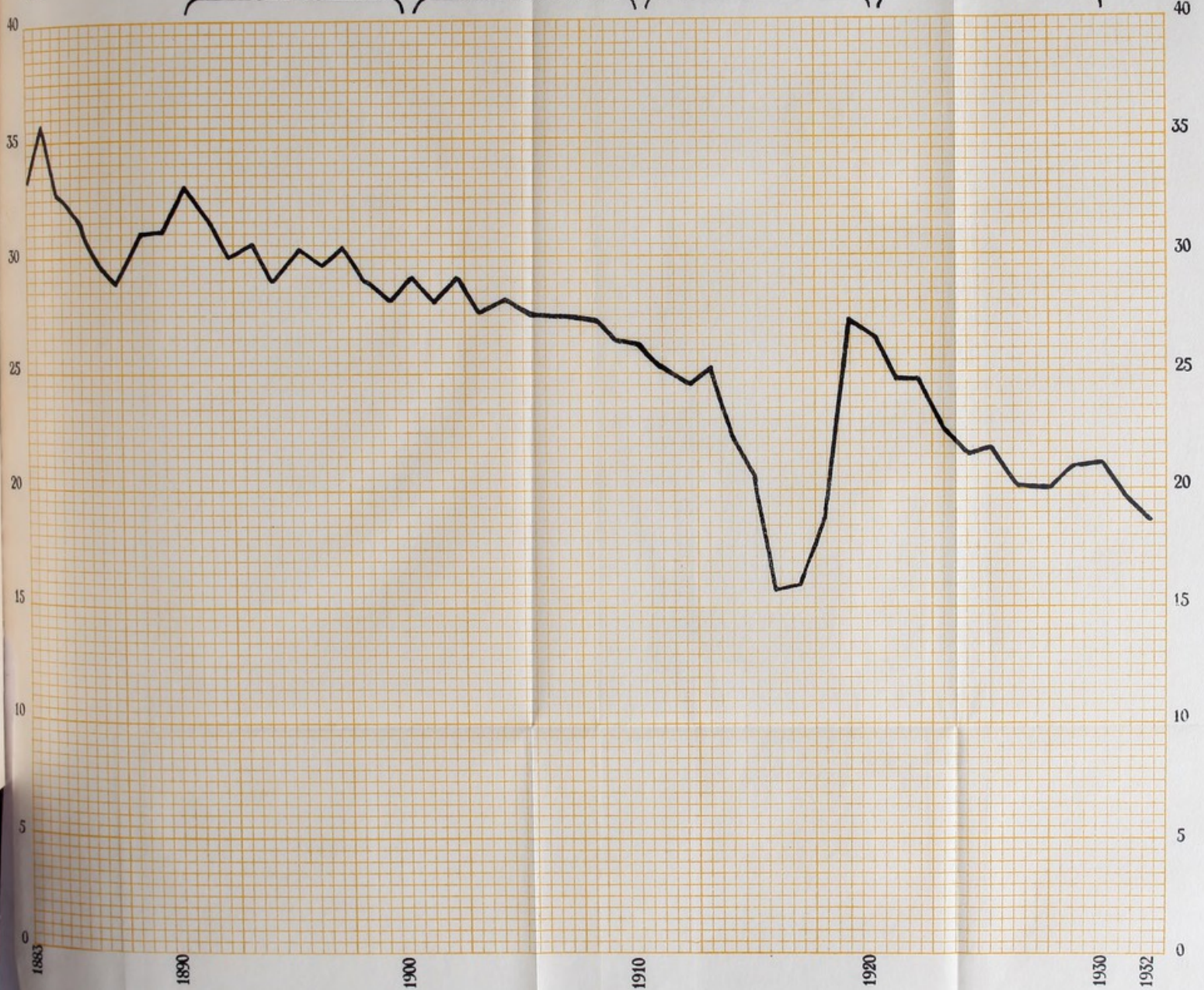
AVERAGE BIRTH-RATE
1901-1910
27.75

AVERAGE BIRTH-RATE
1911-1920
22.15

AVERAGE BIRTH-RATE
1921-1930
22.47

RATE PER
1000

RATE PER
1000

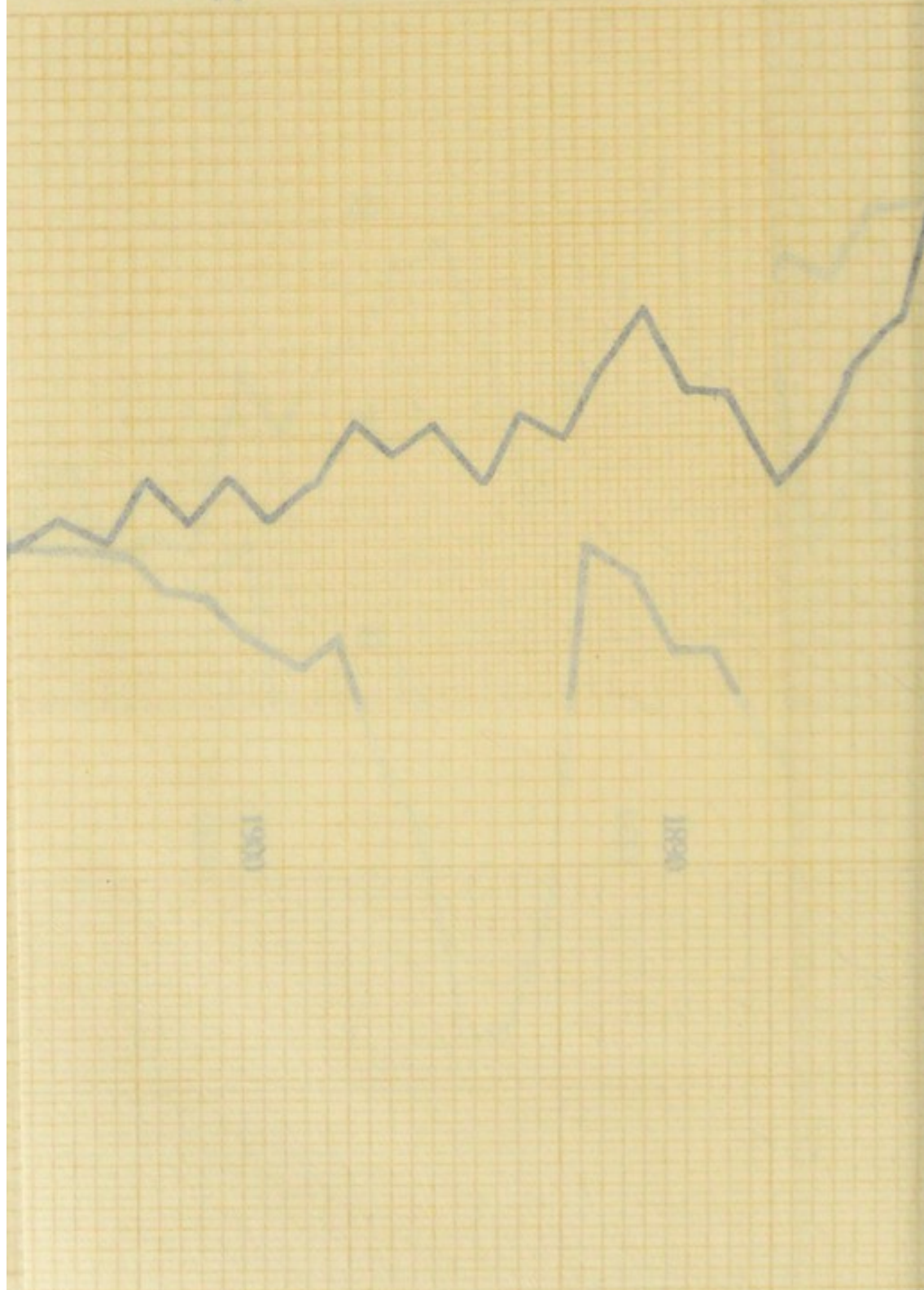


BIRTH RATE

1893-1932

AVERAGE BIRTH RATE
1891-1900
23.9

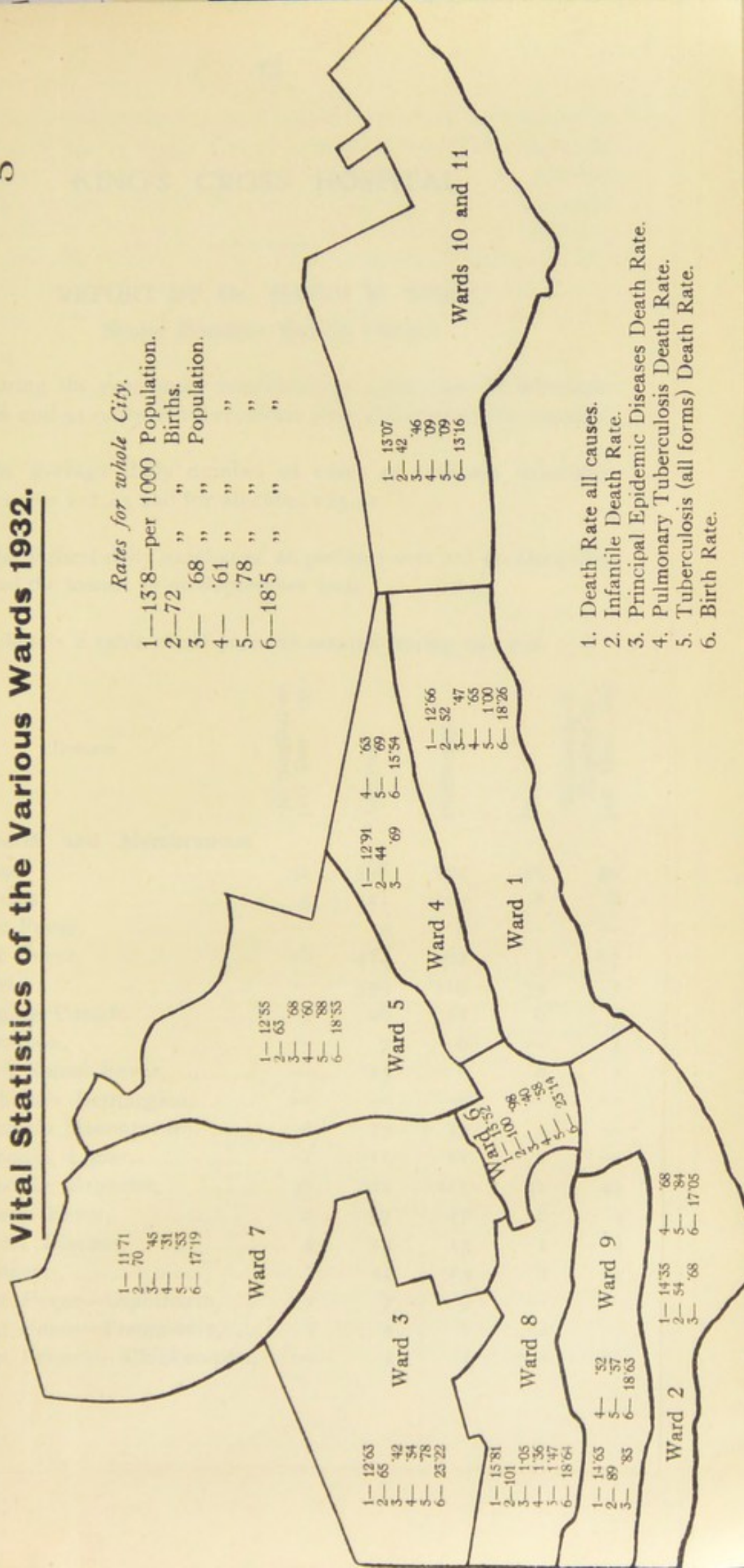
AVERAGE BIRTH RATE
1901-1932
27.2



CITY OF DUNDEE.

Vital Statistics of the Various Wards 1932.

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.

KING'S CROSS HOSPITAL.

REPORT BY DR. DAVID M. KEAY,

Senior Resident Medical Officer.

During the year under consideration 1,665 cases of infectious diseases and 34 cases of tuberculosis were admitted to the hospital.

The average daily number of cases of ordinary infectious diseases was 111.43 and for all cases 123.31.

The highest daily number of all patients was 211 on December 23rd and the lowest 57 on September 10th.

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

Disease	In Hospital on 31st Dec., 1931	Admitted	Discharged	Died	Remaining in Hospital on 31st Dec., 1932
Diphtheria and Membranous					
Croup,	32	338	324	16	30
Erysipelas,	5	121	110	8	8
Enteric Fever,	—	4	4	—	—
Scarlet Fever,	18	414	362	3	67
Measles,	—	359	319	39	1
Whooping Cough,	3	26	18	6	5
Chicken-pox,	—	7	6	—	1
Cerebro Spinal Fever,	—	15	6	8	1
Encephalitis Lethargica,	—	—	—	—	—
Ophthalmia Neonatorum,	1	13	13	1	—
Pneumonia, Lobar,	1	11	11	1	—
Pneumonia, Broncho,	47	241	215	31	42
Puerperal Fever,	2	57	47	8	4
Venereal Disease,	4	14	13	1	4
Dysentery,	1	14	13	2	—
Scarlet Fever—Diphtheria, ...	2	7	9	—	—
Scarlet Fever—Pneumonia, ...	1	2	1	2	—
Scarlet Fever — Chicken-pox, ...	—	1	1	—	—

Measles—Scarlet Fever,	—	3	3	—	—
Measles — Whooping Cough,	—	3	2	1	—
Rubella,	—	7	7	—	—
Mumps,	—	2	2	—	—
Arsenical Dermatitis,	—	2	2	—	—
Chicken-pox—Pneumonia, ...	—	2	1	1	—
Gastro-Enteritis,	—	1	—	—	1
Acute Rheumatism,	—	1	1	—	—
Totals,	117	1,665	1,490	128	164
Tuberculosis,	49	34	69	14	—
Totals,	166	1,699	1,559	142	164

Average Daily Number of Patients, 123.31
 Highest Daily Number of Patients, 211 December 23
 Lowest Daily Number of Patients, 57 September 10

Patient Days—Infectious Diseases, 40,785
 Tuberculosis, 4,348

Total, ... 45,133

The case mortality for cases of ordinary infectious diseases during the year was 7.91%, for tuberculosis 16.86%, and for all cases 8.31%.

Scarlet Fever.

During the year 365 patients admitted with a diagnosis of scarlet fever were discharged, but in 46 cases the provisional diagnosis was not confirmed, the final diagnosis proving to be as follows :—

Measles,	10
Rubella,	10
No apparent disease,	7
Teething Rash,	3
Tonsillitis,	2
Broncho-Pneumonia,	2

The remaining 12 cases were of diabetes mellitus, chronic otitis media, streptococcal dermatitis, chicken-pox, dysentery, bronchitis, erythema solare, drug rash, urticaria, adenitis, septic rash, and burns with a tannic acid rash,

Three deaths occurred, but two of them appear in the list of unconfirmed cases, being of dysentery and broncho-pneumonia.

For the past number of years the type of scarlet fever met with in Dundee has been of a remarkably mild type. Complications have been of the simplest nature and, indeed, have been very few. The average stay in hospital has been roughly 24 days, and there has been no deaths.

A word of warning now seems opportune, for during the year just completed there has been a general increase in severity of the type of scarlet fever treated in this hospital. Complications have been the rule rather than the exception, and have varied from the simple cervical adenitis to the more serious acute nephritis and acute mastoiditis. The average stay in hospital was necessarily increased yet, despite this, the number of return cases was greater than last year. The altered severity became more evident as the year progressed, then a few cases of real toxic scarlet fever appeared and one of those cases died. In addition to the alteration in type, the actual number of cases admitted showed a marked increase over last year's—414 compared with 175. The one fact may explain the other.

Although we have never been able to persuade ourselves that serum therapy was of any great importance in simple scarlet fever it seems of vital interest in the treatment of these more serious types. To obtain its highest efficacy, the serum must be given early and in sufficient dosage—40 c.c.'s proved a safe average amount. Further, one case of simple scarlet fever occurring in a household is no guarantee that all cases occurring in that household will be of a like simple nature.

This phase may prove to be of short duration, but it seems that we shall be fortunate next year if we escape without an occasional death.

Diphtheria.

During the year 340 patients admitted with a provisional diagnosis of diphtheria were discharged from the hospital, but in 81 of those the diagnosis on admission was not confirmed, the final diagnosis proving as follows:—

Tonsillitis,	51
Non-Diphtheritic Laryngitis,	5
Broncho-Pneumonia,	4

Bronchitis,	4
No apparent disease,	4
Acute Rhinitis,	2
Vincent's Angina,	2
Measles,	2
Peritonsillar Abscess,	2

and one of each of the following :—carcinoma tonsil, pleurisy with acute follicular tonsillitis, influenza, acute endo-carditis and faucial streptococcal infection.

To the number of confirmed cases must be added 6 others admitted with a provisional diagnosis other than diphtheria. Of the unconfirmed cases 3 died. These suffered from broncho-pneumonia, measles with broncho-pneumonia, and lobar pneumonia with pulmonary collapse.

The number of deaths was 16, three of these were admitted as pneumonia, whooping cough with broncho-pneumonia and, lastly, measles. This gives a case mortality of 6.03%.

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,	222	8	3.60%
Faucial and Laryngeal, ...	24	4	16.66%
Laryngeal only,	10	1	10.00%
Faucial and Nasal,	6	3	50.00%
Nasal only,	3	—	—
	265	16	6.03%

Laryngeal Diphtheria.

The operation of tracheotomy was performed for laryngeal obstruction in 6 cases, of which 2 died. In one case the patient also suffered from measles with broncho-pneumonia. This gives a case mortality of 33.3%.

Dosage of Antitoxin.

The methods of administration and dosage of antitoxin were as described in last year's report, and are detailed below,

Under 6,000 units,	.....	30
6-10,000	„	122
10-20,000	„	75
20-30,000	„	18
30-50,000	„	13
Over 50,000	„	7
		<hr/> 265

Thus it will be seen that nearly 60% received less than 10,000 units, while in over 90% of the cases a dosage of less than 30,000 units proved sufficient. The results of the year's work seems to bear out the statement that anything over 50,000 units is wasted, for all 7 cases which were given this—to our minds—massive dose, died.

Below is a table giving some details of the fatal cases:—

Age	No. of Cases	No. of days ill before admission	Average Stay in Hospital
—3 Years,	7	7	28 hours
3-5 Years,	2	4.5	40 hours
5 and over,	7	6	7.5 days

Having regard to the above facts, all patients under 3 years of age showing a faucial lesion—no matter how simple in appearance—should be regarded as cases of diphtheria and treated as such. Admittedly, tonsillitis does occur during these tender years, but it is such a rarity that it should be discounted.

Again, some of these fatal cases had been swabbed and, the swab being returned negative, had been treated for tonsillitis or some other illness.

It is futile and absurd to rely on the result of a swab especially in children under 5 years of age. Swabbing a child so young is often a difficult art, and we would suggest its complete abolition in children under school age, for the oft-repeated dictum that “if a case deserves a swab it also deserves antitoxin” is more honoured in the breach than in the observance.

For some time it has been our practice to swab all contacts of cases admitted to this hospital, and last year an attempt was made to passively immunise them at the same time.

In the majority of cases our plea met with a refusal on the part of the parents, and we extend an invitation to general practitioners to assist us in overcoming our difficulties particularly in children under five years, and especially where the accepted case has been ill for some time.

Typing of the Diphtheria Bacillus.

Reference was made in the report for 1931 to the classification of the diphtheria bacillus into two types as *Corynebacterium Diphtheriae Gravis* and *Corynebacterium Diphtheriae Mitis* by M'Leod of Leeds. The suggestion was made by him that diphtheria antitoxin was of little or no use in cases caused by the Gravis type of organism. During the last six months, all positive swabs here were intensively investigated, and the type of bacillus determined according to this classification.

About 50% were of the mitis type—the rest of an intermediate type. So that the work over the above period indicates that the Gravis type seldom occurs in this city at present. Consequently, as far as antitoxin treatment is concerned the situation here remains unchanged.

The investigation is being continued, and the suggestion is made that, should the gravis type of organism begin to appear, careful observation of the efficacy or otherwise of antitoxin, in such cases, would be desirable.

Post-Partum and Post-Abortum Infection.

To maintain continuity of arrangement, this part of the report is submitted in the usual fashion.

As the routine methods of investigation, etc., as detailed in our last annual report remain the same, and as no new mode of treatment of these cases has been discovered we have no further conclusions or suggestions to put forward. The report, therefore, consists of bare statistics.

During the year 47 patients admitted with a provisional diagnosis of post-partum or post-abortum infection were discharged from the hospital and 8 died.

The diagnosis on admission was not confirmed in 4 cases, and, of these, one died of lobar pneumonia.

Two of the other cases showed no apparent disease, and one was suffering from enteric fever. Of the 51 cases in which the diagnosis was confirmed 7 died, a case mortality of 13.7%.

Source of the Cases.

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

In the patient's home in Dundee,	16 cases
In Institutions in Dundee,	9 „
In the patient's home outside Dundee,	21 „
In Institutions outside Dundee,	5 „
	—
	51 „

Post-Partum Infection.

There were 48 cases of post-partum infection with 7 deaths—a case mortality of 14.5%.

Age of the mother.

20+	25+	30+	35+	40+
10	18	10	6	4

As usual more than 50% of the cases occurred within the decade—20-30 years.

Number of Confinements.

1st Confinement,	17 or 35.4%
2nd, 3rd or 4th Confinement,	23 or 47.9%
5th Confinement or over,	8 or 16.7%

State of the Mother.

Only 4 cases occurred amongst unmarried mothers.

Stay in Hospital.

Of those who recovered, the average stay in hospital was 37 days. The longest being 146 days and the shortest 9 days.

Of those who died the average stay was 8 days, the longest being 16 days and the shortest 4 days.

Nature of Confinement.

In 26 cases the confinement was abnormal or the delivery instrumental. The particulars are as follows :—

1. Instrumental Delivery,	20 cases
2. Retained Products of Conception,	3 cases
3. Post-Partum Haemorrhage,	2 cases
4. Craniotomy,	1 case

Damage to Soft Parts.

In 38 cases there was damage to soft parts of varying degree. Cervical lacerations occurred in 7 cases, perineal tears in 10 cases, while combined perineal and cervical lacerations occurred in 21 cases.

Clinical Types of Infection.

The usual 3 groups are defined below. Some authorities prefer to divide Group 1 into two groups—one of which is limited solely to infections of the external genitalia—the other to localised uterine infections. As no purpose seems to be served by this differentiation, we adhere to our former classification.

Group 1.—Cases in which the infective process was localised to the uterus and/or external genitalia. There were 28 of these cases, and all recovered.

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

1. Haemolytic Streptococci,	6
2. Non-haemolytic Streptococci,	4
3. Non-haemolytic Streptococci + other organisms (Colon Bacilli, Staphs, etc.),	12
4. Staphylococci, Colon Bacilli, etc.,	5
5. Unidentified Streptococci,	1

Group 2.—Cases where the infection has spread through or beyond the uterus to the appendages, cellular tissues or peritoneum but which have remained non-septicaemic.

There were 16 of these cases and 4 deaths—a case mortality of 25%.

The bacteriological results of uterine cultures were as follows :—

1. Haemolytic Streptococci,	5
2. Non-haemolytic Streptococci,	4
3. Non-haemolytic Streptococci + (Staphylococci, Colon Bacilli, etc.),	2
4. Staphylococci, Colon Bacilli, etc.,	5

Of the 4 fatal cases, 2 died of pelvic cellulitis with coronary embolism and the other 2 of generalised peritonitis.

Group 3.—Cases (septicaemic) where the infecting organisms were recovered from the blood stream—4 in all with 3 deaths. All 3 fatal cases, in addition to a blood culture positive to the haemolytic streptococcus showed a bright scarlatiniform eruption. The co-presence of these two clinical symptoms practically indicate a fatal issue.

The bacteriological results in each case are given below.

Case	Blood Culture	Uterine Culture	Result
1.	Haemolytic Streptococcus	Haemolytic Streptococcus	Died
2.	Do.	Haemolytic Streptococcus + Staphylococci	Died
3.	Do.	Haemolytic Streptococcus + Staphylococci	Died
4.	Non-haemolytic Streptococcus	Non-haemolytic Streptococcus + Gram Negative Bacilli	Recovered

Summary of Bacteriological Findings in the Three Groups.

Haemolytic Streptococci with or without other organisms, ...	14
Non-haemolytic Streptococci,	9
Non-haemolytic Streptococci + other organisms,	14
Staphylococci, Colon Bacilli, etc.,	10
Unidentified Streptococci,	1

Conclusion.

The transfer of the tuberculosis patients to Ashludie was completed on 29th March, in time to allow of the admission of cases of measles. The vacated pavilion proved eminently satisfactory for the treatment of this disease especially when complicated with broncho-pneumonia.

Quite a number of the patients suffered from marasmus following measles, and injections of convalescent serum were tried in some of these. Although all the cases treated thus showed re-

markable recoveries, equally marvellous results occurred in patients who got no serum. So that the benefits that accrued from serum therapy might have been more apparent than real. Lastly, we have been asked frequently by general practitioners if we have tried anything new in the treatment of whooping cough. X-ray therapy has been advocated by some, but of this we have no experience.

The use of ultra violet rays and carbon dioxide gas—alone or mixed with oxygen in the proportion of 1:5—are two of the so-called new methods that we have tried. The ultra-violet light appeared to have only an indirect effect on the disease by maintaining the patient's state of general well-being and increasing the resistance to the infection. Carbon dioxide gas, however, seemed to have a direct effect on the paroxysms. The spasms became less in frequency and severity, so that nursing and especially feeding was rendered more easy; broncho-pneumonia as a complication was less common and altogether convalescence was more straightforward and uneventful.

MARYFIELD HOSPITAL.

REPORT BY Dr J. B. MACDONALD,

Medical Officer.

Maryfield Hospital had a busy year in 1932, but there was no marked change in the character of the work performed; and chronic, senile, and mental cases continued to occupy most of the beds.

On 1st January there were in Hospital 135 men, 168 women, 19 boys and 18 girls; and there were admitted during the year 642 men, 606 women, 180 boys and 157 girls. The total number of patients treated during the year was 1925.

The Hospital accommodation consists of 328 beds, and the average daily number of patients was 329. The smallest number on any one day was 300, and the largest 362.

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

Bone and Joint,	9
Circulatory,	183
Ductless Glands,	4
Infancy and Malformation,	14
Digestive,	106
Genito-Urinary,	46
General,	53
Infectious,	28
Malignant,	47
Nervous,	158
Senile Debility,	86
Pregnancy and Parturition,	47
Respiratory,	216
Skin,	181
Tuberculosis,	41
Injuries,	54

During the year 24 infants were born in Hospital, and 123 healthy children admitted. Of the latter, 92 were subsequently transferred to Duncarse Children's Home.

During the year 325 patients died, most of these being advanced in years. There were 10 deaths of children under the age of 10.

One case of Diphtheria, one of Encephalitis Lethargica, one of Chickenpox, one of Dysentery, 2 of Primary Pneumonia, 2 of Ophthalmia Neonatorum, 2 of Erysipelas, 11 of Tuberculosis occurred in Hospital and were notified to the Medical Officer of Health.

There were 56 operations performed in the theatre, including:—

- 4 of Tonsillectomy.
- 1 of Turbinectomy.
- 3 of Appendicectomy.
- 2 of Cystostomy.
- 1 for Osteomyelitis.
- 1 for Adenitis.
- 1 for Removal of Semilunar Cartilage.
- 2 for Hydrocele.
- 3 for Hernia.
- 3 for Varix.
- 1 for Haemorrhoids.
- 2 for Hallux Valgus.
- 1 for Adhesions.
- 1 for Whitlow.
- 9 for Abscess.
- 1 Laparotomy.
- 1 Amputation.
- 1 Reduction of Dislocation.
- 1 Excision of Cyst.
- 1 Colostomy.
- 1 Skin Graft.
- 1 Gastrostomy.

The routine work of the Gynaecological Department proceeded on the same lines as in previous years. Operative work included Excision of Epithelioma, Colpo-Perineorrhaphy, and several cases of Curettage. Venereal cases formed an important element, both for diagnosis and for nursing.

Over 200 Gynaecological and Surgical examinations were made during the year by Dr R. C. Buist, Visiting Gynaecologist, and Mr F. R. Brown, Visiting Surgeon.

Systematic work of great excellence and value was done during the year by Mr J. M. Laburn, Visiting Dental Surgeon.

I wish to put on record the industry and ability and constant helpfulness of the Resident Medical Officers.

The usual laboratory work in connection with blood, sugar, pus, urea, etc., was performed in Hospital; and a large number of tests, examinations, and investigations were carried out by the Bacteriological Department of the Dundee Medical School.

Patients requiring to be X-Rayed were sent either 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 26 passes in 33 subjects in 1932, and in the Final Examinations senior nurses had 31 passes out of 40 subjects.

During the year the Sister Tutor gave individual attention to every probationer; and the following list shows the subjects taught and the number of lectures given in each:—

- Anatomy, 58.
- Hygiene, 38.
- Junior Practical, 38.
- Bandaging, 10.
- Poultices, 3.
- Gynaecology, 36.
- Surgical Nursing, 39.
- Medical Nursing, 31.
- Senior Practical, 29.
- Cooking, 8.
- Dietetics, 10.
- Bacteriological, 6.
- Venereal, 6.

Each nurse in training had an opportunity to attend 26 operations in the theatre and 24 ante-natal examinations.

There were 241 patients with mental trouble under treatment in the Observation wards during the year. Of these 69 were removed to Westgreen Mental Hospital, and most of the others improved sufficiently to be transferred to their homes or to the ordinary wards of the Hospital,

Selected cases suffering from depression, inhibitions, fears, and obsessions, were given psychic treatment.

Malarial treatment was tried in certain cases of Dementia Paralytica, and one patient recovered sufficiently to be discharged to his home.

While it may be argued that all curative treatment for mental conditions should be carried out at Mental Hospitals, and that Observation Wards should be simply certifying centres, it has to be remembered that many cases of mental trouble are not certifiable.

If there were a suitably equipped Psychiatric Block in connection with Maryfield Hospital, in place of the present inadequate Observation Wards, great work could be done in the curing of mental depression and allied conditions, and of functional nervous disorders.

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, 1932, 575 (282 men and 293 women), and on 15th May, 1933, 596 (302 men and 294 women) an increase during the year of 21 patients (20 men and 1 woman). As on 15th May, 1932, there had been an increase of 27 patients, this gives an increase in the number of our patients of 48 in two years.

During the year there were 102 Admissions, 49 Discharges and 32 Deaths. The total number under treatment was 677 (336 men and 341 women) and the average daily number 580.75 (291.59 men and 289.16 women).

At the end of the statistical year the 596 patients were chargeable as follows :—

	Male	Female	Total
Dundee,	282	282	564
Angus,	3	5	8
Glasgow,	14	3	17
Other Districts,	3	4	7
	<hr/> 302	<hr/> 294	<hr/> 596

The " Service " patients, maintained as Private Patients, numbered 26 at the commencement and 23 at the close of the year, during the course of which 2 were discharged Recovered and 1 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 5%.

(2) Biologic stresses in 58%, comprising the critical periods of life in both sexes — the climacteric in 12%, adolescence in 19% and senility in 27%.

(3) Psychic Stresses in the form of mental perturbations such as worry and shock and want of occupation in 32%; and

(4) Toxic stresses in the form of alcoholic and drug excesses in 5%.

The types of mental illness among the admissions comprised mainly the constitutional psychoses, e.g., melancholia 20 cases, in 12 of these active suicidal tendencies were manifested, Schizophrenia 13, delusional psychoses 30, confusion and delirium 20. The psycho-neurosis included Epilepsy in 4, neurasthenia in 2 and hysteria in 2. The organic psychoses comprised those of general paralysis 5 cases (4 men and 1 woman) and cerebral arterio-sclerosis in 2 cases, and the congenital psychoses or amentias were represented by 4 morons and imbeciles with active psychotic manifestations.

Discharges.

The cases discharged during the year numbered 49 (20 men and 29 women). Of these 27 were discharged as recovered, 21 as improved, and 1 unimproved, the recovery rate being 26.4 per cent of the number admitted, in addition those improved being 20.6 gives a total of 47 per cent. of cases who have more or less completely regained their health. Of those Relieved and not Improved 7 were boarded out, 4 transferred to other mental hospitals, 9 to the Lunatic Wards, East Poorhouse, and 2 to Certified Institutions.

Of the patients discharged as Recovered, 5 were resident less than three months, 10 less than six months, 7 less than nine months, and 5 for periods up to four years.

Deaths.

Thirty-two patients (14 men and 18 women) died during the year. Based on the average daily numbers, the death rate was 5.5 per cent. The deaths were all due to natural causes, and the causes which were verified by autopsy in 59.4 per cent., that is in all cases where consent was given by the relatives, were chiefly the following :—

Valvular Heart Disease in 13 cases; Organic Brain Disease in 6 cases; Cerebral Apoplexy 2; Acute Lobar Pneumonia 2; General Paralysis 2; and 1 each to the following:—Sarcoma of Jaw, Paralysis Agitans, Pulmonary Tuberculosis, Oedema of Lungs, Pernicious Anaemia, Chronic Bronchitis, and Exhaustion from Acute Mental Excitement.

The ages at death were as follows:—

Between 25 and 35, 5 cases; 35 to 45, 2; 45 to 55, 4; 55 to 65, 7; 65 to 75, 8; and between 75 and 80 years, 6 cases.

Occupational Therapy.

For very many years in most mental hospitals patients have been employed on the farm, in the garden, the workshops, the Laundry, Kitchen and Sewing-rooms and other departments. Such employment was then, and is still, helpful to and appreciated by a large number of the patients. No one who is interested in occupational therapy as we understand it seeks to curtail the number of patients working in these departments; on the contrary, it is found that it is possible to increase their numbers through the work in the occupational centre. Many patients, however, because of their mental and physical state, are totally unfit for that kind of employment. In every mental hospital a good proportion of both male and female patients are unoccupied in any way on account of their mental condition, and it is these cases chiefly that one seeks to benefit by means of craft work. It is of therapeutic value not only in convalescent cases, but in those whose progress towards recovery has become stationary, and in irrecoverable patients, such as those suffering from dementia praecox and paranoia. Every patient does not settle down to work immediately he or she enters the department. It has happened with us on frequent occasions that a patient shows no interest in and pays no attention to what is going on around, but after a time his interest begins to develop. Such a case made a deep impression on my mind shortly after our department was opened two years ago. A man, aged 60, had been in Hospital several months, during which time he did not improve. He spoke to no one, and would not employ himself in any way. He seemed to be deteriorating rapidly and to be passing into dementia. He was sent to the Occupational Therapy Department every day, but for more than a week he showed not the slightest interest in anything he saw or what was said to him. Later he was induced to do a little sand-papering, which he did in an entirely mechanical way. After a time he was

given a fret-saw to use, and this seemed to arouse some interest in him. As the days passed it was apparent that his interest was growing more and more, not only in the work, but also in his personal appearance. As time went on, he was given more difficult work to do, and he became more interested and enthusiastic, and when his discharge was being discussed he was reluctant to leave the Hospital. He made a thoroughly good recovery. A woman who had been in a depressed and agitated condition, and who had maintained almost complete silence for nearly two years, and who, on account of delusions, persistently refused food and had been tube fed for several months, was sent to the occupational department. From that time she began to converse and to take an interest in things outside herself. She improved steadily and was discharged recovered.

In another case of a depressed woman, who had shown little change in her mental condition for over three years, the same happy result took place. From these and other cases which could be mentioned it is clear that, by means of occupational therapy, recovery has been hastened and improvement brought about in the mental condition of many cases suffering from various mental disorders. Occupational therapy accomplishes what other forms of treatment cannot do, but it is only one of many methods which should be at the disposal of those whose duty it is to look after and treat mental disorders. There is much truth in what Thomas Carlyle said, "Work is a grand cure of all the maladies and miseries that ever beset mankind."

General and Administrative.

The general health of patients and staff was on the whole satisfactory. In December and January, influenza of a mild type made its appearance in the Hospital, affecting 10 of the Staff and 25 patients. During the year approximately one-third of the Staff were temporarily incapacitated from duty owing to minor illnesses, and this, owing to our increased number of patients and our understaffed condition due to our lack of sufficient accommodation for the Nursing Staff, was a source of considerable anxiety. Since the National Health Insurance Act came into operation in July, 1912, a record has been kept at the Hospital of the occurrence of every case of illness, incapacitating from duty amongst the insured members of the Staff, and it is of interest to note that our experience indicates that among such a group of selected healthy people the proportion who may be laid aside temporarily from work owing to illness, mostly of a minor nature and lasting usually only a few days, averages about one-third per annum, and varies from a

minimum of one-fourth to a maximum of one-half in particular years.

Attention must be drawn to the increase in our admission rate and particularly to the large number of senile and chronic cases admitted. It is unfortunate that Hospitals primarily for the treatment of mental ailments should have their usefulness in this respect considerably impaired by being thus crowded out with infirm and senile cases, which do not require either specialised medical attention or expert nursing care.

The treatment of the patients has been carried on along the usual lines. Satisfactory results continue to be obtained from the treatment of cases of General Paralysis by modern methods, particularly in the early stages of the disease, and during the year four patients were discharged to their homes greatly benefited, both mentally and physically, after courses of treatment with Tryparsamide. The results have been so encouraging that all cases of General Paralysis, provided the disease is not too far advanced, are now placed under courses of special treatment immediately the diagnosis of the disease is confirmed by the usual serological tests. The treatment causes no inconvenience to the patients, and in no case have there been any ill effects.

Chaplain's Report.

I have the honour to present my report for the year 1932-33.

The service in Church on Sunday afternoon has been held regularly throughout the year. The active and reverent interest in the service displayed by the patients is from every point of view encouraging. The more adequate supply of Bibles provided for their use has proved helpful. I should like to refer to two matters which require attention: (1) The present artificial lighting is inadequate in midwinter; (2) The harmonium is in a very unsatisfactory condition. I shall be glad if these matters are kept in mind. May I again record my gratitude to Mr Adams and Mr Chalmers for their great help in leading the praise during the service.

The usual weekly visits to the wards have been carried out, with services there for those who cannot attend church. These brief services appear to be much appreciated by the patients.

There have been fewer requests than usual for my services at funerals during the past year.

In conclusion, I should again wish to acknowledge the great help and courtesy I have experienced in my work from every member of your Staff.

(Signed) J. MACLEAN, Chaplain,

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, 1932.

I visited the institution each week during the year, and carried out the following Dental Treatment :—

Extractions :—

With Local Anaesthetic,	205 Teeth
With General Anaesthetic,	119 Teeth

12 General Anaesthetics were administered to patients suffering from alveolar abscesses and septic conditions of the mouth.

Fillings,	29 Teeth
Scaling and Cleaning,	278 Cases
Silver Nitrate Treatment (to arrest Dental Caries) ...	82 Teeth Treated
Gum Treatments,	7 Cases

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

The health of the mouths are good.

I thank yourself, your Assistants, Matron and Nursing Staff for the help they have given me during the year in carrying out my duties.

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

The systematic training of the Nursing Staff has been carried on as in former years. In addition to lectures by the Assistant Medical Officers twice weekly, practical Ward demonstrations are given by the Matron and her Assistants.

During the year 5 Nurses and 7 Male Nurses passed the final examination of the Association and obtained the Certificate for Proficiency in Mental Nursing—one Nurse with distinction—and 6 Nurses and 1 Male Nurse passed the Preliminary Examination required for the certificate.

The Artisan Staff have been fully occupied at their various trades, and a considerable amount of work has been done in keep-

ing the Hospital in good repair. At Gowrie House a good deal of replacement had to be undertaken—a new pump in Boiler House was installed, a six-chambered Vegetable Steamer in Kitchen, and a hot water Copper Calorifier as well as a Fire Escape on Male and Female Sections. The White Tiles lining the kitchen walls are commencing to bulge in several places, and will require immediate attention. I desire to draw the attention of the Committee to this expenditure during the past year at Gowrie House in order that they may consider the existing financial agreement with the Directors as to its suitability and adequacy.

Farms and Garden.

The dairy herd of 53 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 58,164 gallons, or 581,640 lbs. This gives an average of 1,097 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 1,506 and 1,437 gallons respectively; 6 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 53 milking cows, we have 18 heifers in calf, 40 yearling heifers and 22 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. Oats gave the highest yield by threshing for many years. Pigs were a poor trade.

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

I have to express my appreciation and thanks to the British Red Cross for a donation of books to the Hospital library.

WM. TUACH MACKENZIE,

Medical Superintendent.

TUBERCULOSIS.

REPORT BY DR. J. H. HUNTER,

Chief Tuberculosis Medical Officer.

By far the most outstanding event during the past year and, at the same time, an outstanding event in the history of the anti-tuberculosis campaign in this City, was the opening of the extension at Ashludie Sanatorium for the reception of patients.

Building operations had been going on for the best part of three years, and early in spring this year saw these operations completed and the buildings ready for occupation. During these years the work of the Institution had been carried out under a great handicap, and it was a great relief to realise that these difficulties and restrictions were at last removed and, in the future, the work would proceed under much better conditions and with greater facility, now that all the tuberculous patients, for whom the Corporation are directly responsible, are housed under one roof.

During the last months of the previous year the furnishing and equipment of the new wards and annexes were dealt with and arrangements completed, so that there would be no delay, once the tradesmen were finished, in furnishing the Hospital preparatory to receiving patients. At the same time the extra nursing and domestic staff, necessary to meet the increased number of patients and size of Institution, was engaged. All arrangements were completed by March.

The patients were transferred from King's Cross Hospital, in relays by ambulance van, commencing on March 18th and completed by March 29th. This transfer was carried out expeditiously and successfully, and no patient suffered from any bad effects as a result of the move. Only three cases refused to be transferred.

The furnishings essential to the housing and treatment of the patients had at first only been considered, now, with the transfer complete, and the wards in working order, the furnishing and equipping of the annexes, the operating theatre, X-Ray room, plaster room, laboratory and dispensary were undertaken, and by the end of the year the equipment of the Unit was practically completed.

It is with a sense of the deepest gratitude that I review these past years and recall the great help given by all those with whom I was associated during these building operations. To all the various members of the staff, who carried on the work of the existing Institution most excellently under circumstances of the greatest difficulty and under the most trying conditions during the great upheaval caused by the prolonged building operations; to members of other Corporation departments, particularly the Works and Electricity departments, who ever willingly gave me much help on the various technical and other matters that arose, I tender my most sincere thanks for this very valuable aid and for the ready and enthusiastic manner in which these services were given, which lightened so materially the many onerous and unusual duties that fell to my lot during this trying time.

Now that this Institution has been in operation for the best part of a year, I am satisfied that the results have fully borne out our expectations, that the housing of all cases in one institution has been to the advantage of all concerned. At the same time, I would urgently bring before your notice, that this change has not been an increase in the number of beds available for the treatment of tuberculosis, it is simply a transfer of beds, already existent, from one institution to another, bringing all cases of tuberculosis under one administration.

The new Institution has made it possible for much more extended treatment to be carried out, especially in the non-pulmonary forms and in adults, whose treatment had not, so far, been undertaken by us, but which is now being forced upon us. Our original establishment was based on the needs for pulmonary tuberculosis, but there is a very large field in the non-pulmonary form for which we have not the required accommodation, and it is to meet this type of case, for whom so much can be done to cure, that I strongly urge the consideration of ways and means of remedying this defect. It might be met by installing more beds at Ashludie Sanatorium, or of making use of the Institutions already in existence in the City, by setting aside beds in King's Cross Hospital or Maryfield Hospital, or both, as demands arise. The matter is urgent and, I hope, will be considered at an early date. Arrangements could be made to receive advanced and hopeless cases into one or other of these City Institutions and, I think, is to be recommended, for the convenience of near relatives in such cases must be considered. The distance to Ashludie is great, and the cost of travelling and the loss of time make a severe burden on the

resources of the friends, who naturally desire to see as much as possible of their relatives and to whom visiting facilities must be extended. For this reason alone, I would recommend the installation of some beds in one of the City Institutions mentioned. This would release a certain number of beds at Ashludie Sanatorium, which could then be utilised for these non-pulmonary cases.

The work of the Tuberculosis Scheme in the City was carried on as in former years. I take this opportunity of acknowledging my appreciation of the great assistance received during the year from all other Institutions interested in this work, Medical Officers and Staffs of the Public Health Service, the Public Assistance and the Royal Infirmary, I tender my thanks to them for their very valuable services, which have helped much in the carrying out of our work.

The total notifications of tuberculosis for 1932 show an increase of 26. On analysing the figures, this is found to be a reduction of 16 in the pulmonary and the great increase of 42 in the non-pulmonary. In the pulmonary the decrease is for all age groups, except for those of 45 years and upwards, where there is a definite increase. The non-pulmonary increase, I think, is due to the Royal Infirmary notifications, and is accounted for by the personality and alertness of the Resident Medical Officers. In males, the increase is in age group 5 to 15 years, in females, 15 to 45, and glands and joints in type, just the form of tuberculosis that would be found in the out-patient department of the Royal Infirmary.

The attendances at the clinics show little change and the work at these has been carried out satisfactorily. The increase in the attendances at the artificial sunlight and the X-Ray prove their usefulness, but with regard to the latter, the installation of an X-Ray apparatus at Ashludie Sanatorium will diminish the attendances here next year, as the X-Ray work for Ashludie Sanatorium was done here.

The examination of contacts, that very important branch of our work, has increased by a considerable number during the past year.

I visited Sidlaw Sanatorium on several occasions during the year and I was always impressed by the progress made by the children there.

I take this opportunity of thanking the Medical and Nursing staffs for their valuable help to this part of our work.

In the year 1932, 358 cases of tuberculosis were notified. 229 cases of pulmonary tuberculosis and 129 cases of non-pulmonary tuberculosis. Of these :—

- 121 cases were discovered at the Tuberculosis Section.
- 80 cases were notified by private practitioners.
- 22 cases were notified from Maryfield Hospital.
- 98 notifications came from Royal Infirmary.
- 13 notifications came from Medical Officers outside the City.
- 24 cases came under the notice of the Department through the Registrar after death had taken place.

Pulmonary Tuberculosis.

During the year, 229 cases of pulmonary tuberculosis were notified. The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	—	—	—
1- 5 years	...	3	1	4
5-15	...	21	34	55
15-25	...	18	28	46
25-45	...	42	38	80
45-65	...	23	14	37
65 years and upwards	...	5	2	7
Total	...	112	117	229

The following are the particulars as regards housing :—

No. of Rooms.	No. of Cases.	Total No. of Inmates.	No. of Inmates per Room.
1	17	65	3.82
2	96	416	2.16
3	34	191	1.87
4 and upwards	22	121	1.37

In 60 cases home conditions were satisfactory.

64 houses were disinfected on removal of patients to hospital as compared with 72 in 1931.

Non-Pulmonary Tuberculosis.

During the year 129 cases of non-pulmonary tuberculosis were notified. The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	...	5	5
1-5 years	...	13	11	24
5-15	..	32	17	49
15-25	..	13	17	30
25-45	..	5	12	17
45-65	..	...	4	4
65 years and upwards	...	...	...	...
		63	66	129

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	4	2	2	3	4	0	1	0	1	0	1	0	0	5 13
Abdomen	0	0	1	1	10	3	4	5	1	2	0	1	0	0	16 12
Glands	0	0	5	4	8	9	1	3	1	2	0	1	0	0	15 19
Joints	0	1	2	2	9	1	6	5	1	2	0	0	0	0	18 11
Spine	0	0	2	1	0	0	2	1	1	2	0	1	0	0	5 5
Other Forms	0	0	1	1	2	0	0	2	1	3	0	0	0	0	4 6
Totals	0	5	13	11	32	17	13	17	5	12	0	4	0	0	63 66

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	9	39	4.33
2	44	239	2.72
3	25	126	1.68
4 and upwards	12	79	1.64

In 39 cases home conditions were satisfactory.

Tuberculosis Clinic.

During the year 474 new cases were enrolled as compared with 441 in the year 1931. Of these 79 were found to be suffering from distinct phthisis (44 males and 35 females). 81 were found not to have the disease. In 300 cases the signs were somewhat indefinite, but these cases were regarded as the "pre-tuberculosis stage"; 13 were found to be suffering from other forms of tuberculosis and 1 refused examination.

There were 312 contacts examined; 6 were found to be suffering from pulmonary tuberculosis, 139 were suspicious and are being kept under observation and the remaining 167 were found to be negative.

Of the 79 cases of definite phthisis, 27 were previously notified and 52 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	...	—	3	3
5-15	„	7	9	16
15-25	„	10	11	21
25-45	„	19	10	29
45-65	„	—	2	10
65 years and upward :	..	—	—	—
Totals	...	4	35	79

The attendances at the tuberculosis clinic were as follows :—

	Insured.	Non-Insured.	Total.
January	384	275	659
February	419	363	782
March	467	309	776
April	438	231	669
May	412	251	663
June	392	218	610
July	316	158	474
August	380	230	610
September	458	287	745
October	418	342	760
November	401	337	738
December	403	309	712
	4888	3310	8198

Artificial Sunlight.

During 1932, 318 patients attended the artificial sunlight clinic. Of these, 164 were males and 154 were females.

	Males.	Females.	Total.
No. of Attendance ^s	6,021	6,081	12,102
No. of Sessions	—	—	459

Laboratory Work.

During the year, 414 specimens of sputum were examined, with the following results:—

		Positive.	Negative.
61 for general practitioners	...	14	47
353 for clinic patients	... — ...	39	314

X-Ray Department.

During 1932, 416 radiograms and 613 screen examinations were carried out. Of the 416 radiograms:—

Chest.	Other parts.
376	40

Artificial Pneumothorax.

During the year, there were 191 attendances at the artificial pneumothorax clinic. Of these 49 were males and 142 were females.

Sidlaw Sanatorium.

During the year there were altogether 59 cases from the City recommended for treatment in this Institution. 25 of these were males and 34 were females. There were 55 cases discharged (22 males and 33 females). Average stay in Institution—210 days.

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

Improved.	Slight Improvement.	No Improvement.
42	6	7

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

ASHLUDIE SANATORIUM.

Report by Dr B. W. ANDERSON

This year was marked by the opening, in March, of the new hospital block, which provides an additional 60 beds for pulmonary and surgical tuberculosis, and to which is attached the wing containing the operating theatre, plaster room, and X-Ray room. The sanatorium is now completely equipped for the modern treatment of all types of tuberculosis. During the year, both the former were equipped and in use. The X-Ray plant, although not obtained during the year under discussion, has now been installed and is working satisfactorily. The X-Ray plant, so necessary a part of sanatorium equipment, will be of inestimable value in diagnosis and in the control of treatment.

One of the day rooms in the new block was utilised to make room for four children's cots and this, together with the 60 adult beds and the two old pavilions, makes the total available number of beds 124. The additional beds were quickly filled by the transference of the patients from King's Cross Hospital, and this sudden transference of a large number of patients made the total admissions for the year high. The admissions for the year were 223—101 males and 109 females, and 13 children (under 12 years). Table 1 gives the facts of the report in brief.

	Males	Females	Children	Totals
Admitted:—				
Disease of Lungs,	91	87	2	180
Disease of other parts,	9	19	11	39
Non-tuberculous,	1	3	—	4
	<hr/>	<hr/>	<hr/>	<hr/>
	101	109	13	223
Discharged:—	50	72	5	127
Average residence of those discharged—189.6 days.				
Died,	18	14	0	32
Average residence of those died—86.1 days:—				
No. in residence on Dec. 31st,				
1932,	56	57	7	120

Average daily number of patients before March 17th,	56.5
Average daily number of patients after March 17th,	110
Average daily number of patients for whole year,	99
Highest daily number of patients,	122

Of the admissions, cases of pulmonary tuberculosis formed more than four-fifths of the total. This has meant that a number of the beds in the wards reserved for the treatment of surgical tuberculosis have been occupied by pulmonary cases. As the period of treatment in tuberculosis of bones and joints is, however, very long, there is little doubt that all the beds in these wards will be required for cases of that type and when this does occur, a bed shortage may arise. This shortage cannot be made good at the expense of decreasing the time of the patients' residence in the sanatorium. The average period of residence of those discharged—189.6 days—is already very low, when one considers the majority of those admitted are advanced cases of tuberculosis. This low figure is partly accounted for by the number of patients who left after relatively short periods of treatment and against medical advice, and partly by the discharge of a number of advanced cases who had got rapidly worse and were allowed to go home on request.

Analysis of admissions according to extent and locality of disease:—

Total—223.

	Early			Intermediate			Advanced			Total
	M.	F.	C.	M.	F.	C.	M.	F.	C.	
Pulmonary,	10	12	—	16	15	—	65	60	2	180
Non-Pulmonary—										
Meninges,	—	—	—	—	—	—	—	—	—	
Abdomen,	—	—	1	—	—	1	—	—	—	
Glands,	—	—	—	—	—	—	—	—	—	
Bones & Joints,	1	—	2	—	5	2	4	9	1	
Spine,	—	—	—	1	—	—	2	4	—	
Other Forms, ...	—	—	4	—	—	—	1	1	—	39

Non-tuberculosis, admitted for observation—4.

No attempt at accurate classification is made, but the table gives a rough indication of the type of case admitted. Pulmonary and bone and joint tuberculosis present two different problems. Of the cases of lung disease, in those classified as early, cure can be expected, and in the intermediate group, one may hope to obtain

quiescence of the disease under treatment. In the advanced cases, which greatly preponderate, although it may be possible to obtain considerable improvement in many, permanent benefit is not likely to result, and many are beyond the stage when treatment has any effect.

In bone and joint tuberculosis, cure is to be expected in the early and intermediate groups when properly treated, and quiescence or even cure may be obtained in many of the advanced cases, but as there is always destruction of large areas of tissue in these cases, cure is likely to be accompanied by permanent deformity and disability.

The high percentage of advanced cases is regrettable, but is largely unavoidable. Many patients do not present themselves for examination until they are in a hopelessly advanced condition; others refuse sanatorium treatment when first seen and only consent to go in months or years later when they have really got beyond the stage when sanatorium treatment can be of any benefit. A fairly large percentage of the advanced cases admitted are patients who have previously received treatment but who have broken down a number of years later. This is particularly likely to happen in those who leave the sanatorium on their first stay before they have completed the course. It must be remembered, however, that the very high figures for this year are largely due to the transference of those patients previously resident in King's Cross Hospital, practically all of whom suffered from advanced tuberculosis.

A high percentage of advanced cases means a big number of bed patients, and in the past year the new block has been unable to hold them all, with the result that a fair number of patients confined entirely to bed have had to be nursed in the pavilions. The duration of treatment varies with the type and state of the case, but long periods are required in most instances, and, generally speaking, the more advanced the case the longer the period of treatment necessary. This is particularly so in advanced bone and joint disease, where treatment may extend over a number of years. With this high admission rate in advanced cases, and their subsequent lengthy residence, a bed shortage is scarcely avoidable.

Analysis of admissions according to age and site of disease:—

Total—223.

	Under 4 years	10 years	15 years	20 years	30 years	40 years	50 years	60 years	and over	Total
Pulmonary, ...	—	—	10	23	70	40	22	7	8	180
Non-Pulmonary:—										
Abdomen,	1	—	1	—	—	—	—	—	—	2
Bones & Joints, 3	—	—	3	10	6	1	—	—	1	24
Spine,	—	—	—	2	3	1	1	—	—	7
Other Forms, ...	3	—	2	1	—	—	—	—	—	6
Non-Tuberculous, —	—	—	—	—	1	3	—	—	—	4
	—	—	—	—	—	—	—	—	—	—
	7	—	6	13	10	5	1	—	1	43

As patients between the ages of 5 and 12 years are sent to the Sidlaw Sanatorium, this table does not form a true guide to the age incidence of non-pulmonary tuberculosis, many of the cases falling in the age group not admitted to Ashludie. The majority of cases of non-pulmonary tuberculosis occur within the first 30 years of life, while pulmonary tuberculosis affects chiefly persons in early or middle adult life, with a well marked peak in the age group 21 to 30 years. In bone and joint tuberculosis the outlook is not greatly affected by age, but on the whole the response to treatment is better in children than in adults. In pulmonary tuberculosis, on the other hand, the younger the patient the more acute the disease process tends to be and the worse the prognosis.

Conditions of patients on discharge:—

	Lungs		Abdomen		Bones and Joints		Other Forms	
	M.	F.	M.	F.	M.	F.	M.	F.
Quiescent,	2	7	—	—	—	2	—	—
Much Improved,	15	15	1	—	—	—	1	1
Improved,	21	16	—	—	—	—	—	—
No Improvement,	8	13	—	—	—	2	—	1
Worse,	2	7	—	—	—	—	—	—
Died,	18	13	—	—	—	1	—	—
King's Cross Hospital, —	—	—	—	—	—	1	—	1
Royal Infirmary,	—	1	—	—	2	2	—	—
Sidlaw Sanatorium, ...	—	—	1	—	—	—	—	—
Maryfield Hospital, ...	—	—	—	—	—	1	—	—

Non-Tuberculous—4.

Total discharges, including deaths—159.

This table shows in brief the results of treatment and the condition of the patients on leaving the sanatorium. Considering the

type of case admitted, the results of treatment are, on the whole, satisfactory.

State of patients in the Sanatorium on December 31, 1932 :—

	Males			Females			Children		
	Adv.	Inter.	Early	Adv.	Inter.	Early	Adv.	Inter.	Early
Lungs,	31	9	8	27	10	9	2	—	—
Bones & Joints,	3	—	1	4	3	—	2	1	—
Spine,	2	1	—	4	—	—	—	—	—
Other Forms,	—	—	—	—	—	—	—	1	1

Non-Tuberculous—1. Total—120.

Treatment.

Artificial pneumothorax was begun in eleven patients during the year, and in all eighteen patients were having this treatment. This, the most widely used of the methods of collapse therapy, forms one of our most effective weapons in the treatment of pulmonary tuberculosis, but unfortunately the number of patients suitable for the treatment is small.

Evulsion of the phrenic nerve was done in five cases, with distinct benefit resulting in four. This operation, although it has a limited application, has still a definite and valuable place in the treatment of pulmonary tuberculosis.

Courses of injections of gold salts, either in the form of Sanocrysin or Crisalbine were given to eight patients; in one of these, injections were stopped early as they aggravated the condition. A difference of opinion still exists as to the benefit likely to be derived from the use of gold salts in the treatment of pulmonary tuberculosis, but they do certainly appear to exercise a beneficial effect on the lung lesions if used on properly selected cases. They are not to be regarded as a curative measure. Experience and caution are necessary in their use if good results are to be obtained, as their use is not altogether free from danger. It is a costly method of treatment, but in a disease such as pulmonary tuberculosis, where active methods of treatment are limited, if it is to help the patient it is a justifiable expenditure.

Treatment in the cases of bone and joint tuberculosis has been largely conservative. The few cases that required operative interference were transferred to Dundee Royal Infirmary, as at that time the operating theatre was not equipped. In future, all such work will be done at the sanatorium,

Conservative treatment in bone and joint tuberculosis consists largely in immobilisation of the affected part, either by splints, plaster or other special appliance, and the majority of these patients, of necessity, spend the greater part of their stay in the sanatorium, in bed. Previously, many of these cases were treated outside the sanatorium, but it is just as important that they should have sanatorium treatment as the cases of pulmonary disease. No treatment will be effective that is confined to dealing with the local condition. Tuberculosis is a general disease of which the lesion in bone or joint is a local manifestation, and it is just as important to treat the patient's general condition as to treat the local lesion. It is here that the sanatorium is of the greatest benefit. Rest, good food, fresh air and sunlight do much to improve the general condition of the patient and build up his resistance. The tonic value of fresh air and sunlight in the treatment of all forms of tuberculosis cannot be overestimated. Exposure to direct sunlight, while contra-indicated in the pulmonary types, is, when properly controlled, of the greatest benefit to the non-pulmonary types. In view of this, one cannot help regretting that the balconies were not built a few feet wider.

It was suggested some time ago to put screens at each end of the verandahs, with a view to preventing, if possible, the wind sweeping along them. On windy days many of the patients refused to go outside on account of the cold and discomfort. It is to be hoped the screens will have the desired effect, as there is little doubt that those patients, who live outside constantly, do better than those who are confined mainly to the wards.

VENEREAL DISEASES.

REPORT By DR. C. AVERILL,
Special Medical Officer, Venereal Diseases Scheme.

As in former years the treatment of the various forms of Venereal Disease has been carried out under the Venereal Diseases Scheme at the Public Health Institute, 55 Constitution Road.

A separate clinic for the treatment of these conditions in nursing mothers and their babies still meets at the Chief Child Welfare Centre, Nelson Street. The reorganisation of this clinic is at present under consideration.

Throughout the year the number of new cases reporting has shown very little variation on previous years. A detailed consideration of this number, however, brings out a few points of extreme interest. The total number of new cases was 1,110, a diminution of 58 compared with the previous year.

The actual numbers were:—

1931—Male,	723	1932—Male,	624
Female,	445	Female,	486
<hr/>		<hr/>	
1,168		1,110	

From these numbers it will be seen that there was an increase in the female new cases of 41, which made the total number of new cases for the female clinic during 1932 the highest since 1921. Of these new female cases there was a slight increase in the number of patients with syphilis from 138 to 164, an increase, however, of little importance. A much more important point was the large increase in the number of new cases who reported suffering from gonorrhoea. This was also the case during 1931, but still more so during the year under discussion. For the past ten years the number for new female cases of gonorrhoea were as follows:—

1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
94	63	58	44	63	53	95	64	106	205

With a population such as we have it is obvious that the number of cases reporting with gonorrhoea is suspiciously low. The suspicion becomes intensified when it is noted that for each case of gonorrhoea there are 3.1 cases of syphilis, as during 1930. During this year, 1930, for the whole of Scotland, the ratio of gonorrhoea to syphilis (new cases) was 1.01 for female cases. From 1927 until 1930 inclusively, the ratio varied only from 1 to 1.1 (vide:—Report of the Department of Health for Scotland, 1931). In our clinics during 1932 the ratio approached to something like what one should expect, but had never previously

managed to attain. The extra number of new cases as will be noted meant a certain increase in attendances, but this was kept as low as possible commensurate with efficient treatment.

Treatment has been considerably modified of late with excellent results. A greater variety of preparations are now in use, and patients are not allowed to go for long without effective and repeated testing. From experience one knows that certain pathological conditions may be due to prolonged treatment with a single preparation. This now never occurs. Even with this reduction in period of attendance it will be noted that the percentages of discharges is practically the same as in former years, when the tendency was to keep patients for very prolonged periods.

As for syphilis, although there has been a slight increase in the number of new cases, the attendances are not as high as one would expect and could have permitted. Fewer injections are now given, but these are in larger doses and more in line with modern treatment. Moreover, if at all possible, all patients are given two preparations, an arsenobenzol and a metal, at each visit. This has been found to be much more efficacious than giving numerous small intravenous injections over a prolonged period and alternating with a metallic substance given intramuscularly. Moreover, it applies in both directions as saving the patient numerous unnecessary visits and the Local Authority unnecessary expense.

An analysis as to how the patients were directed to the Public Health Institute is of some interest.

	Male	Female	
Practitioners,	144	118	
Dundee Royal Infirmary, ...	26	65	43 of these are from Dr Fairlie, Gynaecologist, Dundee Royal Infirmary.
	Male	Female	
Ante-natal Clinic,	—	40	
Child Welfare Centre,	—	—	
School Clinic,	—	5	
Other Institutions,	—	33	
Ophthalmic Clinic,	93	69	
Traced by M.O. Female Clinic through female patients,	16	—	
Traced by M.O. Male Clinic through male patients, ...	—	32	
With S.D. Cards,	67	—	
Voluntary,	278	124	
	—	—	
Total,	624	486	

From these figures it will be noted that of the 65 from Dundee Royal Infirmary 43 of these were directed to the Public Health Institute by the Gynaecologist who also happens to be the same as is in charge of the ante-natal clinic. In other words, 83 new cases came to the Public Health Institute from these two sources, obviously depending to a large extent, at least, upon the officers in charge.

As the great majority of these cases were suffering from gonococcal infections, and as it is extremely difficult to get hold of such patients, anything done to change the working of these sources of supply is to be thoroughly deprecated, no matter whether it be a question of staff or location.

From the number of cases who reported at the Public Health Institute, it should be obvious that in spite of various modifications the amount of work entailed would be enormous. The total attendances accounted for by these patients throughout the year 1932, together with those brought forward from the previous year (and compared with those of 1931) were as follows:—

		Syphilis		Gonorrhoea		Mixed Infections		Other V.D.		No V.D.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1931, ...		7,109	5,085	17,877	5,944	1,566	1,327	569	—	1,049	911
1932, ...		5,589	6,493	18,072	7,729	—	—	778	—	854	949
1931—Male,				28,170		1932—Male,				25,293	
Female, ...				13,267		Female, ...				15,171	
Total, ...				41,437		Total, ...				40,464	

It will be noted that during 1932 there were no cases of mixed infections. During this year the Department of Health for Scotland decided that such patients should be classified as suffering from their individual complaints. Hence such patients are included under the headings for syphilis, gonorrhoea, etc.

It will be seen from these totals that there was a reduction in male attendances of 2,877 and an increase in female attendances of 1,904.

The following are the number of in-patient days, and as in the case of the attendances the increases and decreases affect the same set of figures:—

In-patient days resident.

1931—Male,	1,410	1932—Male,	1,242
Female, ...	196	Female, ...	813
<hr/>		<hr/>	
Total, ...	1,606	Total, ...	2,055

In the case of male patients indoor treatment is carried out at the Public Health Institute where there are wards of ten and two beds respectively. Indoor treatment of female patients is carried out at King's Cross and Maryfield Hospitals, the former serving for cases of non-pregnant patients, while the latter accepts pregnant V.D. cases and other such cases as are scarcely suitable for admission to an infectious diseases hospital. Treatment in all cases is controlled by the Medical Officers in charge at the Public Health Institute.

I wish once again to draw attention to the great importance of patients reporting at the earliest appearance of any form of venereal lesion. This is extremely important from the point of view of every one. It gives the patient a much better chance of cure.

Every one ought to know how much more difficult it is to treat a case of syphilis once the Wassermann has become positive. In other words, there is little excuse for delaying the diagnosis of syphilis beyond the pre-Wassermann stage: i.e., diagnosis should be by Dark Ground. Judging from the number of Dark Grounds for the year 1932, 56 in all, it is perfectly obvious that it is not yet realised how important this method of diagnosing syphilis is; more so is this the case, when it is noted that 49 of these patients were submitted for Dark Ground examination on behalf of the V.D. Clinics, leaving a balance of 7 for all other sources, a state of affairs that requires no further comment. A case of syphilis diagnosed by this means and before the Wassermann reaction has become positive gives, in my opinion, the patient a chance of a guaranteed cure and diminishes the time and amount of treatment, points of very great importance to the ratepayer as well as to the patient. Unfortunately the "wait and see" method of diagnosing early syphilis is not yet defunct, and the habit of waiting on a negative Wassermann reaction becoming positive is much too common.

With regard to the treatment of syphilis there has been little deviation from the usual methods. Reliance is still placed upon an arsenobenzol compound and a metal, the former usually given intravenously and the latter intramuscularly. Throughout the

year under consideration Tryparsamide has been used much more extensively for chronic cases of syphilis and affections of the central nervous system. The administration of this preparation requires great care, and should not be undertaken without a considerable amount of experience. Once again I wish to draw attention to the question of inefficient treatment. It is, as far as we know at present, useless to give less than two complete courses of an arsenobenzol compound (usually intravenously) together with a metal intramuscularly.

The amount of arsenobenzol should not be less than 4.95 grms. per course and the amount of metal, e.g. Bismuth, not less than 3.4 grms. Many authorities even give three such courses together with larger quantities of the arsenobenzol and bismuth in each respective course. There is ample argument for both methods, but to give less than two courses is not only futile but well-nigh malpractice because, as far as one can judge, many cases by means of inefficient treatment are not only rendered Wassermann fast or in other words resistant to antispecific treatment but are exposed to the onset of the more serious central nervous system lesions such as *Tabes Dorsalis*, General Paralysis of the Insane, Cerebro-spinal syphilis, and the more serious tertiary lesions.

Time, as emphasised since the days of Hutchinson, is a most important factor, and to send away a patient immediately at the end of a course or courses of treatment covering a very short period of, say, twelve months, is to be thoroughly deprecated. To throw the burden of the results of such inefficient treatment and its consequently increased expenditure upon those responsible for the care of these cases is to say the least of it extremely unprofessional.

With regard to the new cases of syphilis reporting during 1932 an analysis shows them to be made up as follows:—

	Male	Female
With "Dark Ground" positive but Wassermann reaction still negative,	9.0%	1.6%
With "Dark Ground" positive and Wassermann reaction positive,	13.8%	3.0%
Suffering from secondary syphilis,	23.3%	37.4%
In the Tertiary phase of syphilis,	31.9%	32.4%
Cases showing involvement of central nervous system (<i>Tabes Dorsalis</i> and General Paresis included,	17.4%	11.6%
Congenital syphilis,	4.6%	14.0%
Extra-genital syphilis,	Nil	Nil

It will be seen from the above percentages of the different types of syphilis reporting that the number of cases in the pre-Wassermann stage is appallingly low; in the case of the female it is almost non-existent. This state of affairs requires no further comment. The percentages of secondaries and tertiaries are still, as in past year, high and I presume will remain so long as syphilis is diagnosed and treated as haphazardly as it is at present.

The actual cost of the antispecific preparations (an arseno-benzol compound and/or a metal) per patient for 1932 works out at $1/5\frac{1}{2}$ per patient. The following are given for the sake of comparison:—

	Male	Female
1929,	8½d	10½d
1930,	6d	1/1
1931,	1/-	9d
1932,	7½d	10d

The question of gonorrhoea is no less important as this condition is still treated too much as a matter of very little consequence. In the female sex it is too often diagnosed as leucorrhoea and little or nothing done until some complication sets in and then the seriousness of the condition is appreciated. It is most important that the male should report at the very earliest and while, at least, the urethritis is confined to the anterior urethra. In the case of the female the matter is obviously much more difficult particularly from the patient's point of view, and the onus of the matter to a large extent falls upon the practitioner. It is a great pity that all female patients who suffer from abnormal vaginal discharges do not seek medical advice. It would then become the duty of the practitioner to examine properly and not diagnose the condition as one of leucorrhoea until he or she had definitely excluded Gonorrhoea. This can, to say the least of it, only be done by taking smears from the proper sites and one of these is very rarely the vagina, certainly almost never in the adult: before puberty always.

It does not seem to be realised that gonococcal urethritis is a possibility in the female sex and that the custom of examining the urethra and taking smears therefrom is just as important as in the male. If the cervix is not infected already, an early diagnosis of gonococcal urethritis may serve, if properly treated, to prevent the onset of the many and graver complications which give the consulting gynaecologist so much to do.

Of those reporting and found to be suffering from this complaint 30.5% (31% male and 30% female) were in the early stages of the disease and unaccompanied by any complication; of those in whom the condition was advanced or at least well established there were 69.5% (69% male and 70% female). Of the female the majority were suffering from urethritis and cervicitis, the latter in various stages of progress. With regard to the male all the cases had at least developed posterior urethritis, and of these a considerable number had further complications in the form of epididymitis, 8.13%; prostatitis, 3.5%; vesiculitis, 4.2%. Obviously treatment in these cases is much more difficult and unsatisfactory than in those who have no complication. The test for cure in such cases is extremely difficult and loses much of its value because of the ability of the gonococcus to get located in parts that are well nigh impossible to get at with our present armamentarium. Consequently all the problems become much simplified by early reporting in the disease, and although one cannot guarantee the prevention of any particular complication, much may be done to reduce their incidence.

Treatment of male patients has been along much the same lines as in former years. In the female clinic treatment has been considerably elaborated as it was felt that patients in past years were attending for periods that were, to say the least of it, lengthy.

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 1931 are given for the sake of comparison.

	1931	1932
Wassermann reaction,	2,272	2,184
Special Wassermann,	173	267
Gonococcus Complement Fixation Test, ...	804	840
Dark Ground Examinations,	48	49
Smears,	1,577	2,388
	—	—
Total,	4,874	5,728

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	3	24	4	13	44
February	13	35	6	24	78
March	5	14	7	17	43
April	10	12	1	14	37
May	12	18	0	4	34
June	7	15	1	12	35
July	8	16	3	14	41
August	6	23	3	5	37
September	3	23	2	11	39
October	7	18	3	11	39
November	8	12	5	17	42
December	6	13	3	15	37
Totals	88	223	38	157	506

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total
January	5	5	2	7	19
February	0	5	1	1	7
March	1	2	2	3	8
April	2	7	0	0	9
May	4	7	1	3	15
June	0	6	0	1	7
July	2	4	1	0	7
August	5	4	0	0	9
September	3	5	0	3	11
October	3	3	2	1	9
November	1	9	0	0	10
December	2	3	0	2	7
Totals	23	60	9	21	118
Grand Total	116	283	47	178	624

TOTAL—New Cases—Males ... 624

NEW CASES.

DUNDEE.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January	14	19	0	15	48
February	10	21	0	19	50
March	14	13	0	7	34
April	15	10	0	6	31
May	11	12	0	6	29
June	14	17	0	7	38
July	7	13	0	4	24
August	6	24	0	10	40
September	15	16	0	13	44
October	17	19	0	6	42
November	15	12	0	8	35
December	15	13	0	7	35
Totals	153	189	0	108	450

OTHER AREAS.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January	0	1	0	2	3
February	0	1	0	1	2
March	2	2	0	1	5
April	2	0	0	0	2
May	0	1	0	0	1
June	2	3	0	0	5
July	0	0	0	0	0
August	3	0	0	1	4
September	2	1	0	3	6
October	0	2	0	1	3
November	0	4	0	0	4
December	0	1	0	0	1
Totals	11	16	0	9	36
Grand Total	164	205	0	117	486

Females—486=1,110.

AGE PERIODS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.
Under 1 year ...	1	0	0	2
1-5 years ...	1	0	0	1
5-15 years ...	2	0	0	2
15-25 years ...	25	91	20	57
25 years and up	87	192	27	116
Totals, ...	116	283	47	178
Grand Total	...	...	624	

ATTENDANCES.

DUNDEE.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	351	1,446	49	42	1,888
February ...	371	1,504	71	65	2,011
March ...	385	1,579	44	68	2,076
April ...	405	1,372	107	73	1,957
May ...	337	1,373	43	44	1,797
June ...	368	1,344	39	79	1,830
July ...	390	1,329	102	92	1,913
August ...	331	1,265	60	57	1,713
September	430	1,504	65	64	2,063
October ...	427	1,418	42	65	1,952
November	578	1,479	66	77	2,200
December	671	1,763	38	62	2,534
Totals	5,044	17,376	726	788	23,934

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	73	81	10	19	183
February ...	50	54	8	6	118
March ...	45	21	10	7	83
April ...	41	55	0	0	96
May ...	45	78	6	7	136
June ...	34	54	0	4	92
July ...	62	90	10	3	165
August ...	37	74	0	2	113
September	66	48	0	6	120
October ...	30	67	8	4	109
November	33	52	0	1	86
December	29	22	0	7	58
Totals ...	545	696	52	66	1,359
Grand Total	5,589	18,072	778	854	25,293

Total Attendances—Males, 25,293.

AGE PERIODS—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.
Under 1 year ...	3	0	0	6
1-5 years ...	5	3	0	14
5-15 years ...	9	4	0	7
15-25 years ...	41	75	0	17
25 years and up	106	123	0	73
Totals ...	164	205	0	117
Grand Total	...	...	486	

ATTENDANCES.

DUNDEE.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	443	496	0	52	991
February ...	424	604	0	83	1,111
March ...	482	647	0	62	1,191
April ...	488	546	0	64	1,098
May ...	513	534	0	64	1,111
June ...	554	544	0	67	1,165
July ...	462	540	0	69	1,071
August ...	428	487	0	64	979
September	477	626	0	120	1,223
October ...	538	676	0	89	1,303
November	555	690	0	84	1,329
December	645	815	0	97	1,557
Totals ...	6,009	7,205	0	915	14,129

OTHER AREAS.—Females.

	Syphilis.	Gonorrhœa.	Other V.D.	No. V.D.	Total.
January ...	35	52	0	9	96
February ...	33	42	0	9	84
March ...	24	61	0	6	91
April ...	32	44	0	1	77
May ...	28	30	0	0	58
June ...	43	38	0	0	81
July ...	49	37	0	0	86
August ...	45	45	0	4	94
September	67	49	0	4	120
October ...	43	51	0	0	94
November	35	27	0	0	62
December	50	48	0	1	99

Totals ...	484	524	0	34	1,042
Grand Total	6,493	7,729	0	949	15,171

Females, 15,171=40,464.

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given :—

		Novarsenobillon				Metarsenobillon		
		.15	.3	.45	.6	.15	.3	.45
January	...	5	14	54	45	7	13	25
February	...	10	19	48	64	15	17	42
March	...	20	25	91	75	6	11	60
April	...	12	21	97	83	4	9	29
May	...	12	21	103	67	8	10	32
June	...	10	28	96	79	5	7	41
July	...	12	26	108	70	4	7	33
August	...	12	16	71	69	4	7	18
September	...	11	26	90	83	4	8	24
October	...	10	26	80	80	5	14	18
November	...	19	21	78	71	4	15	23
December	...	9	21	189	85	4	7	17
		142	264	1,105	871	70	125	362
Totals	...	2,382				557		

		Kharsulphan.			Other Drugs.	Bismuth.		
		.15	.3	.45		.2	.3	.4gm.
January	...	11	11	30	65	21	89	84
February	...	11	12	47	49	62	74	81
March	...	14	31	76	57	45	103	104
April	...	6	17	78	78	62	100	118
May	...	8	27	67	69	61	186	67
June	...	5	36	104	61	66	116	103
July	...	9	25	62	76	54	130	110
August	...	10	29	45	64	75	87	70
September	...	26	39	63	73	57	120	125
October	...	10	20	85	79	69	79	97
November	...	20	30	45	106	67	102	106
December	...	10	38	61	119	79	92	97
		140	315	763	896	718	1,278	1,162
Totals...	...	1,218			896	3,158		

GRAND TOTAL—8,211

PATHOLOGICAL WORK.

Number of Specimens examined :—

		Wassermann Test	Special Wassermann Test	Gonococcus Complement Fixation Test
January ...	...	205	32	64
February ...	...	193	18	76
March ...	...	173	20	69
April ...	...	204	22	63
May ...	...	140	14	57
June ...	...	162	15	60
July ...	...	190	30	80
August ...	...	163	18	71
September ...	...	216	31	98
October ...	...	176	26	67
November ...	...	187	25	62
December ...	...	175	16	73
Totals ...	...	2,184	26	840

			Dark Ground Tests.	Microscopic Smears.
January ...	...	...	4	201
February ...	...	...	5	209
March ...	...	...	3	205
April ...	...	...	4	200
May ...	...	...	4	158
June ...	...	...	2	179
July ...	...	...	5	211
August ...	...	...	0	178
September ...	...	...	9	225
October...	...	...	6	188
November ...	...	...	3	184
December ...	...	...	4	250
Totals ...	...	...	49	2,388

BACTERIOLOGICAL REPORT.

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, 1932, TO 31ST DECEM-
BER, 1932.

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.
- (3) Examination of Milk for tuberculosis, and for the presence of the bacillus of Epizootic Abortion of cattle.
- (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 1932, 56 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 56 cases examined, 53 were sent by the venereal diseases officers, and only 3 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 3,829, of which 2,184 were from the clinic, 206 from other Public Health Institutions, 257 from private practitioners, and 1,182 from institutions other than those connected with the Department of Public Health.

To the total number there must be added 224 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 4,053 for 1932.

3. Special (Quantitative) Wassermann Tests.

The special quantitative Wassermann reaction, elaborated in 1925, continued in use during 1930 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 269, all but two being from the clinic, so that the grand total of Wassermann Reactions for the year under consideration was 4,322.

4. Examination of Cerebro-spinal Fluids.

During 1932 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 224 investigations, 12 were carried out on material from patients in Maryfield Hospital, 2 from King's Cross Hospital, and one from Ashludie, 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 1932, 2,733 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, ...	206
From the Clinic,	2,388
From Institutions other than those controlled by the Public Health Department,	57
From Private Practitioners,	82

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

During 1932, 918 Complement Fixation Tests have been carried out with a view to the control of treatment or diagnosis of Gonorrhoea. They were distributed thus:—

From the Clinic,	840
From other Public Health Institutions,	24
From Private Practitioners,	25
From Institutions other than those controlled by the Public Health Department,	29

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

Dark Ground Examinations,	56
Wassermann Reactions (ordinary),	3,829
Special Quantitative Wassermann Reactions,	269
Special examinations of Cerebro-spinal Fluids,	224
Microscopical examinations of discharges and urines,	2,733
Gonococcus Complement Fixation Tests,	918
	<hr/>
	8,029
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3. Gonococcal Vaccine.

During 1932 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 1932 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 798.

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 the report of work done during 1931 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 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 has been made the subject of very extended investigation.

This work has been carried out in the laboratory by a member of the staff of the Department of Public Health, Dr James Murray, who has devoted his leisure to this investigation.

The observations are not yet completed, but it may be stated that in Dundee, as is apparently the case throughout Scotland, neither of the varieties of the bacillus which are common in Leeds are of frequent occurrence.

The type of diphtheria bacillus which predominates here exhibits cultural characters that resemble to some extent those of the so-called " gravis " type and also to some extent those of the " mitis " type. It is interesting to note that, so far as our observations go, its virulence for the human appears to be intermediate between these.

Dr Murray is to be congratulated upon the enthusiasm he is showing in prosecuting this work, and I trust that his example will be followed by others attached to the department.

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, 25 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 1932 there have been remarkably few cases of enteric fever in the city, and it is notable that infection due to bacillus paratyphoid beta, which has been prevalent in past years, has been very infrequent in the period under consideration.

1. Widal Reactions.

In all, 150 tests were carried out on 75 specimens of blood. The duplicate test against both typhoid and paratyphoid beta continues to be employed as a routine.

In only 5 instances was a positive result obtained, 4 being from cases of typhoid, and one infection with bacillus paratyphoid beta.

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

Among the 75 specimens so tested, three agglutinated the bacillus abortus in such low concentration that the reaction was diagnostic.

Of the three patients, two were permanent residents of the City, while one, a resident of the County of Angus, was under observation in hospital as a case of pyrexia of unknown origin.

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, and in the year under consideration, as few cases of enteric fever have occurred, fortunately, the opportunity for applying it as a diagnostic method has not arisen.

The method was, however, employed in seven cases, and in two of these an early diagnosis was made possible. In one the infecting organism proved to be the typhoid bacillus, and in the other bacillus paratyphoid 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 1932, only 44 specimens of faeces from convalescents of enteric fever, or from possible carriers of the disease, were examined, the typhoid bacillus being found in one instance, and bacillus paratyphoid beta in 4.

(ii.) Urines.

Of urines, 19 specimens were examined, bacillus paratyphoid beta being recovered from two of them.

(c) Control of Tuberculosis.

306 specimens of sputum were examined from cases in Dundee during 1932, a figure showing no significant change from that of previous years. The ratio of negative to positive findings remains much as before.

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 1932, 267 such specimens have been investigated, comprising :—

Urines,	69 specimens
Cerebro-spinal fluids,	84 „
Pus, including pus from glands,	54 „
Pleural Fluids,	40 „
Fluid from joints,	9 „
Miscellaneous,	11 „
	<hr/>
	267 „

(d) Puerperal Sepsis.

During 1932 the investigation of material from puerperal sepsis has been continued. Certain improvements in technique have been introduced with a view, if possible, further to elucidate the question of the relative importance of different varieties of streptococci, as causal agents of the condition.

In all, 182 examinations of material from 68 patients have been carried out during the year under review, and these comprise :—

(a) Examinations of uterine cultures,	121
(b) Blood cultures,	61

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 infection with streptococcus haemolyticus, the following figures dealing with the recovery of streptococci from puerperal cases, may be of some interest.

In 61 patients, both blood culture and full investigation of uterine discharge was carried out, the following results being obtained.

(i.) In 4 cases, streptococcus haemolyticus was recovered, both from the blood and from the discharge.

(ii.) In 18, streptococcus haemolyticus was shown to be present in the uterine discharge, but not in the blood.

(iii.) In 2, streptococcus pseudo-haemolyticus (known also as streptococcus Alpha prime) was recovered from the discharge, the blood culture being sterile.

(iv.) In 22, streptococcus viridans was found in the discharge but not in the blood.

(v.) In one case, pneumococcal infection of the uterine mucosa occurred, without similar infection of the blood.

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

It is significant that the only definite instances of generalised blood infection, of uterine origin, in the series, were cases in which the infecting micro-organism was streptococcus haemolyticus, and that neither streptococcus pseudo-haemolyticus nor streptococcus viridans gave rise thereto.

It may be noted that 46 out of 61 cases of puerperal sepsis in which complete examination was made yielded cultures of some variety of streptococcus.

In 3 patients examination by blood culture alone was carried out, of which none gave growth of micro-organisms of any kind.

In 4 patients, examination of the uterine discharge was made without blood culture being performed. In this series of cases there were none of infection with streptococcus haemolyticus, none with streptococcus pseudo-haemolyticus, and two with streptococcus viridans.

These results may be summarised thus :—

	Uterine Culture	Blood Culture
Patients,	68	61
Streptococcus haemolyticus,	22	4
Streptococcus pseudo-haemolyticus,	2	0
Streptococcus viridans,	22	0
No streptococci,	22	57

In addition, examination of the respiratory tract of 21 contacts and attendants of cases of puerperal sepsis was made, with a view to determining whether infection was, or was not, traceable to these sources.

In addition, complete bacteriological examination of the urine was called for in 7 cases of puerperal sepsis, making the grand total of such investigations 210.

III.—SPECIAL INVESTIGATIONS.

(a) Examination of Milks for Contamination.

During 1932, 82 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 ...	16
B. Coli test positive in .01 c.c. negative in .001—Doubtful	9
B. Coli test positive in 0.1 c.c. negative in .01 —Good ...	10
B. Coli test positive in 1 c.c. negative in 0.1 —Very good	11
B. Coli test negative in 1 c.c. —Excellent	36
	—
	82

So far, then, as the B. Coli test is concerned, 57 of these milks are up to the standard of Grade A Milk, while 47 pass the more severe test for certified milk.

2. Total Number of Micro-organisms.

(a) Over 5,000,000 per c.c. ...	0
(b) Over 3,000,000 but less than 5,000,000 per c.c. ...	1
(c) Over 1,000,000 but less than 3,000,000 per c.c. ...	4
(d) Over 700,000 but less than 1,000,000 per c.c. ...	3
(e) Over 500,000 but less than 700,000 per c.c. ...	2
(f) Over 300,000 but less than 500,000 per c.c. ...	4
(g) Over 200,000 but less than 300,000 per c.c. ...	0
(h) Over 100,000 but less than 200,000 per c.c. ...	5
(i) Over 50,000 but less than 100,000 per c.c. ...	12
(j) Over 30,000 but less than 50,000 per c.c. ...	9
(k) Over 10,000 but less than 30,000 per c.c. ...	14
(l) Over 5,000 but less than 10,000 per c.c. ...	9
(m) Less than 5,000 per c.c. ...	19
	—
	82

(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, 14 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.	900 per c.c.—February
Negative in 1 c.c.	1,500 per c.c.—
Negative in 1 c.c.	3,600 per c.c.—
Negative in 1 c.c.	2,000 per c.c.—
Positive even in .001 c.c.	1,500,000 per c.c.—May
Negative in 1 c.c.	300 per c.c.—
Negative in 1 c.c.	300 per c.c.—
Negative in 1 c.c.	150,000 per c.c.—August
Negative in 1 c.c.	4,800 per c.c.—
Negative in 1 c.c.	5,950 per c.c.—
Negative in 1 c.c.	850 per c.c.—November
Negative in 1 c.c.	4,000 per c.c.—
Negative in 1 c.c.	1,850 per c.c.—
Negative in 1 c.c.	1,800 per c.c.—
Negative in 1 c.c.	1,870 per c.c.—

It will be observed that in one instance the content of bacillus coli was very much too high, as also was the total count of micro-organisms—first specimen May, 1932. There was also one instance in which, although the content of colon bacilli was satisfactory—less than 1 c.c.—the total bacterial count was unexpectedly high—first specimen August, 1932.

(c)¹ Examination of Milk for the Presence of Tubercle Bacilli.

During 1931, the Public Health Department co-operated in a national investigation sponsored by the Empire Marketing Board, in collaboration with the Department of Health for Scotland, designed to determine the incidence of tuberculosis in market milk.

It was originally intended to investigate 2,000 samples, over a period of two years, but the work was brought to an end after 1,500 samples had been dealt with, and of these 1,130 fell to be reported during that year. There remained then 370 samples, the investigation of which have to be reported in the year under consideration.

In 1,397 of the 1,500 samples, the examination was completely successful, giving 6.85% of specimens in which the findings were of such a nature that the presence or absence of tuberculosis could not be determined.

The specimens were categorised thus:—

Samples designated "A"—Milk as received from dairies.

Samples designated "B"—Pasteurised Milk.

Samples designated "C"—Milk as retailed.

The following were the final results obtained:—

Category	Total	Positive	Positive Percent
A.	461	33	7.15%
B.	488	26	5.32%
C.	448	36	8.03%

It is difficult to comment upon the findings without accurate knowledge of the source, degree of mixing and precise method of handling of the milk, but the following general observations are, I think, permissible.

In the first place, it might by some be suggested that, as from 7 to 10 per cent. of the samples of fresh milk contain bacillus tuberculosis, fresh milk is, potentially at least, a dangerous article of diet.

In this connection, however, it must be explained that the method of testing for tubercle in the series of samples under consideration was very stringent indeed, and the positive percentage cannot be accepted as a **simple direct** index of the danger of fresh milk to the health of the people. In large centres of population so much mixing of this food occurs that infection from one animal is distributed in the final mixture with great dilutions of the infective moiety, and such minimal infection, although detected by a special technique, may be of very slight significance from the standpoint of health.

The grave danger so far as tuberculous milk is concerned arises when a small group of the population constantly derives its supply of that food from the same **limited** number of cattle of which one or more, is tuberculous, and the more limited the source of supply, the greater the danger.

It is necessary to call attention to this as some might be disposed to consider, wrongly I think, that, roughly, a 10% positive rate for tuberculosis in milk, constitutes what might be termed by them a public health "emergency."

Indeed, if it were possible to assume that milk was always slightly and **safely** tuberculised, such milk would be valuable as an immunizing agent. Unfortunately it is not possible to ensure this, and therefore every effort should be made to induce those engaged in dairy farming to increase the output of milk from tuberculin tested herds.

A second point of considerable interest is noticed in these findings, namely, that of the pasteurised samples, no less than 5.3% contained living tubercle bacilli.

This at first sight appears surprising because the process of pasteurisation, when carried out in the laboratory upon an experimental scale almost invariably kills bacillus tuberculosis. Clearly then technical difficulties may from time to time be encountered in conducting this process upon a commercial scale, and a very slight error of technique may result in a temporary breakdown so far as efficiency of pasteurisation is concerned.

In all of the 26 instances in which bacillus tuberculosis was found in pasteurised milk the investigation was followed out fully by every available laboratory procedure in order to determine whether the bacillus present was of the bovine or human type.

This was done because it might be suggested that the infection was introduced after pasteurisation and possibly from human sources. As all the strains of bacilli therefrom proved to be bovine in type one could only conclude on the evidence available that they had survived pasteurisation.

In the case under consideration this temporary loss of efficiency cannot be detected, unless a gross mistake has occurred, until about eight weeks have elapsed, and during that period the process may continue to be conducted in an inadequate fashion,

In Dundee, where the number of pasteurising plants is small, a temporary breakdown in any one of these would lead to an unexpectedly large number of positive findings because of the relatively large number of samples examined in a limited period of time from each.

It is plain from the findings in the case of pasteurised samples that careful and continual supervision would be required to ensure the process being so conducted that tubercle bacilli were definitely eliminated from the milk.

The supplying of milk to large populations presents many problems, of which that under consideration is but one, and it is felt by the writer that any legislation designed to deal with one of these problems must consider very carefully its relation to others, if waste both of material and of effort is to be avoided.

In addition to this group of 370 samples which remained over from the survey of 1,500 specimens, there were 29 routine tests performed during 1932 with a view to determining the presence, or absence, of tubercle bacilli in the milk supply of the City.

Of these 29 samples, 3 were found to be tuberculous, giving a total of 399 tests, of which 27 proved to be positive.

(c)² Examination of Milk for the Presence of the *Bacillus Abortus* of Bang.

In view of the fact that large numbers of milk samples were available for investigation because of the tubercle survey, discussed above, it was felt that the opportunity should be taken to examine these same milks for the presence of the micro-organism of epizootic abortion of cattle.

This aspect of the milk survey was of relatively slight importance to public health, in that infection of the human with the bacillus of bovine abortion is infrequent. On the other hand, from the standpoint of veterinary science, it is extremely important, and as a fair statistic is now available from this laboratory, it is felt that the findings should be put on record.

The following is a summary of the results obtained.

During 1931, 1,044 samples had been adequately examined, and when the investigation was completed the total number amounted to 1,374, so that in 1932 there fall to be reported 330 such tests,

Category	Total	Positive	Positive Percent
A.	472	104	22.08%
B.	474	6	1.23%
C.	428	53	12.38%

Although it must not be assumed from these figures that between 12% and 22% of cattle are infected with the bacillus of epizootic abortion, none the less they indicate that an unsuspectedly large number do secrete milk containing that micro-organism. It is fortunate then that this bacillus is not highly infective for humans, for the condition produced—Undulant Fever—although seldom fatal, is none the less a formidable disease, in that the illness is prolonged and convalescence is equally tardy.

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

During 1932, 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 1932, no outbreak of food poisoning occurred in Dundee, and although there were four suspected sporadic cases, none of them proved to be that condition.

(f) Primary Meningitis.

During 1932, 15 cases of such nature that they might be 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.

Investigation of contacts of one of these cases showed that they were carriers of the causal germ of the disease.

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

In addition to these suspected cases of meningococcal meningitis, there were 12 in which primary meningitis, other than that due to infection with the meningococcus, was suspected.

Of these 6 proved to be due to the pneumococcus, one to the streptococcus, and one to bacillus influenzae.

There were, therefore, 8 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 1932, there were investigated 12 cases of meningitis occurring as a sequel to injury, or arising as a complication in other conditions.

The organisms responsible for these infections were:—

Streptococcus	4
Pneumococcus,	4

and in one instance the infection was due to an anaerobic bacillus.

There, therefore, remain three cases in which the findings were negative.

(h) Cases of Subacute Meningismus.

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

(i) Amoebic Dysentery.

Only 2 cases of suspected amoebic dysentery occurred in the City; complete investigation negated this diagnosis in one instance and established it in the other.

(j) Bacillary Dysentery.

During 1932, 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.

Occasional sporadic cases of bacillary dysentery continue to occur in the City, while during the year under consideration a few definite institutional outbreaks were observed. The latter will be dealt with first, and thereafter the sporadic cases will be considered.

In an institution, herein referred to as "A," a very definite, but fortunately limited, group of cases of the disease, due to a Flexner bacillus of the V.Y. antigenic type, was recognised in May, 1932.

The cases numbered only 3 in this small outbreak, but the causal organism was recovered from all, and the connection between the cases was easily established.

This group of cases required examination of five specimens of faeces, and a complete investigation of the blood serum of one case.

In the same institution "A" a similar outbreak occurred in October, 1932, but on this occasion the causal organism was found to be the Sonne III. dysentery bacillus. In the institution three persons fell victims to the infection, and one case occurred in a practitioner of medicine who was engaged in examination of morbid material from these cases.

This group of cases required the investigation of seven specimens of faeces and three specimens of blood.

Finally in institution "A" there occurred a single sporadic case of bacillary dysentery due to bacillus Flexner type V., 19/10/32. Two specimens of faeces were examined in connection with this case.

In another institution, designated "B" a number of cases of bacillary dysentery manifested themselves during the late months of the year.

The first was a sporadic case of Flexner V infection, which was diagnosed on 5/10/32. At first it was thought that there might be some connection between this case and that which occurred at institution "A" on 19/10/32, but no connection could be established.

There was, however, a definite relationship between this case and that of the medical practitioner mentioned in connection with

the Sonne III. outbreak at institution "A." That gentleman also examined morbid material from this Flexner V case at institution "B," and when he fell ill (14/10/33) he was found to be infected both with the Sonne III. bacillus and with bacillus Flexner V.

From these two cases and from contacts, fourteen specimens of faeces were examined.

In the same institution "B" there occurred nine cases of bacillary dysentery during the period 9/11/32—12/12/32. Two of these were apparently sporadic cases, one being due to bacillus Sonne III and the other to an organism of the Flexner V type.

The remaining seven were interesting in that from each of them there was recovered a micro-organism having the morphological, cultural and fermentative characters of the Flexner bacillus, but none of these seven strains qualified as a member of any of the recognised serological sub-groups of that organism. As, however, the serum of the patients during convalescence showed the development of antibodies to this bacterium, and as the serum from four of these patients—only four were tested—reacted with all seven strains, there was very definite evidence that this aberrant Flexner bacillus was responsible for the outbreak.

The investigation of these nine cases involved examination of material from 49 persons who were cases or contacts. Of faecal specimens, 83, and of blood specimens 7 were investigated in the course of the outbreak.

Apart from these small institutional outbreaks, there were other sixteen cases of suspected bacillary dysentery during the year under consideration.

These cases were not related to one another, either geographically or in point of time, and of them, fifteen gave entirely negative findings.

In one instance, a fatal case, the infecting organism proved to be the bacillus dysenteriae of Shiga, which is fortunately not indigenous in this country.

The patient who fell victim to this infection had just returned from abroad, and was certainly infected when he arrived home.

From these 16 cases, 17 specimens of faeces, and one specimen of blood, were examined,

These results are summarized in the following table :—

Institutional Cases.

Institution	No. of Cases	Type of Bacillus	Contacts Exam.	Faeces Exam.	Faeces Pos.	Serum Exam.	Serum Positive
A.	3	VY	2	5	3	1	1 to VY
A.	4	Sonne III.	None	7	5	3	3 Sonne III.
A.	1	V	None	1	1	None	None
B.	2	V	6	14	2	None	None
B.	1	Sonne III.	40	1	1	2	1 Sonne III.
B.	7	Aberrant Flexner		70	8	4	4 Aberrant Flexner
B.	1	V		3	1	1	1 to V.

Cases Other Than Institutional Cases.

1	Shiga	None	2	2	1	1 to Shiga
15	—	—	15	Nil	—	—

Total number of suspected cases, 35

Number Positive, 20

Shiga bacillus, 1

Flexner V, 4

Flexner VY, 3

Aberrant Flexner, 7

Sonne III., 5

Total Number of Examinations, 112

Examinations of faeces, 101

Examinations of Blood, 11

(k) Variola Vaccinia Flocculation Reaction.

During 1932, no cases of smallpox occurred in the City, but in 2 instances the flocculation reaction was employed to corroborate a diagnosis of severe chickenpox.

In this connection, it may be noted that the help of the laboratory has been requested by other public health authorities to assist in the investigation of doubtful cases of smallpox, and in one instance this help proved to be of special value in excluding smallpox, as the patient had been in contact with a very large number of people. Subsequent developments proved the case to have been one of varicella.

(1) Leptospirochaetosis.

There was only one suspected case of infection with leptospira icterohaemorrhagiae during 1932. The examination of this case was very fully conducted, but it was found that it was not one of Weil's disease.

(m) Blood Cultures in Pneumonia, and Pyrexia of Unknown Origin.

Generalised blood infection occurs fairly often in lobar pneumonia, and as the gravity of the case is to some extent related to the occurrence of a blood infection, we have been called upon during the year under consideration to investigate 20 cases of pneumonia by blood culture.

In addition, 15 blood cultures were examined in cases classed as "pyrexia of unknown origin," or suspected undulant fever.

(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 10 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, ...	1
3. General examination of urine,	1
4. Preparation of vaccine,	1

(iii.) Maryfield Hospital.

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

(iv.)—Ashludie Sanatorium and Tuberculosis Clinic.

1. Complete examination of pleural fluids,	2
2. Complete examination of urine,	2
3. Complete examination of sputum,	1
4. Complete examination of pus,	1
5. Complete examination of cerebro-spinal fluid, ...	1
6. Preparation of vaccine,	1

One case each malaria, encephalitis lethargica, infestation with intestinal parasites, two cases of suspected anthrax, two of undulant fever by blood culture, three of the same condition by indirect diagnostic methods, and three of poliomyelitis, were each very fully investigated.

The work of the laboratory on behalf of the Public Health Authority of the City, during 1932, has been very similar to that in previous years, the only outstanding feature being the completion of investigations resulting from the survey of market milk, carried out during the year 1931.

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 staffs 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.

I am especially pleased to report that in addition to the close co-operation of Dr Murray in the work of this laboratory another member of the staff of the Public Health Department, Dr Stewart, has followed his lead, so that the liaison between the city hospitals and the laboratory is now very close, to the advantage of both.

MATERNITY SERVICES.

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

DR. MARGARET FAIRLIE.

DR. H. GORDON CAMPBELL.

DR. DORA W. GERRARD.

The attendances at all the Clinics have markedly increased in 1932.

A noteworthy fact with regard to the ordinary clinics is that, of the infants attending for the first time, over 55 per cent. have been brought before the age of two months. This is satisfactory, as it renders possible the correction of errors of diet, before serious damage may have resulted from wrong feeding.

The only new feature of the Scheme has been the opening of another Ante-natal Clinic, in a room at Polepark Day Nursery.

This is intended to serve the mothers living in the western district of the town, who sometimes found attendance at the Central Ante-natal Clinic difficult on account of the distance.

The Clinic was opened in March; and the attendances are increasing steadily.

I wish to thank the members of the Dundee Voluntary Health Workers' Association for their valuable assistance at the Clinics and Sewing Classes, and for the garments they have provided for the infants and children attending the Clinics and the Day Nurseries, as well as the Nursing Staff, whose assistance has contributed so largely to the continued success of the re-organised Scheme.

I append the detailed account of the work done under the Scheme, including the reports of the Medical Officers in charge of the various special Clinics.

Infantile Mortality.

- (a) Number of deaths 236
- (b) Rate per 1,000 births 72
- (c) For classification of deaths in age groups and causes of death—See Table XII., in the Statistical section of the Report.

235 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
77	13	7	5	28	41	31	33	235

Of these 99 were breast fed.

26 were partly breast fed.

8 were mixed feeding (breast and artificial feeding).

44 were artificially fed.

In 48 cases feeding was not commenced due to prematurity.

8 cases were not visited.

2 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 ..	49	15	2	4	2	3	2	2	17	99	..	..	..
Partly Breast ..	1	2	4	3	3	3	2	2	6	26	..	..	..
Mixed ..	0	0	0	2	1	0	0	0	5	8	..	..	..
Artificial ..	2	3	2	6	3	6	10	0	12	44	..	..	..
Totals ..	52	20	8	15	9	12	17	4	40	177	48	8	2

In the 225 deaths in which particulars were obtained :—

90 occurred in houses of one room, in which there were 387 occupants.

107 occurred in houses of two rooms, in which there were 528 occupants.

27 occurred in houses of three rooms, in which there were 166 occupants,

1 occurred in a house of four rooms, in which there were 4 occupants.

In 225 cases in which particulars were obtained, 47 mothers were engaged in work outside their own homes ; and 178 were not thus engaged.

In 2 cases the mother left work two weeks before confinement.

23 children who died were illegitimate.

12 children who died were twin births.

3 children who died were a triplet birth.

68 deaths were due to prematurity.

In addition to deaths of infants under one year of age, 131 deaths of children from 1-5 years of age were noted by the Department.

Births.

(a) Number registered (corrected)	...	...	3,276
(1) Legitimate	...	...	3,050
(2) Illegitimate	...	...	226
(b) Number notified	...	...	3,416
(c) Number classified according to nature of attendance (doctor, midwife, etc.) :—			
Doctor	...	...	352
Doctor and Midwife	...	...	131
Midwife	...	...	1,099
Maternity Hospital	...	...	1,522
Maternity Home	...	...	151
Maryfield Hospital...	...	...	29
Parents	...	...	42
Other sources	...	...	90
(d) Number of Stillbirths (births of dead children)			174

PARTICULARS OF BIRTHS NOTIFIED AND REGISTERED IN DUNDEE DURING 1932.

Number of births taken from Registrars' Weekly Returns (including transfers out and also transfers in)	....	3432
Difference between Notification and Registration (1931-1932 and 1932-1933)	....	19
		3451
Less number transferred into Dundee	....	28
(1) Number of Live Births occurring in Dundee	...	3423
Number of Stillbirths	...	174
(2) Total number of births occurring in Dundee	...	3597
(3) Number of births notified, in accordance with the Act—i.e., 94.9 per cent. of total number of births (3597)	...	3416
(4) Number of live births notified—i.e. 94.6 per cent. of live births (3423)	...	3241

CLASSIFICATION OF NOTIFICATIONS.

Attendance in relation to notification :—

By whom Notified.	Notified.	Unnotified.	Total.	Total cases attended.	Percentage of total births.
Doctors	352	144	496	628	17.4%
Doctor and Midwife	131	—	131	131	3.6%
Midwives	1,099	6	1,105	1,105	30.7%
Mat. Ward D.R.I....	1,522	3	1,525	1,525	42.3%
Maryfield Hospital	29	—	29	29	0.8%
Parents	42	—	42	—	—
Other Sources ... \	90	—	90	—	—
Out of Town ...	—	28	28	—	—
Clement Pk. Mat. Home	151	—	151	151	4.2%
	3,416	181	3,597	3,569	

STILLBIRTHS

174 stillbirths were notified during 1932.

19 of these occurred in the practice of Midwives : —

13 were full time infants.

6 were premature infants.

Of the 13 full time infants :—

5 were cases of macerated foetus.

4 were due to complicated labour or congenital deformities.

4 were unclassified.

Of the 6 premature infants :—

4 were cases of macerated foetus.

1 was due to congenital deformity.

1 was unclassified.

Maternal Mortality.

- (a) Number of deaths resulting from miscarriage or childbirth 14
- (b) Number of deaths resulting from Puerperal Sepsis 8

During 1932 an inquiry was made into 31 deaths of women occurring in childbirth or within 28 days after, or later if illness originated during pregnancy, childbirth or puerperium. 9 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.

The 22 Dundee deaths were attended at birth as follows :—

Attended by doctor	3
Attended by a doctor and midwife	5
Attended by Maternity Hospital I.P.	13
Attended by midwife	1

CLASSIFICATION OF CERTIFIED CAUSES OF DEATH (22 cases :—

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

Puerperal Sepsis	2
Puerperal Sepsis ; Septic Pneumonia	1
Puerperal Sepsis ; Coronary Embolism	1
Puerperal Sepsis ; Lobar Pneumonia	1
Uncontrollable Vomiting; Pulmonary Embolus; Failure of Heart ; Puerperal Sepsis	1
Acute Peritonitis ; Acute Salpingitis	1
Pelvic Cellulitis ; Pregnancy ; Pulmonary Embolism	1
Post-partum Haemorrhage	1
Shock ; Manual Removal of Placenta ; Adherent Placenta	1
Preternatural Labour (face presentation) Heart failure during delivery	1
Parturition (twins, normal instrumental delivery) Heart failure 12 hours after delivery	1
Acute Yellow Atrophy of the Liver	1
Child Birth (rigid Os) ; Obstructed Labour ; Shock ; Pulmonary Embolism... ..	1
Accidental Haemorrhage ; Uraemia	1
Pregnancy Toxaemia	1
— 16	

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

Total Parenchymatous Nephritis	1
Lobar Pneumonia	1
Chronic Nephritis ; Uraemia	1
Acute Nephritis, Fatty Degeneration of the Heart	1
Acute Appendicitis ; Peritonitis	1
— 5	

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

Acute Nephritis ; Acute Yellow Atrophy of the Liver... ..	1
— 1	

Report Under Midwives (Scotland), Act, 1915.

The following is a list of Midwives who, during January, 1932, intimated their intention to practise Midwifery in the City of Dundee.

NAME and ADDRESS.	C.M.B. Reg. No.	REMARKS.
Anderson, Mrs Isabella D.—197 Princes Street ...	2,863	Trained.
Andrews, Miss Dora—3 Boyd Place, Broughty Ferry	8,253	Trained.
Angus, Mrs. Clementina—96 King St., B.F. ...	3,057	Bona fide.
Arnott, Miss Jean—36 Dundonald Street ...	1,182	Bona fide.
Bowman, Mrs. Jessie—10 Hilltown ...	4,958	Trained.
Boyd, Miss Agnes—138 Hilltown ...	8,994	Trained.
Brodie, Miss Chrissie,—Craigie Nursing Home, Ferry Road, ...	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—6 Glamis Drive ...	4,423	Trained.
Duffus, Miss Mary C.—34 Victoria Street ...	2,567	Trained.
Gouk, Miss Margaret K.—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.
Low, Mrs Helen—44 Ann Street ...	5,186	Trained.
Lowe, Mrs. Jane R.—2 Brown Street ...	432	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—325 King Street, Broughty Ferry or 77 Albert Street ...	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.
Peel, Miss Sarah do. ...	9,142	Trained.
Derbyshire, Miss Ellen do. ...	8,255	Trained.

(1) In January, 1932, 27 Midwives notified their intention to practice Midwifery in Dundee. During the year 2 Midwives gave notice of their intention to practise in Dundee.

(2) This leaves on the Local Roll of Midwives at the end of December, 1932, 29 names. 23 of the 29 are actually practising as Midwives.

(3) The Midwives attended a total of 1236 births (including 131 cases where the Midwife acted as a Midwife though a Doctor was in attendance)—that is 29 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 159 cases, another only attended 9 cases. The average to each Midwife in practice is 53 cases.

(5) 76 visits were paid by the Inspector of Midwives and her Assistant to the Midwives' homes : 11 visits of inspection were paid to the (8) Registered Maternity Homes in Dundee.

(6) Opportunity was given to the Midwives to attend the lectures in connection with the College of Nursing

(7) The general working of the Act has again been entirely satisfactory. There has been no infringement of any of the Central Midwives Board Rules.

The Midwives have sent 436 mothers to Ante-natal clinics or to private doctors for advice and supervision, which is an increase of 109 on the number sent in 1931.

Unfortunately there has again been a reduction in the total number of cases attended by Midwives during the year—(1,236, as compared with 1,362 in 1931), doubtless due to the stress of present economic conditions.

The two months within which a medical practitioner must submit his claim for payment in terms of Section 22 of the 1915 Act, as amended by Section 4 of the 1927 Act, is considered by many practitioners to be too short ; and I am inclined to agree with this view. Medical practitioners are encouraged to recover the fee directly from the patients, and should they fail, to submit a claim to the local authority. It is impossible for them to make any serious effort to recover the fees in the time permitted ; and it is suggested that when an opportunity occurs, the period of two months should be extended to at least three, and, possibly, even six months.

893 Notifications have been received from Midwives as follows :

(1) Application for Medical Assistance—(a) Mother	...	719
(b) Child	...	90
(2) Notification of Death—(a) Mother	... ..	0
(b) Child	... ..	3
(3) Notification of Stillbirth	... ..	17
(4) Notification of liability to be a source of infection	...	7
(5) Notification of laying out a dead body	... ..	1
(6) Notification of Artificial Feeding	... ..	2
(7) Notification of Patient's failure to follow advice	...	54

Ante-natal (520).

Examination	436
Headaches	3
Pain (various)	9
Carious Teeth	9
Varicose veins	15
Threatened Abortion	2
Ante-partum Hæmorrhage	2
Cardiac Condition	1
Swelling in Groin	1
Purulent discharge	16
Sickness	6
Albuminuria	3
Defective Breast	1
Cough	1
Constipation	3
Oedema	1
Fainting Attacks	1
Abortion	3
Rash	1
Dimness of Vision	1
Contracted Pelvis	1
Feeling ill	1
Tender Breasts	1
Foetal heart sounds not heard	1
Foetal distress	1

Post-natal (24).

High Temperature	9
Pain (various)	4
Rapid Pulse and Headache	3
Cough	2
Cyst in Vagina	1
Rigors	1
Mastitis	1
Secondary Post-partum Hæmorrhage	1
Subinvolution	1
Weakness	1

Labour (175).

Prolonged Labour	74
Ruptured Perineum	64
Abnormal presentation	23
Adherent Placenta	3
Exhaustion	3
Post-partum Hæmorrhage	3
Rapid pulse ; persisent vomiting	1
Acute Bronchitis (complicating labour)	1
Ante-partum Hæmorrhage	1
Laceration of Labia	1
Contracted Pelvis	1

Infants (90).

Inflammation of the Eyes	17
Stillbirths	17
Feeble and Premature Infants	16
Congenital Deformities	13
Illness of Infant	8
Septic Pemphigus	6
Icterus Neonatorum	3
Coryza	3
Rash	2
Sudden Death of Baby	1
Inflammation of Breast and Right Arm	1
Swollen Feet	1
Melæna	1
Umbilical Hæmorrhage	1

DUNDEE, 1932.

BIRTHS IN AREA OR DISTRICT.

Total No. of Births during 1932 (uncorrected)	Total No. of Deaths of Newly-Born Children during 1932 (within 10 days)	Actual No. of Births Attended by Midwives during 1932	Actual No. of Deaths of Newly-Born Children occurring in the Practice of Midwives during 1932 (within 10 days of Birth)	Actual No. of Cases not attended at birth by a Doctor or Midwife during 1932	Deaths
3432	92	1236	23	0	0

CASES OF OPHTHALMIA NEONATORUM.

Total No. of Cases during 1932	Actual No. of Cases occurring in the Practice of Midwives during 1932	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1932
56	30	0

CASES OF PUERPERAL SEPSIS.

Total No. of Cases during 1932	Total No. of Deaths during 1932	Actual No. of Cases occurring in the Practice of Midwives during 1932	Actual No. of Deaths occurring in the Practice of Midwives during 1932	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1932	Deaths
17	2	8	1	0	0
(Notifications)				Cases	Deaths

CASES OF PUERPERAL PYREXIA.

Total No. of Cases during 1932	Total No. of Deaths during 1932	Actual No. of Cases occurring in the Practice of Midwives during 1932	Actual No. of Deaths occurring in the Practice of Midwives during 1932	Actual No. of Cases occurring where Confinement not attended by a Doctor or Midwife during 1932	Deaths
42	8	7	4 (1 Lobar Pneumonia 2 Puerperal Sepsis)	0	0

CASES OF STILL-BIRTH (DEAD BORN).

Total No. of Cases during 1932	Actual No. of Cases occurring in the Practice of Midwives during 1932
174	19

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 1932, distinguishing the different cases of emergency

Ante-natal	Labour	Post-natal	Infant	Total
84	175	24	90	373

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

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

2 cases notified as "Puerperal Pyrexia"—Final diagnosis at death :—

(a) LOBAR PNEUMONIA.

(b) PELVIC CELLULITIS PREGNANCY EMBOLISM.

Health Visitors' Work (Maternity Services Only).

Total number of homes visited, 3,505

Total number of visits to these homes, 13,755

Average number of visits per home, 4

Total number of cases visited, 13,852

	1st visits.	Revisits.	Total.
(a) Routine Visits :—			
Babies	2,986	10,361	13,347
Mothers, A.N. ...	13	1	14
P.N. ...	6	8	14

(b) Notifiable Diseases and Special Visits.

Ophthalmia Neonatorum	54	398	452
Infantile Diarrhoea	8	6	14
Puerperal Pyrexia	4	—	4
Puerperal Fever	3	—	3
Maternal Deaths Enquiries	4	—	4

Of the 2,986 infants visited for the first time :—

181 were premature

2,805 were fulltime births

Of the 2,952 homes of the newly born visited for the first time the home conditions were as follows :—

very good.	298
good.	1,399
medium.	1,125
bad.	130

Information regarding feeding of 2,986 infants visited for the first time :—

(a) Breast	2,460
(b) Partly breast	72
(c) Mixed feeding	47
(d) Artificial	185
(e) Stillborn	143
(f) Dead at first visit	79
—	2,986

Special information as to the feeding of infants for the first six months of life was obtained in 1,425 cases :—

(a) Breast	731
(b) Partly breast	146
(c) Mixed feeding	64
(d) Artificial	484
—	1,425

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	...	579
(b) Total number of attendances	... ..	1135
(c) Classified summary of conditions found :--		
Advice only	... ..	438
Not Pregnant	... ..	2
Conditions due to Pregnancy	... ..	24
Ante-Partum Hæmorrhage	... ..	3
Albuminuria	... ..	9
Oedema	... ..	1
Hydramnios	... ..	6
Vomiting	... ..	1
Dead Foetus	... ..	1
Mole	... ..	2
Twins	... ..	1
Conditions aggravated by Pregnancy	... ..	25
Discharge	... ..	17
Varix	... ..	7
Intertrigo	... ..	1
Conditions complicating Pregnancy	... ..	20
Contracted Pelvis	... ..	3
Malpresentations	... ..	11
Prolapse	... ..	1
Gonorrhoea and Syphilis	... ..	1
Various	... ..	4
(d) Number of Cases :—		
	New Cases.	Re-visits.
(1) Referred to Ante-natal Ward	... 11	28
(2) Referred to Family Doctor	... 2	3
(3) Treated at Clinic	... 496	595
	509	626

Post-Natal and Other Consultations.

Post-Natal	27
Not Pregnant	... ..	1

Classified summary of conditions found :—

Advice only	...	...	P.N.	11	N.P.	1
Displacements	...	...	"	4	"	0
Menorrhagia	...	...	"	3	"	0
Various	...	...	"	9	"	0

	New Cases.		Re-visits.
	P.N.	N.P.	P.N.
(1) Referred to D.R.I.	7	0	4
(2) Referred to Family Doctor	44	0	0
(3) Treated at Clinic	16	1	2

2. Polepark A.N. Clinic.

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

1 Weekly Session of 2 Hours.

This Clinic was opened on March 9th, 1932.

- (a) Total number of Expectant Mothers attending ... 123
 (b) Total number of attendances ... 185
 (c) Classified summary of conditions :—

Advice only	...	...	...	78
Conditions due to pregnancy	...	...	...	10
Albuminuria	...	...	...	2
Oedema	...	...	...	2
Hydramnios	...	...	...	3
Vomiting	...	...	...	3
Conditions aggravated by Pregnancy	...	...	...	18
Discharge	...	...	...	3
Varix	...	...	...	13
Haemorrhage	...	...	...	1
Intertrigo	...	...	...	1
Conditions complicating Pregnancy	...	...	...	17
Contracted Pelvis	...	...	...	3
Malpresentations	...	...	...	10
Various	...	...	...	4

- (d) Number of Cases :—

	New Cases.		Re-visits.
(1) Referred to Ante-Natal Ward	...	4	0
(2) Referred to Family Doctor	...	0	0
(3) Treated at Clinic	...	119	62

Post-Natal and Other Consultations.

New Cases				
Post-Natal	...	....	...	1
Not Pregnant	...	....	....	0

Classified summary of conditions found :—

Displacements	1
---------------	-----	-----	-----	---

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

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	1501	15,733
(2) Over 1 year of age	1468	19,026
(3) Mothers—A.N.	2	2
P.N.	22	59
	2993	34,820

Diseases recorded on admission to the Clinics :—

(1) Children under 1 year of age.

Of the 1,115 babies under 1 year of age attending the 6 clinics, 88 (7.89%) showed no disease or congenital defect. The remaining 1,027 showed 2,412 diseases or defects, classified as follows :—

Diseases of digestive system	...	...	1301
Diseases of respiratory system	...	...	307
Diseases of nutrition :—			
Rickets	...	...	17
Other disorders of Nutrition	...	...	9
			26
Diseases of the skin	...	...	192
Diseases of nervous system	...	...	0
Diseases of the eye	...	...	19
Diseases of the ear, nose, and throat	...	...	9
Congenital defects	...	...	493
Surgical condilions	...	...	15
Various	...	...	50
			2412

(2) Children over 1 year of age.

Of the 235 children between one and five years of age attending the clinics 14 (5.95%) showed no disease or congenital defect. The remaining 221 showed 454 diseases or defects, classified as follows:—

Diseases of the Digestive System	...	...	...	63
Diseases of the Respiratory System	...	...	...	90
Diseases of Nutrition :—				
Rickets	...	...	...	77
Other disorders of Nutrition	...	...	...	23
				— 100
Diseases of the Skin	...	...	...	37
Diseases of the Nervous System	...	...	...	5
Diseases of the Eye	...	...	...	14
Diseases of the Ear, Nose and Throat	...	...	...	49
Congenital Defects	...	...	...	40
Surgical Conditions	...	...	...	29
Infectious Diseases :—				
Diphtheria	...	...	...	1
Mumps	...	...	...	1
				— 2
Various	...	...	...	25
				— 454

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	...	...	...	192
(2) Children	...	...	...	125
				— 317

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

(1) Mothers—(102).

Dental Caries, 78 ; Alveolar Abscess, 4 ; Septic Roots, 7 ;
Gingivitis, 9 ; Tartar, 4.

(2) Children—(77).

Dental Caries, 39 ; Alveolar Abscess, 21 ; Tartar, 1,
Periodontitis, 2, Gingivitis, 2 ; Injury to Teeth, 4 ;
Secondary Dentine, 2 ; Stains on the Teeth, 3, Enlarged
Cervical Glands, 1 ; Advice, 2.

(c) Number of Dentures, supplied, ....	...	...	1
(d) Gross cost of Dentures supplied ...	...	£5 0s 0d	
Sums recovered from patients ...	...	£11 7s 0d	
(For Dentures supplied previously).			

(e) Classified summary of treatment carried out :

Advice, 38 ; Extractions (temporary,) 12 ; (permanent) 186 ; Fillings (temporary) 39 ; (permanent) 28 ; Treatment of Alveolar Abscess, 34 ; Dressings, 54 ; Aconite and Iodine treatment, 28 ; Special gum treatment, 13 ; Brushing and Scaling, 41 ; Impressions for Dentures, 2 ; Repairs to Dentures, 2.

B. V.D. Clinic.

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

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 ...	3	1	—	27	31		6	9	—	172	187
Children ...	—	2	—	5	7		—	190	—	50	240
Mothers, A.N. ...	—	2	—	3	5		—	109	—	112	221
P.N.	1	2	—	15	18		31	455	77	253	816
	4	7	0	50	61		37	763	77	587	1464

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 ...	1	1	—	14	16		2	—	—	13	15
1-5 years ...	—	—	—	3	3		—	2	—	—	2
5-15 years ...	—	—	—	—	—		—	—	—	2	2
15-25 years ...	—	—	—	—	—		1	—	—	8	9
25 years and over	—	—	—	—	—		0	4	—	10	14
	1	1	0	17	19		3	6	0	33	42

Number of Injections given—Intravenous and Intramuscular :—

Neokharsivan	...	...	...	5
Kharsulphan	...	...	...	0
Bismuth	...	...	...	6
				— 11

Number of Specimens sent for Examination :—

Wassermann Tests	...	...	50
Gonococcal Complement Fixation Tests			19
Smears	...	...	78
			— 147

C. Ultra-Violet Light Clinics.

(a) Number of attendance :—

Babies	...	...	...	1559
Children	...	...	...	5329
				— 6888

(b) Number of cases :—

Babies—New Cases	...	...	85
Re-visits	...	...	0
Attending from 1931	...	...	5
			— 90

Children—New Cases	...	...	220
Re-visits	...	...	1
Attending from 1931	...	...	54
			— 275

(c) Summary of conditions treated and results obtained :—

(1) Babies—(90 cases).

			Marked Imp.	Slight Imp.	No Imp.	Did not Attend.	Still Attending.	Total
Not thriving	...	...	1	3	1 (Ad. to Hosp.)	5	1	11
Debility	...	...	0	1	2 (Ad. to Hosp.)	3	10	16
Marasmus	...	...	1	0	1 (Died)	7	0	9
Anæmia	...	...	0	0	0	1	0	1
Late dentition	...	...	4	6	0	11	3	24
Incipient Rickets	...	...	2	3	1	3	2	11
Rickets	...	...	3	4	0	8	0	15
Bronchitis	...	...	0	1	0	0	0	1
Eczema	...	...	1	0	0	1	0	2
			12	18	5	39	16	90

(2) Children—(275 cases).

	Marked Imp.	Slight Imp.	No Imp.	Did not Attend.	Still Attending.	Total
Not thriving	2	0	0	6	2	10
Debility	17	18	0	29	18	82
Post-Measles Debility	1	0	0	0	2	3
Post-Pneumonia Debility	0	1	0	0	0	1
Marasmus	3	1	1	3	4	12
(Ad. to Hosp.)						
Anaemia	1	0	1	2	2	6
Late Dentition	4	1	0	2	2	9
Late Walking	2	1	0	1	0	4
Early Rickets	3	7	1	6	8	25
Slight Rickets	5	5	0	8	3	21
Rickets	6	29	2	40	5	82
Bronchitis	4	1	0	3	0	8
(1 left town)						
Right Dorsal Scoliosis	1	0	0	0	0	1
Muscular Paresis	1	0	0	3	0	4
Infantile Paralysis	2	1	0	1	0	4
Scurvy	0	0	0	1	0	1
Impetigo	0	0	1	0	0	1
T.B. Abdomen	0	0	1	0	0	1
(Ad. to Hosp.)						
	52	65	7	105	46	275

Day Nurseries.

Hillbank Day Nursery was closed temporarily in August.

The reason for this was that the Matron of Lilybank Day Nursery left to take up another appointment ; and, as the number of children attending Hillbank was so small, owing to the unemployment in that district, it was possible to transfer the Matron to Lilybank, and to accommodate the children in St George's and Lilybank Nurseries.

(a) Number of attendances :—

(1) Under 1 year of age	...	...	...	...	2,753
(2) Over 1 year of age	...	...	...	...	7,354

(b) Charges made :—

4s. 6d. for 5½ 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	...	...	697
Applications granted	...	...	426
Applications disallowed	...	...	271

Number of cases who received free food or milk :—

(1) Mothers	...	...	...	...	...	27
(2) Children	...	...	...	...	...	394
						<hr/> 421

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

Gross Cost . . . £968 19s. 8d.

Milk Substitutes :—

Sold at cost price at clinics :—Ostermilk 288 tins ; Allen & Hanbury's 4 tins ; Bengers 3 tins

Total 295 tins—£23 11s. 6d.

Puerperal Sepsis (17 (Cases)).

	Notified	Primipara	Multipara	Admitted to Hospital	Nursed at Home	Recovered	Died
Doctors ...	11	2	3	4	...	4	...
Midwives ...	...	...	4	2	2	3	1
Doctor & Midwife	...	3	...	3	...	3	...
Maternity Ward-							
Inpatient ...	2	...	...	...	...	...	...
Outpatient...	1	1	...	1	...	1	...
Clement Park							
Mat. Home ...	...	2	...	2	...	1	1
Nursing Homes	...	2	...	2	...	2	...
Maryfield							
Hospital ...	1	...	...	1	...	1	...
Registrar's							
Returns ...	2	...	...	...	...	...	...
Totals ...	17	10	7	15	2	15	2

RECOVERED		DIED	
Primipara.	Multipara.	Primipara.	Multipara.

Where delivered :—

Home ...	5	6	...	1
Maternity Ward D.R.I.				
In-patients ...	...	...	...	...
Out-patients ...	1	...	...	...
Clement Pk. Mat. Home	1	...	1	...
Nursing Homes ...	2	...	...	...
	9	6	1	1

Where Treated :—

Home	...	...	...	1	...	1
D.R.I.	...	...	...	...	1	...
King's Cross Hospital	9			5	...	...
	9			6	1	1

Home Conditions :—

Good	...	...	9	4	1	1
Bad	...	...	...	2	...	...
	9			6	1	1

PARTICULARS OF CASES.

Primipara.	Recovered.	Died.	Total.
Instrumental delivery ; Ruptured perineum	6	—	6
Instrumental delivery ; laceration of soft parts	—	1	1
Normal confinement....	3	—	3
	9	1	10

Multipara.	Recovered.	Died.	Total.
Normal confinement	3	—	3
Normal confinement ; ruptured perineum	1	—	1
Normal confinement (had persistent vomiting all pregnancy)	—	1	1
Abortion	2	—	2
	6	1	7

Puerperal Pyrexia (42 Cases).

	Notified	Primipara	Multipara	Admitted to Hospital	Nursed at Home	Recovered	Died
Doctor	26	1	9	5	5	9	1
Doctor and Midwife	—	2	3	4	1	3	2
Midwife	—	—	2	2	—	—	2
Maternity Ward, I.P.	16	9	9	19	—	17	2
O.P.	—	—	1	—	—	—	—
Clement Park							
Maternity Home	—	4	—	3	1	4	—
Nursing Homes	—	2	—	1	1	1	1
	42	18	24	34	8	34	8

Where Delivered.	Recovered.		Died.	
	Primipara.	Multipara.	Primipara.	Multipara.
Home	2	10	1	4
Maternity Hospital, I.P.	8	8	1	1
O.P.	—	1	—	—
Clement Park				
Maternity Home	4	—	—	—
Nursing Homes	1	—	1	—
	—	—	—	—
	15	19	3	5
	==	==	==	==
Where Treated.				
Home	2	4	—	—
D.R.I.	8	4	1	—
King's Cross Hospital	3	11	2	5
Clement Park				
Maternity Home	1	—	—	—
Nursing Homes	1	—	—	—
	—	—	—	—
	15	19	3	5
	==	==	==	==
Home Conditions.				
Good	12	16	3	5
Bad	2	3	—	—
Institution	1	—	—	—
	—	—	—	—
	15	19	3	5
	==	==	==	==

PARTICULARS OF CASES.

	Primipara.		Recovery.	Died.	Total.
Normal confinement	7	—	7
Normal confinement with ruptured perineum	2	2	4
Instrumental delivery	1	1	2
Instrumental delivery with ruptured perineum	1	—	1
Instrumental delivery with right lateral episiotomy	1	—	1
Breech confinement with ruptured perineum	1	—	1
Multiple pregnancy	1	—	1
Eclampsia...	1	—	1
			—	—	—
			15	3	18
			==	==	==

Multipara.	Recovery.	Died.	Total.
Normal confinement	9	4	13
Normal confinement with ruptured perineum	1	—	1
Instrumental delivery	2	—	2
Instrumental delivery with ruptured perineum	1	—	1
Instrumental delivery with episiotomy	1	—	1
Abortion (complete)	2	1	3
Breech confinement	1	—	1
Face presentation ; Post-partum haemorrhage	1	—	1
Post-partum haemorrhage	1	—	1
	—	—	—
	19	5	24
	==	==	==

8 cases had been notified as Puerperal Pyrexia ; but the final cause of death was given as follows :—

Puerperal Sepsis	...	...	6 cases
Lobar Pneumonia	...	...	1 case
Pelvic Cellulitis ; Pregnancy ; Pulmonary Embolism	...	...	1 case

Number of cases following instrumental delivery :—

	Cases.	Deaths.
(a) Puerperal Fever	7	1
(b) Puerperal Pyrexia	7	1

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

(i) Consultant Service	...	...	3
(ii) Bacteriological Examinations	...	...	—
(iii) Skilled Nursing at Home	...	...	9
(iv) Hospital Treatment	...	...	43

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.		Maryfield Hospital.	Maternity Home.	M. S. Dept.	Eye Institution	Total.
				In-Pat.	Out-Pat.					
By whom notified...	30	7	3	1	2	2	—	10	1	56
By whom attended	10	27	3	8	5	1	2	—	—	56
Total No. of Births attended in 1932	628	1105	131	1525		29	151	—	—	3565

Treated in Institutions	Treated at Home	Type of Case		Result						
		Severe	Mild	Complete Recovery	Injury to Sight	Died during Treatment	Not Visited	Initial Visits	Re-visits	
King's Cross H. 12 Maryfield H. 2 Dundee R. In. 1	15	41	5	51	55	0	1	2	54	398

5 cases of the severe type were attended at birth as follows :—

Maternity Ward—In-Patient	....	....	....	3
Doctor	....	....	....	1
Midwife	....	....	....	1

15 cases were admitted to Hospital, in one case the infant died of Acute Enteretis during treatment.

Smears were taken in 49 cases.

40 were negative.

3 were positive.

6 were suspicious.

In 7 cases smears were not taken from the eyes :—

5 were in Hospital.

2 eyes were clear at the first visit.

One case of Acute Purulent Conjunctivitis was notified to the Department, and was treated in King's Cross Hospital.

Number of cases in which infection is gonococcal :—

positive (3), suspicious (6).

Number of cases in which there was appreciable loss of vision

0

Rickets.

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

All these cases were between the ages of 7 and 12 months ; and the particulars of feeding were as follows :

- 4 were entirely breast fed.
- 2 had been breast fed for the first four months.
- 3 were breast fed for less than 2 months and then fed on cow's milk.
- 1 was breast fed for 2 months and then fed on breast and cow's milk.
- 2 were breast fed for 6 weeks and then fed on cow's milk and Grant's Oat Flour.
- 2 were fed on fresh cow's milk.
- 2 were fed on dried milk.
- 1 was fed from birth on cow's milk and Grant's Oat Flour,

Of the 235 children admitted between the ages of 1 and 5 years 77 (32.7%) showed some signs of clinical rickets on admission.

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

1-2 years	...	47	out of a total of	113
2-3 years	...	19	out of a total of	68
3-4 years	...	8	out of a total of	33
4-5 years	...	3	out of a total of	21

Enquiries as to the feeding in the first year of life elicited the following information :—

Breast fed for less than 1 year	...	35	out of a total of	116
Breast fed for over one year	...	9	out of a total of	28
Partly Breast fed (for a few months only)				
			17	out of a total of 49
Fed on fresh cow's milk	...	...	9	out of a total of 30
Fed on artificial food	...	...	7	out of a total of 12

Deaths from Infantile Diarrhoea.

23 deaths occurred from infantile diarrhoea during 1932, of which the particulars were as follows :—

- 4 were breast fed.
- 4 were partly breast fed.
- 2 were mixed feeding (breast and other food)
- 11 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 ...	0	1	0	0	0	0	0	1	2	4	
Partly Breast	1	1	0	0	0	2	0	0	0	4	
Mixed ...	0	0	0	0	0	0	0	0	2	2	
Artificial ...	0	0	1	1	2	3	3	0	1	11	
Totals ...	1	2	1	1	2	5	3	1	5	21	2

Of the 21 deaths from infantile diarrhoea in which particulars were obtained :—

- 9 occurred in houses of one room, in which there were 38 occupants.
- 10 occurred in houses of two rooms, in which there were 50 occupants.
- 2 occurred in houses of three rooms, in which there were 16 occupants.

The family history showed that in these families :—

- 53 were still alive.
- 38 had died, of which 31 had died in the first year of life.
- 2 mothers had worked outside their own homes : and
- 19 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, opportunity was given to the midwives to attend the lectures in connection with the College of Nursing.

A weekly Sewing Class for the mothers attending the Clinics was held in three of the Centres during the winter months of the year. Each session lasted 2 to 2 ½ hours, and the number of names on the roll was 61. Knitting, cutting-out, machining and re-making old garments were all taught ; and in all, 299 garments were made.

The Classes were entirely carried out by the members of the Voluntary Health Workers' Association, and were much appreciated by the mothers who attended.

Voluntary Agencies.

DUNDEE VOLUNTARY HEALTH WORKERS' ASSOCIATION.

During the year 650 knitted garments and 314 sewn garments were made by the members of the Association for the Clinics ; and 334 were provided for the Day Nurseries.

1031 garments supplied by the Association were distributed at the clinics,. Of these 275 were sold at cost price, 6 at half cost price, 674 at quarter cost price, and 76 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, 1932	22
Number of non-paying cases admitted during 1932	34
Number of cases confined in the Home during 1932	27
Number of days in the Home during 1932	8,958

LOCHEE DAY NURSERY.

On account of the continued unemployment in Lochee this Nursery was closed during 1932.

NURSERY SCHOOL.

Number of children admitted in 1932	17
Re-admitted, from 1931	15
Average number on Roll	23
Total number of attendances in 1932	3,450

PRE-SCHOOL AND SCHOOL MEDICAL SERVICES

REPORT BY DR. A. E. KIDD,
Chief School Medical Officer.

DUNDEE,
17th August, 1933.

I HAVE the honour to submit for information a report on the work of the Medical Department (School Services) for the year ending 31st July, 1933.

Number of schools under inspection	....	....	....	....	43
Average number of children on roll for the past session	....	....	....	....	29,541
Percentage of average attendance for the whole year	....	....	....	....	91

Summary of Year's Work.

Attendance at Treatment Clinic	....	....	....	....	52,213
Examinations for Attendance Certificates	....	....	....	....	22,213
Routine Examinations in Schools	....	....	....	....	8,548
Special Examinations in Schools	....	....	....	....	3,725
Nurses' Visits to Schools	....	....	....	....	1,662
Doctors' Visits to Schools	....	....	....	....	642
Attendance at Cleansing Station	....	....	....	....	4,234
Cases inspected before Exemption granted	....	....	....	....	—
Children inspected before going to Holiday Home	....	....	....	....	1,078

Number of Visits to Schools.

Nurses	1,662	Doctors	642
--------	------	------	-------	---------	------	------	-----

New Schools.

During the past session the following schools were occupied :—

Rockwell Advanced Division School
St. Peter and Paul School
St. Joseph's (Infants and Girls) School

Organisation and Administration.

During the past year, change due to slum clearance and the re-distribution of population has necessitated a certain amount of change in the districts into which the city is divided, in order that the work of the Health Visitors in each area should be more or less equal.

Two areas have been grouped as one—two districts have been divided into two sections each—while other two districts have had alterations made in their boundaries to permit of equalising of the work and ease of administration.

During the year the Health Visitors have carried out visits for :—

Infectious Disease	....	...	... 10686
Dirty, Neglected and Verminous children	....		436
Tuberculosis	...	...	... 3915

Special visits to children found defective :—

Age 1-5...	....	...	... 1624
Over 5 ...	...	...	... 2604
Re visits	....	...	... 24689
Total			... 43954

24326 homes were visited, and 1662 visits were paid to schools.

" Following Up."

The regular visits paid by the Health Visitors are now looked upon as one of the great advantages of the combined services—the headmaster of the school has the advantage of gaining at first hand, information which is of the greatest value to him—the Health Visitor may report conditions which call for consideration both as to school routine and attendance in the case of certain children. The regular attendance of the Health Visitor at the school is also of benefit in that children who have become infected with vermin may be watched, infection prevented from spreading, and the mother informed of the best methods of getting rid of the source of infection. It is only by constant supervision of such cases that this evil can be combated.

The system whereby each Health Visitor has her own district is proving a success, as shown in many ways. It is now very easy to obtain particulars of any case, and the fact that the Health Visitors in each area attend their own district clinic is of the greatest benefit to the doctor in attendance, as by this system the whole particulars of each case, obtained from the Health Visitor, as to condition of housing, environment, family history and other details, are available and may influence the requisite advice and necessary treatment.

Supervision of Infectious Disease.

During the past year Mumps, Measles and Whooping Cough have been responsible for a large amount of non-attendance at school. During the months of October, November, December 1932 and January 1933, 1907 cases were reported. Mumps were fairly prevalent in June 1932, during the holiday season the number of cases diminished, but in September they began to mount up until the peak period was reached in November with 877 cases—there has been a considerable drop in the number of cases reported in the last few months, but cases are still being reported. The highest number of cases of measles (155) was reported in March 1933, while whooping cough reached its maximum in May 1933. In all 4,105 certificates for exclusion from school were issued during the past session.

One regrets that there still exists in the minds of some, the idea that there is no necessity to take any precautions in what they call "children's diseases," such as mumps, measles and whooping cough, and these persons take no measures to keep infected children apart from others, with the result that an outbreak drags on, and many children become infected, whereas, if the customary precautions of isolation and contact with other children were carried out, the outbreak would have been of much shorter duration. Care taken in the initial stages will prevent graver trouble later on.

Cleansing Station.

Attendances to the number of 4,234 have been recorded at this institution. The provision of facilities for cleansing and disinfection where whole families have become infected have proved of benefit—the fact that the bodies and clothing of the inmates of the house—the beds, bed clothes and houses can all be cleansed in a few hours, have permitted several families to get a chance to start afresh—and one is pleased to report that this procedure has always proved a benefit, as, once clean, the family did their best to remain

clean. That such facilities are provided requires to be better known, as in the event of an infection taking place application for cleansing should be made as soon as possible, and arrangements will be made so as to permit of thorough cleansing and at the same time the minimum of discomfort or alteration in the day's work of the family.

Presence of Parents at Inspection.

Number of parents present at inspection ... 5,048

Physical Condition of School Children.

Total number of children examined :—

(1) ROUTINE EXAMINATIONS.

Boys ...	4,262
Girls ...	4,286
Boys and Girls ...	8,548

(2) SPECIAL EXAMINATIONS ... 3,725

Clothing.

	Boys.	%	Girls.	%	Boys & Girls.	%
Number examined ...	4,262	—	4,286	—	8,548	—
Satisfactory ...	4,243	99	4,261	99	8,504	99
Unsatisfactory ...	19	—	25	—	34	—
In need of repair ...	94	2	81	2	175	2
Clothing clean ...	4,198	99	4,220	99	8,418	99
Clothing dirty ...	64	1	66	1	130	1

Insufficient clothing is not often recorded, but the number of cases of clothing in need of repair is increasing of late. While some parents still fail to realise that loose clothing is warmer than tight clothing, yet one seldom sees nowadays, children sewn up in their winter garments.

The habit of exposing arms and legs by way of "hardening" the child is still seen, and such an uneven distribution of clothing is manifestly a case for the homely advice of the Health Visitor,

Footgear.

				Boys and			
		Boys.	%	Girls.	%	Girls.	%
Number examined	...	4,262	—	4,286	—	8,548	—
Satisfactory	... ..	4,228	99	4,263	99	8,491	99
Unsatisfactory	...	34	1	23	—	57	—
Barefoot	... ..	9	—	1	—	10	—

Cleanliness of Head.

Number examined ...		4,262	—	4,286	—	8,548	—
Vermin ...		16	—	39	1	55	1
Nits ...		50	1	382	9	432	5
Clean ...		4,235	99	4,250	99	8,485	99

Percentage for 1923. Percentage for 1928.

Boys and Girls—Vermin	4	1
Nits	15	9

Cleanliness of Body.

Number examined ...		4,262	—	4,286	—	8,548	—
Vermin ...		19	—	13	—	32	—
Vermin marked ...		159	4	170	4	329	4
Clean ...		4,224	99	4,254	99	8,478	99

Percentage for 1923. Percentage for 1928

Boys and Girls—Vermin	2	—
Vermin marked	7	4

It is a very pleasing duty to report a continued improvement in regard to the cleanliness of the children examined. Cases of vermin have been reduced during the past session, and the number of cases of nits in the hair has also been reduced. The percentage of nits in the hair of girls for 1932-33, namely 9%, shows a very great advance upon the percentage recorded 20 years ago, when the figure was 33%. The fact that girls and boys now wear their hair much shorter no doubt has helped to diminish this evil, but the great improvement is undoubtedly due to the patient and careful attention paid by the Health Visitors in their regular visits to the schools, in addition to their tactful advice given in the course of their home visiting.

The arrangements whereby each Health Visitor has her own district to work in permits of a closer acquaintance of all concerned, permitting that tactful instruction and advice which is now producing good results as seen by this year's figures in regard to cleanliness.

Condition of Skin.

	Boys.		Girls.		Boys and Girls.	
	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,262	—	4,286	—	8,548	—
Head—						
Ringworm... ..	5	—	1	—	6	—
Impetigo	77	2	75	2	152	2
Favus	2	—	—	—	2	—
Other diseases ...	35	1	32	1	67	1
Body—						
Ringworm... ..	4	—	6	—	10	—
Impetigo	78	2	80	2	158	2
Scabies	16	—	24	—	40	—
Other diseases ...	55	1	38	1	93	1

Nutrition.

Number examined ...	4,262	—	4,286	—	8,548	—
Above average ...	1,099	26	1,151	27	2,250	26
Average	2,831	66	2,703	63	5,534	65
Below average ...	299	7	379	9	678	8
Very bad	33	1	53	1	86	1

All cases observed as being "very bad" are at once reported and special investigations made as to feeding, home circumstances etc. At the commencement of the past session and during the whole session many cases reported by headmasters as requiring feeding, were examined by the medical staff with a view to their inclusion on the lists of those requiring feeding. Although these extra examinations take up a considerable amount of time, they are very valuable in that they provide for immediate attention to such children, thus preventing further physical disability.

Boys and Girls.

Nutrition.

Year.	Number Examined.	Above Average.	%	Average.	%	Below Average.	%	Very Bad.	%
1923-24 ...	10,666	4,490	42	5,565	52	529	5	82	1
1924-25 ...	8,401	3,341	40	4,754	57	291	3	15	—
1925-26 ...	9,408	3,440	36	5,713	60	240	3	15	—
1926-27 ...	8,354	2,884	34	5,181	62	302	4	27	—
1927-28 ...	11,459	3,550	31	7,108	62	764	6	37	—
1928-29 ...	10,934	3,059	28	7,303	65	564	5	8	—
1929-30 ...	11,396	3,730	33	7,189	63	464	4	13	—
1930-31 ...	7,898	2,302	29	5,166	65	518	5	12	—
1931-32 ...	7,908	2,170	27	5,206	66	506	6	26	—
1932-33 ...	8,548	2,250	26	5,534	69	678	8	86	1

The above figures are for the past ten years and show a rise in the percentage of the "below average" and "very bad" cases.

Teeth.

Number examined ...	4,262	—	4,286	—	8,548	—
Perfect ...	222	5	249	6	471	6
Sound ...	698	17	767	18	1,465	17
1-4 decayed ...	2,403	56	2,332	54	4,735	55
5 or more decayed ...	939	22	938	22	1,877	22
Oral sepsis ...	212	5	233	6	445	5

Nose and Throat.

Number examined ...	4,262	—	4,286	—	8,548	—
Nose—						
Catarrh ...	307	7	271	6	577	7
Obstruction ...	26	—	35	1	61	1
Other diseases ...	18	—	16	—	34	—

Throat—

(a) Tonsils—

Slightly enlarged	587	14	654	15	1,241	15
Much enlarged	158	4	158	4	316	4

(b) Adenoids—

Probably present	167	4	167	4	334	4
Present ...	41	1	39	1	80	1
Other diseases	23	—	26	—	49	—

(c) Glands—

Submaxillary—

Enlarged ...	692	16	578	14	1,270	15
Much enlarged	8	—	7	—	15	—
Suppurating	1	—	—	—	1	—
Cicatrices ...	42	1	42	1	84	1

Cervical—

Enlarged ...	259	6	261	6	520	6
Much enlarged	10	—	17	—	27	—
Suppurating ...	—	—	—	—	—	—
Cicatrices ...	39	1	46	1	85	1
(d) Mouth Breathers	256	6	194	5	450	5

				Percentage for 1923.	Percentage for 1928.
Boys and Girls—					
Tonsils, slight ...	...	...	...	17	15
much enlarged ...	...	...	...	2	4
Adenoids, Present ...	...	...	...	—	—
Probably present ...	...	...	...	4	4
Enlarged } Submaxillary ...	...	...	...	14	13
Glands. } Cervical ...	...	...	...	5	5

External Eye Disease.

		Boys.		Girls.		Boys and Girls.	
		Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	...	4,262	—	4,286	—	8,548	—
Strabismus ...	...	132	3	125	3	257	3
Nystagmus ...	...	5	—	1	—	6	—
Blepharitis ...	...	120	3	141	4	261	3
Conjunctivitis ...	...	107	3	112	3	229	3
Corneal Nebulae ...	...	14	—	5	—	19	—
Corneal Ulcer ...	...	3	—	5	—	8	—
Other diseases ...	...	20	—	32	1	52	1

				Percentage for 1923.	Percentage for 1928.
Boys and Girls—					
Strabismus ...	...	...	...	3	3
Blepharitis ...	...	...	...	2	2
Conjunctivitis ...	...	...	...	1	2

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 ...				3,001	—	3,153	—	6,154	—
6/6 ...				2,333	78	2,396	76	4,729	77
6/9-6/12 ...				397	13	488	15	885	14
6/18 or worse ...				271	9	269	9	540	9
						Percentage		Percentage	
						for 1923.		for 1928.	
Boys and Girls—6/6 ...				...	...	68		80	
6/9-6/12 ...				...	...	22		12	
6/18 or worse ...				...	...	10		8	

Ears.

				Boys and			
				Boys.	%	Girls.	%
Number examined ...	4,262	—	4,286	—	8,548	—	
Otorrhoea ...	46	1	47	1	93	3	
Wax ...	135	3	147	4	282	—	
Other diseases ...	7	—	2	—	9	—	

Hearing.

Number examined ...	4,262	—	4,286	—	8,548	—	
Somewhat deaf ...	40	1	40	1	80	1	
Markedly deaf ...	—	—	3	—	3	—	

Speech.

Number examined ...	4,262	—	4,286	—	8,548	—	
Defective articulation	50	1	45	1	95	1	
Stammer ...	26	—	16	—	42	—	

Retarded Condition.

Number examined ...	4,262	—	4,286	—	8,548	—	
" Retarded " ...	26	—	14	—	40	—	

Heart and Circulation.

				Boys and					
				Boys.	%	Girls.	%	Girls.	%
Number examined ...	4,262	—	4,286	—	8,548	—			
Organic—									
Congenital ...	3	—	3	—	6	—			
Acquired ...	16	—	20	—	36	—			
Functional ...	45	—	58	1	103	1			
Anaemia ...	348	8	392	9	740	9			
				Percentage		Percentage			
				for 1923.		for 1928.			
Boys and girls—Anaemia ...				...	...	6	6		

The number of cases of anaemia, which for many years gave a percentage of about 6 per cent, has now risen to 9 per cent, this, combined with the increase in the number of "very bad" nutrition cases forms two of the very significant factors in this year's report.

Lungs.

	Boys.		Girls.		Boys and Girls.	
	Boys.	%	Girls.	%	Boys and Girls.	%
Number examined ...	4,262	—	4,286	—	8,548	—
Bronchitis ...	141	3	121	3	262	3
Tuberculosis ...	—	—	—	—	—	—
? Tuberculosis ...	18	—	14	—	32	—

Nervous System.

Number examined ...	4,262	—	4,286	—	8,548	—
Epilepsy ...	—	—	—	—	—	—
Chorea ...	2	—	5	—	7	—
Infantile Paralysis ...	5	—	4	—	9	—
Other diseases ...	4	—	—	—	4	—

Tuberculosis (Non-Pulmonary).

Number examined ...	4,262	—	4,286	—	8,548	—
Glandular ...	9	—	5	—	14	—
Bones and Joints ...	2	—	2	—	4	—
Abdominal ...	6	—	7	—	13	—
Skin ...	1	—	—	—	1	—
Other forms ...	—	—	—	—	—	—

Deformities.

Number examined ...	4,262	—	4,286	—	8,548	—
Bow Leg ...	26	—	10	—	36	—
Knock Knee ...	18	—	14	—	32	—
Cleft Palate ...	3	—	5	—	8	—
Spinal Curvature ...	9	—	9	—	18	—
Rickety Chest ...	123	3	62	1	185	2
Wry Neck ...	5	—	3	—	8	—
Club Foot ...	2	—	3	—	5	—
Congenital ...	9	—	10	—	19	—
Acquired (non-rachitic) ...	9	—	10	—	19	—

Rickets.

Number examined ...	4,262	—	4,286	—	8,548	—
Slight... ...	135	3	78	2	213	3
Marked ...	31	—	25	—	56	1

			Percentage for 1923.	Percentage for 1928.
Boys and Girls—Slight ...	...	...	2	2
Marked ...	...	...	3	—

	Boys.	%	Girls.	%	Boys and Girls.	%
OTHER DISEASES	23	—	41	—	64	—

Result.

Number examined ...	4,262	—	4,286	—	8,548	—
Fit ...	3,865	91	3,859	90	7,724	90
Defective (excluding verminous cases) ...	397	9	427	10	824	10

			Percentage for 1923.	Percentage for 1928.
Boys and Girls—Fit ...	...	...	91	90
Defective ...	...	...	9	10

Special Schools and Classes.

(1) *Fairmuir Special School.*

Physically Defective Children—

	Boys.	Girls.
On roll, July, 1932 ...	126	110
Admitted ...	35	20
Left ...	36	25
On roll, July, 1933 ...	125	105

(2) *Fairmuir Special School*

" Retarded " Children—

On roll, July, 1932 ...	66	40
Admitted ...	18	9
Left ...	21	10
On roll, July, 1933 ...	63	39

The accommodation in this school has been fully occupied during the past session, and there is a waiting list for admission in August larger in number than can be accommodated at once.

The Medical Services are much indebted to Mr Forbes and Miss Carmichael for their interest in and care of the orthopaedic cases requiring treatment in this school. Miss Carmichael cannot overtake all the work that is lying to hand in this school, already she has now over 70 children receiving regular treatment, but about

130 cases in all would benefit from treatment, and further, we have not been able to avail ourselves of her services in regard to supervision of breathing exercises for certain cases, and graduated exercises for heart cases. The importance of this treatment cannot be overestimated, without it some children will have to go out to the world suffering from some crippling disability which might have been cured or at least much diminished by the regular provision of treatment.

The question of manual occupation and training for the older boys on the "retarded" side of this school is one which calls for very careful consideration. These boys will have to earn their living by the use of their hands, therefore it is necessary, in the last years of their school life, that they should have much manual training in order that they may develop manual dexterity of as high a degree as possible, and at the same time make themselves acquainted with and learn the use of the various tools which they may have to use in later life.

A boy receiving such a training would be willing to stay on at school until such time as a suitable job had been found for him, as he would have the feeling that he is learning something which will help him in after life, whereas if no manual occupations be offered, the boys will drift away probably into unsuitable or "blind alley" occupations.

(3) *Blind Institution School.*

Blind and Partially Blind Children.

"Educationally" Blind—

			Boys.	Girls.
On roll, July, 1932 ...	...	...	23	15
Admitted ...	...	...	3	1
Left ...	...	...	10	1
On roll, July, ...1933	...	...	16	15
Other Cases—				
On roll, July, 1932 ...	...	...	16	8
Admitted ...	...	...	1	—
Left ...	...	...	1	—
On roll, July, 1933 ...	...	...	16	8

(4) *Dudhope Terrace School.*

Deaf and Deaf Mute Children—

On roll, July, 1932 ...	...	...	41	24
Admitted ...	...	...	3	4
Left ...	...	...	4	2
On roll, July, 1933 ...	...	...	40	26

(5) *Sidlaw School, Auchterhouse Sanatorium.*

Children undergoing Sanatorium treatment.

On roll, July, 1932	13	12
Admitted	35	29
Left	36	28
On roll, July, 1933	12	13

Arrangements for Physical Training.

- (a) Physical Exercises.
- (b) Swimming.
- (c) Practical Instruction in Personal Hygiene.

The once prevalent idea that physical exercises merely meant the production of muscle has become a memory of the past, and people now realise that physical exercises properly carried out, result not only in an improved physical balance, but in addition, that mental alertness which is always associated with general physical well-being. There is no doubt that many of the muscular movements commonly carried out by all, tend to produce a lop-sided condition of the body owing to the fact that we use the right side of our body more than the left in every day occupations of life, and the scientifically arranged exercises of graduated physical training correct not only this defect but also the defects of bad posture and prevent us from becoming merely one sided creatures.

The teaching of swimming and the principles of life saving is a matter of extreme importance at the present moment. The number of persons who go bathing is increasing year by year, and one would wish to see the time when every one who bathes can swim and has a knowledge of life saving. Regular instruction given by trained teachers has largely increased the number of boys and girls in this city who can swim, and this instruction has given them not only healthy exercise but has in addition fitted them to be of assistance to others, in the bathing pond or on the seashore should the need arise. One would like to see a further extension of the facilities for the practice and teaching of swimming.

During the past session the Public Health Department of this City arranged a series of exhibitions of cinema films illustrating the work of the Department in regard to such subjects as personal cleanliness—personal hygiene—the care of the teeth and eyes—clean water and clean food—infectious disease—child welfare, etc. During many of the exhibitions a running commentary was given, explaining or emphasising some particular point in each film. It is interest-

ing to note that these demonstrations attracted an attendance of over 6,000 people, that the films shown were loaned by many societies and corporations, came from many countries, and represented the latest in health education films.

Arrangements for Medical Treatment.

Summary of attendance at Treatment Clinics

(1) *Central Clinic.*

Dental	...	...	...	...	...	3,945
Skin and X-ray	...	...	...	...	...	12,349
Ear, Nose and Throat	...	...	...	...	...	8,502
Eye	...	...	...	...	...	16,037
Orthopaedic	...	...	...	...	...	22
General	...	...	...	...	...	13,936
Total attendances						54,791

Total number of children who have attended Clinic:—

(a) Off school	...	...	...	...	2,356
(b) Attending school	...	...	...	...	4,936
					7,292

Average attendance per child (in days)	...	...	8
Average daily attendance	...	...	193

(2) *Broughty Ferry Clinic.*

Eyes	...	...	...	34
Ears	...	...	...	8
General	...	...	...	215
				257
				257

Cases sent by Headmaster	...	...	176
Return Cases	...	...	309

(3) *Ferry Road Clinic.* (since October 1932).

Eyes	...	...	...	829
Ears	...	...	...	691
General	...	...	...	2959
				4,479
				4,479

Cases sent by Headmaster	...	...	587
Return Cases	...	...	272

(4) *Lochee Clinic.*

Eyes	...	....	...	...	2,242	
Ears	...	...	....	....	1,066	
General	...	...	...	....	5 521	
					8 829	8,829

Cases sent by Headmasters	...	...	...	1753
Return Cases	...	....	...	1454

(5) *Isles' Lane Clinic.*

Eyes	...	...	....	...	519	
Ears	...	...	....	....	812	
General	....	...	...	...	3,374	
					4,705	4,705

Cases sent by Headmasters	....	...	...	549
Return Cases	...	...	....	217

Total attendances at all Clinics 73,061

Summary of Attendance Certificates Granted at Clinics.

Total number of certificates issued 18,534

(a) Unfit to attend school—

		Four Weeks.	Three Weeks.	Two Weeks.	One Week.
Clinic cases	...	3	8	161	2,184
Non-clinic cases	...	235	460	1,623	3,223
Total Clinic cases	...	...	...	2,356	
Total Non-Clinic Cases	...	...	...	5,541	
					7,897

(b) Fit to attend School.

Clinic cases	...	...	...	4,743	
Non-Clinic cases	...	...	...	5,894	
					10,637
Total					18,534

DENTIST'S REPORT, 1932-1933.

Sir,

I beg to submit my Ninth Annual Report for the period ending June, 1933.

The total attendances at the dental clinic numbered 4057 comprising 1390 Boys and 1379 Girls. Parents accompanying the children were 2170.

Since the appointment of a full time dentist in the year 1924, the attendances have now almost doubled. The morning and afternoon sessions have been chiefly occupied with the examination and treatment of casual or emergency cases submitted by head teachers of the various schools. The cases were mostly "toothache" arising from excessive decay and due to neglect of the practice of simple oral hygiene. Cases were also submitted by the School Medical Officers in which the ill-health of the child was traceable to the condition of the mouth. Whenever possible, the teeth have been conserved by filling but unfortunately in nearly all the cases presented the teeth were irreparable. Cavities of decay suitable for successful filling can only be selected at the routine dental inspection at the Schools, which inspection has had to be more or less suspended on account of the large number of emergency cases.

The following work was done :—

Fillings	...	...	...	...	291
Dressing and Applications	...	...	...	...	1214
Scaling and Cleaning	...	...	...	...	10
Extractions—Temporary Teeth	...	...	...	...	1,763
—Permanent Teeth	...	...	...	...	181
Anaesthetics—Local	...	...	...	...	972
—General	...	...	...	...	41
Advice	...	...	...	...	198

Several cases of dental irregularities were sent and have been successfully treated by orthodontic methods at the Dundee Dental Hospital.

Miss Wilson, L.D.S., assisted at the dental clinic in order to gain experience of dental treatment of school children.

Mr McPherson, L.D.S., attended the dental clinic and the inspection at schools in accordance with the regulations for the diploma in Public Dentistry of St. Andrews University.

Nurse Sutherland continues to carry out her duties in a commendable way.

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.

Dundee Area.

OPHTHALMIC SPECIALIST'S REPORT.

Dear Sir,

I beg to submit the following detailed list of 1,438 cases seen by me at the School Clinic during the session 1932-33 :—

Refractions	...	...	...	...	690
Corneal Ulcers	...	...	...	...	363
Blepharitis	...	...	...	...	89
Admitted to Sight Saving School	...				4
Interstitial Keratitis	...	...	...		127
Conjunctivitis	...	...	...	...	53
Sebaceous Cyst	...	...	...	...	1
Lachrymal Abscess	...	...	...		14
Wound of Cornea	...	...	...		1
Contusion of Eyeball	...	...	...		8
Corneal Abrasion	...	...	...		4
Chalazion ...	...	...	...	...	35
Pterygium...	...	...	...	...	1
Tear Duct Obstruction		...	...		28
Choroiditis	...	...	...	...	1
Hordeolum	...	...	...	...	12
Corneal Nebulae	...	...	...	...	4
Subconjunctival Ecchymosis	...	...	...		1
Wound of Conjunctiva	...	...	...		2
Total	...	...	...	...	1,438

My best thanks are due to the full-time Medical Staff and the Clinic Nurse for valuable assistance during the past year.

(Signed) ALLISTER M. MACGILLIVRAY.

EAR, NOSE, AND THROAT DEPARTMENT.

New Cases seen	422
----------------	-----	-----	-----	-----

Diseases of the Ear—

A.O.M.S.	....	...	...	24
C.O.M.S. ...	...	....	...	43
External Otitis	...	....	...	2
Catarrhal Otitis Media	...	...	...	1
Mastoid ...	...	....	....	7
Inflation ...	...	...	...	5
Paracentesis	...	...	....	2

Diseases of Nose and Throat—

Nasal Cattarrh	...	...	....	24
Sinus Nasal Suppuration	...	...	....	1
Other Nasal Conditions	...	...	...	6
Conservative Treatment	...	...	...	241

Operative Treatment—

Tonsils and Adenoids	...	....	...	312
Mastoids ...	....	...	...	7
Old Patients examined	...	...	...	252
Negative examinanions	....	...	...	59
Total number of cases examined	...	...	...	674
Average number of cases examined daily	...	...	...	16

(Signed) M. J. GIBSON,

M.B., F.R.C.S.E.

X-RAY SPECIALIST'S REPORT FOR 1932-33.

DURING the past session 77 children have made 374 attendances at this department. The following table shows the diseases from which they suffered :—

Ringworm in the scalp :—

Microsporon	...	...	...	...	15
Trichophyton	...	...	...	...	1
Kerion	...	...	...	...	—
Favus	...	...	...	...	—
Ringworm of the body	...	...	...	...	1
Other diseases of the scalp	...	...	...	...	17
Streptococcal dermatitis	...	...	...	...	12
Other diseases of the skin	...	...	...	...	31
					—
					77
					=

The apparatus continues to function as satisfactorily as such a type can be expected to do. As it has not yet been installed in the Clinic in Nelson Street no report on its behaviour there can be given.

The treatment of Streptococcal Dermatitis continues to be satisfactory, and to Nurse Miller and the rest of the staff I have again to render my thanks for their unremitting assistance.

(Signed) JOHN KINNEAR,

M.D., M.R.C.P., Ed.

Treatment Centres.

During the past session there have been two great changes in the working of the Treatment Centres.

(a) In October the Ferry Road new Clinic was opened, and took at first the pupils from St. Patrick's and Glebelands Schools. One of the Assistant School Medical Officers attends once a week, to see new cases and to supervise the treatment of return cases. Daily dressings are carried out by one or other of the Health Visitors whose district lies near or around the clinic.

(b) The greatest change however, has been the removal of the Central School Clinic from Castle Street to the enlarged premises at Nelson Street. This change was made in May 1933, and at first the new conditions gave rise to certain complications in the working of the system, but organisation devised for each difficulty, aided by the willing co-operation and help of the whole staff, soon permitted of the smooth working of the various branches, clinics, and consultation hours.

There was a re-arrangement of schools sending cases to the Central Clinic, the various district clinics each taking on additional schools. The object being to take the pupils away as little as possible from their school area.

It has been a great pleasure to exchange the cramped and ill lit rooms of the Castle Street Clinic for the big airy and well lighted Clinic of Nelson Street. Further, this centralisation has made administration much easier, and information upon many matters can now be handled with greater expedition.

Holiday Homes.

1,078 children had the opportunity of a fortnight's holiday at one or other of the Homes which regularly provide for the country holiday so much required by many children in this city. Children sent to these Homes are convalescent from some exhausting illness, and the benefit which is the result of that fortnight in the open has only to be seen to be appreciated at its true worth.

On behalf of these 1,078 children we have to thank all who administer and work for these Homes. The names of Auchterhouse Holiday Home (Dundee Invalid Aid Society); Comerton Home, Newport; Marfield Home, Rattray (Dundee Social Union);

and St. Leonard's Home, St. Andrews, are all household words in the city, and this year there has been added the benefits received at the new Armitstead Home at Barnhill, a new name, which is rapidly becoming familiar to many homes.

During the winter months many a child is able to carry on only by virtue of the health obtained during its residence in one or other of these Homes.

The Pearson Picnics to Tayport were again favoured with good weather, there were a few minor accidents (promptly attended to by the doctor) and everyone enjoyed to the full the day in the open. The "Toc H" Picnic for retarded boys, is now an established summer outing looked forward to for many days and spoken of for many weeks after, while the Rotary Club Picnic to Cripple and Invalid Children continues to provide a day's outing to some 60 children. That these outings are of benefit to the children no one would wish to deny, and one would wish that it were possible to extend these benefits to a larger number of children.

In conclusion I wish to thank every member of the staff for their willing assistance during the past session, and for their kindness in doing extra duty when the staff was much reduced in numbers by illness. It is only by the constant exhibition of tact, courtesy, and the human interest of the staff in their work, which permits of the smooth working of the department. I would also beg to thank many members of other departments for their kindly assistance granted at all times.

VETERINARY INSPECTION.

(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.

- (a) During the year 202 visits of inspection were made by me to Registered Dairies and 3,234 cows and 112 other animals were examined.
- (b) Five visits were made to exempted premises and 12 cows were examined.
- (c) The Total Number of Cows in Registered Dairies, 584
- (d) Total number of cows in exempted premises, ... 23
- (e) Total number of cows inspected, 3,234

(3) Bovine Tuberculosis.

- (a) Total number of cows found Tuberculous on clinical examination and slaughtered under the T.B. Order of 1925, 6
- (b) Total number of cows found Tuberculous after tuberculin test, and slaughtered under the T.B. Order of 1925, 7
- (c) Total number of cows to which the tuberculin test was applied under Section 22 of the Milk and Dairies (Scotland) Act, 1914, was 35, 22 of which passed the test and 13 re-acted.

- (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.	11	13,176
GRADE "A" (T.T.). Messrs. Alex. Keay & Sons, 11 Forthill Road, Broughty Ferry.	11	13,176

- (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	11	13,176

- (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 56,691 carcasses were inspected.

The number of cases of Tuberculosis detected during the year was 2,347, an increase of 196 cases as compared with 1931. Of the aforesaid number 746 were cows, an increase of 128 as compared with 1931.

The total amount of meat seized under this head during the year was 175,374 pounds, an increase of 12,034 pounds as compared with 1931.

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
1928	170	943	16	571	2	...	158	1,860
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

Other Diseases.

The detections under this head during the year amounted to 1,533, a decrease of 123 cases as compared with 1931. The total amount of meat seized being 41,452 pounds, a decrease of 4,377 pounds as compared with 1931.

Animals Slaughtered at Public Slaughter-Houses.

The number of detections of disease during the process of slaughter for the year was 7,270, an increase of 2,248 cases as compared with 1931.

Carcasses Dressed and Undressed Brought into the Slaughter-Houses.

The number of detections of disease in consigned carcasses during the year was 242, a decrease of 127 cases as compared with 1931.

Cattle, Sheep and Pig Organs.

During the year 16,480 cattle, sheep and pig organs were seized and condemned as compared with 14,053 during 1931, an increase of 2,427 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 ...	876	Livers ...	147	Udders ...	21
Livers ...	2,890	Plucks ...	643	Plucks ...	91
Lungs ...	2,498	Kidneys ...	647	Kidneys ...	139
Hearts ...	887	Lungs ...	1,565	Livers ...	66
Kidneys ...	2,129			Lungs ...	26
Heads ...	847	Total ...	3,002	Total ...	343
Tongues ...	894				
Skirts ...	2,114				
Total ...	13,135				

Tinned and Frozen Meat.

During the year 15 pounds frozen ox livers, 8 pounds frozen ox kidneys, 32 pounds tinned meat and 41 pounds frozen 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, 1932.

Class of Animal.	NUMBER OF ANIMALS.			Weight (in lbs.) of Condemned Meat.
	Slaughtered.	Wholly Condemned.	Partially Condemned.	
Cattle ...	13,486	179	4,459	189,945
Sheep ...	27,879	51	2,348	3,544
Pigs ...	3,883	12	221	3,279

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 one cow was seized in the Cattle Market with the owner's consent as a suspicious animal and sent to the Slaughter-House to be slaughtered.

Throughout the year licences were granted for the movement of 47 Irish cows sold in the Cattle Market.

Anthrax.

There were no cases of this disease during the year.

Swine Fever.

During the year one outbreak of this disease occurred involving 230 pigs. 59 died on the premises and their carcasses were burned; 171 were removed, under licence, to the Slaughter-Houses and killed, and on examination were found to be free from infection. The premises were thoroughly disinfected, and there were no other cases.

One visit was made examining pig reported dead, and a report was submitted to the Ministry. Form "A" was served on owner with copy to Ministry, Local Authority and Police.

Two visits were made examining pigs reported as having been in contact with swine fever infected pigs. A report was submitted to the Ministry and Form "A" served on owners with copy to Ministry, Local Authority and Police.

One visit was made examining a pig reported as suspected of swine fever. A report was submitted to the Ministry and Form "A" served on owner with copy to Ministry, Local Authority and Police.

One visit was made examining 2 pigs suspected of swine fever, but they showed no trace of infectious or contagious disease.

Three visits were made examining pigs on infected premises, and monthly reports forwarded to the Ministry.

Three visits were made examining pigs infected with swine fever. A report was submitted to the Ministry and Form "A" served on owners with copy to Ministry, Local Authority and Police.

Parasitic Mange.

There were no cases of this disease during the year.

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 1,279 Irish and Canadian cattle were admitted into the City accompanied by licence, necessitating 167 visits of inspection, a decrease of 672 imported cattle as compared with 1931.

Transit of Animals Order (1927) and Amendment Order of 1931.

Under this Order all railway trucks and road vehicles whether mechanically propelled or horse-drawn, 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 2,030 motor floats, 262 horse floats and 86 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 departments necessitated 39 visits during the year.

The whole stud is in a satisfactory state of health, and are in good working condition.

Other Work.

Three visits were made to Mill Farm, Invergowrie, Huntly Farm, Invergowrie and Lochee, tracing two Irish cows moved without licence and reported same to the Procurator Fiscal.

Four visits were made examining 22 pigs, but found no trace of any infectious or contagious disease.

One visit was made to Knackery making post-mortem examination on dead horse belonging to the Works Department, the cause of death being acute inflammation of double bowel.

One visit was made to Whitelawson.

HUGH FERRIER, M.R.C.V.S.,

Veterinary Surgeon.

SANITARY DEPARTMENT.

REPORT BY MR R. MITCHELL, Chief Sanitary Inspector.

SANITARY DEPARTMENT,
WEST BELL STREET,
DUNDEE, 16th May, 1933.

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 1932. The Report has been prepared in accordance with the circular of the Department of Health for Scotland dated 23rd December, 1932, 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.—Offensive Trades—action taken.
- 7.—(a) Schools; (b) Workshops; (c) Factories; (d) Common Lodging-Houses; and (e) Burial Grounds—sanitary condition.
- 8.—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 5th December, 1932.

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) Dairymen 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 26 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.**

Introduction.

The year 1932 in the Industrial World still showed much evidence of the decreased trade which this country has been experiencing for a year or two back, but in the matter pertaining to the improvement of the health of the inhabitants there is no lessening in the efforts of all those connected with the question. The fact that a large number of the population have so much time on their hands gives more opportunities to thoroughly enquire into the conditions under which they live, and particularly in regard to the housing aspect has this been found the case.

Housing.—In comparison with previous years, there has been an extraordinary increase in the number of applications by tenants for certificates under the Increase of Rent and Mortgage Interest Restrictions Acts, 1920-5, due in all probability to the cause aforementioned. The results of these applications together with the activities of this branch of the service will be found in the housing section of this report.

Water Supply.—The water supply of a community is a subject of the utmost importance. We in Dundee can congratulate ourselves on the magnificence of the supply at our disposal, not only for its almost unlimited quantity, but for the purity at which it is served—the freedom from the incidence of water-borne diseases in the records of the city bears this out. With the erection of so many houses now containing separate water-closet and bath, including those erected for re-housing persons displaced from insanitary and unhealthy houses, the consumption of the water supply for domestic purposes is bound to increase. The minimum estimated figure per head per day for Slum Areas is only 10 gallons, while that for the New Housing Areas is 28—a nett increase of 18 gallons.

Housing Survey.—The task of surveying the whole of the houses in the city was again commenced in October. When completed, and the whole of the information derived therefrom has been collated, a true indication of any changes in the requirements of the city for new housing, and the improvements necessary in existing properties, can be properly gauged.

Refuse Disposal.—This year, at a cost of approximately £25,000, the erection of a combined Salvage and Incineration Plant was completed. The advantages of such a plant are manifold, and further information regarding it will be found under the heading, "Scavenging and General Nuisances."

Sewerage.—During the year work was commenced on a new sewer which, when completed, will be approximately $3\frac{1}{2}$ miles in length. This is for the service of areas in the northern part of the city and the lower lying district of Downfield from which the sewage had formerly to be pumped to a sewer already existing on a higher level. The cost of this improvement is estimated at £18,200.

Boundaries Extension.—By the Dundee Corporation Order Confirmation Act, 1932, two areas embracing 638.96 acres lying to the north-east and north-west of the former boundaries were included within the city proper. Mainly of a rural character, these annexed areas make valuable sites within our own boundaries for the development of housing or industry as occasion warrants.

Staff.

The number and composition of the staff are as follows:—

- 1 Chief Sanitary Inspector.
- 1 Superintendent.
- 1 Housing Inspector.
- 1 Plumbing Inspector.
- 2 Food Inspectors and Sampling Officers—Food and Drugs Acts.
- 1 Indoor Inspector.
- 2 Housing Officers.
- 4 District Inspectors.
- 1 Port Officer.
- 5 District Officers.
- 2 Junior District Officers.
- 1 Clerk.

—
Total 22

In addition to the loss of Mr Forbes Grant, whose death was recorded in my report of last year, I have also to notify the death of one of the younger members of the Staff — District Officer James Hutchison. Mr Hutchison was a young man who showed exceptional promise in his work, and his loss to this Department is deeply regretted.

Death-Rate: Density of Population, and Acreage.

The death-rate per 1,000, as calculated and corrected by the Medical Officer of Health, for 1932 was 13.8, as against 13.9 in 1931 and 16.0 in 1930.

The population, as estimated to the middle of 1932 by the Registrar-General, is 176,833.

The acreage of the City, excluding foreshore, is 7,316. This works out at 24.17 persons to an acre.

Rainfall.

The total rainfall in Dundee, as noted at the Eastern Necropolis and reported by the Superintendent of Cemeteries, was 28.01 inches as against 31.62 inches last year. The figures for each month are as follows :—

January	...	...	...	...	1.81 inches.
February	...	...	...	...	0.11 inches.
March	...	...	...	...	2.59 inches.
April	...	...	...	...	2.22 inches.
May	...	...	...	...	2.91 inches.
June	...	...	...	...	0.95 inches.
July	...	...	...	...	3.92 inches.
August	...	...	...	...	0.87 inches.
September	...	...	...	...	1.56 inches.
October	...	...	...	...	6.48 inches.
November	...	...	...	...	1.31 inches.
December	...	...	...	...	3.28 inches.
Total					28.01 inches.

This shows an average fall of 2.33 inches per month, as against 2.63 inches of the former year, and 2.77 in 1930.

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 $1\frac{1}{2}$ miles of new sewers were laid down, making the total length of sewers in the City 144.647 miles. In maintenance and repair the sum of £3,734 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 has started on the Downfield Outfall Sewer, which is approximately 3.42 miles in length and estimated to cost £18,200. Commencing at the River Tay at Stannergate and terminating at Downfield, this sewer will provide a gravity outfall for Downfield sewage which is presently pumped up to Kingsway Sewer. It will also provide for future building schemes in the Northern and Eastern Districts of the city.

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	...	...	...	...	...	8,937,800
Monikie	...	...	...	...	...	910,500
Crombie (for the supply of Carnoustie)	...	...	...	...	...	231,700
						<hr/>
Total						10,080,000
						<hr/>

This total is lower by 549,000 gallons than the figure for the previous year, and in this reflects the reduced demand for water for industrial purposes during the past year, and reduction of leakage.

The above total represents a daily consumpt of 49.41 gallons per head of the population supplied, i.e., 204,000. Of this consumpt per head 13.04 gallons represents water used for trade and industrial purposes through meter, while the remaining 36.37 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.

Seventeen properties throughout the city have had their water supplies augmented and improved by the installation of larger main service pipes. Following complaints to this Department, the examination of the fittings is placed in the hands of the staff of the Water Engineer, who reports their findings to the Public Health Committee as the Local Authority from whom instructions are received to serve the necessary notices on the agents or owners of the properties affected.

98 sinks have been installed at 22 different properties as follows :—

- 31 in attic houses ;
- 16 in houses other than attic dwellings ;
- 45 iron sinks have been replaced by fireclay ones ;
- 5 installed in shops ; and
- 1 in an office,

Scavenging and General Nuisances.

The work in maintaining the cleanliness of the city and the scavenging thereof does not come within the jurisdiction of this Department but is wholly under the charge of a separate Superintendent of Cleansing.

The question of disposal of refuse has received a great amount of attention during the past few years, and it has been found difficult to find suitable outlets for the amount of refuse requiring to be disposed of by a city of this size. A number of areas where the ground was very uneven have been levelled, and work of this nature is still proceeding. With the intention of bringing this thorny and knotty problem to a finality it was agreed, after many reports, meetings and discussions had taken place, to erect a suitable Refuse Disposal Plant.

This plant, a combination of salvage and incineration, with a Primary Separation for taking out dust under $\frac{3}{8}$ in. and cinder from $\frac{7}{8}$ in. to about $1\frac{1}{4}$ in. was erected by the firm of Messrs Petrie & McNaught, Ltd., of Rochdale, on a fine site adjacent to Blackscroft, and known locally as Gourlay's Yard. This system is coming more and more into vogue, as through the extraction of the dust, the light combustible matter is more easily burnt with resultant reduction of clinker.

The cinders or half-burnt fuel is also found to be a very useful product for steam raising and heating. The introduction of picking tables also enabled the Cleansing Department to extract a very varied number of articles which are saleable. These include aluminium, brass, copper, zinc, lead, tins, bottles, bones, rags, etc., whilst the hours of reduction in actual burning in the incinerator are fully one-third that of the total incineration. The introduction of this plant has meant the closing of many unsightly and insanitary dumps in and about the City, whilst the centralisation of the work has greatly reduced haulage costs. The riddled material, we are informed, is finding a very ready sale amongst farmers in the district, and this can be delivered absolutely free of nuisance. These are facts to be appreciated by both farmers and public alike, and so far as both the Sanitary and Cleansing Departments are concerned, there is satisfaction in knowing that at the end of each day, the whole of the refuse collected is either destroyed by fire or placed safely away without fear of nuisance at a later date.

The cost of the erection, including Plant and Buildings, was approximately £25,000. With regard to the actual cost of working, while it is rather early to state exactly, the Cleansing Superintendent is of the opinion that it is certainly done at a lower cost than the previous system, both in actual disposal and collection, while the revenue will be enhanced considerably.

General Nuisances.—Nothing of a particularly serious nature or nuisance likely to be injurious to health has occurred. On the whole, the Inspectors engaged on the job of detection of such found them more of a minor character. Nevertheless, activities in an earnest manner have been pursued, always keeping in view that it is from the smaller or minor nuisances that those of a more serious nature, giving rise to conditions likely to endanger or be detrimental to the health of the citizens, are brought about.

In the course of the year, however, several nuisances have received the attention of the Department which warrant mention here. Early in June the sewer in Todburn Lane was found to be choked. Visions of serious flooding arose, but after notification the Works Department speedily had it cleared and relieved an otherwise serious situation.

Complaints were received of offensive smells finding their way to offices. Investigations showed that in the basement flat of the premises concerned "Fish Cakes" were being prepared. A more unsuitable place for such a trade could not have been chosen, and it was necessary to effect an immediate removal of the offending parties.

Who at this late day would expect to find fowls being kept within a dwelling-house. Incredible as it may seem a number of hens were found to be kept in the attic of a house, and access to which was gained directly from the kitchen. According to the culprit's story he had **brought the hens over with him from Ireland**. Needless to say a disposal of the stock was effected immediately and the premises thoroughly cleansed thereafter.

Serious complaints were received from the occupiers of a block of offices in the centre of the city of noxious vapours emanating from dry cleaners' premises in the same building. It was found that odours of a sickly nature — attributable to the process of cleaning—were finding their way into the offices concerned. The matter was taken up with the proprietors of the plant, and as delay

was occurring, an Intimation in terms of Section 16 (1) of the Public Health (Scotland) Act, 1897, was served. Active steps were there and then taken to abate the nuisance, and no further complaints have reached us.

At the early part of the year numerous complaints were received in regard to the defective condition of washing-houses, some of which had not been in use for a number of years, with the result that even the boilers had to be renewed. These complaints appear to be concomitant with the industrial depression, the householders finding with the application of the "Means Test" that they are unable to pay for the much better but more expensive facilities of the Public Washing-Houses and were compelled to again use the washing-houses at their properties.

56,011 visits of inspection were made in the detection of nuisances, of which 13,263 were discovered and steps taken for their abatement.

Verminous Houses and Persons.

At 115 different properties 134 rooms were dealt with for the destruction of bugs. This work was carried out after application for assistance had been made by the tenants. The method generally employed is to have all paper stripped from the walls, and, where possible, facings, skirtings, picture rails, etc., are removed or loosened, when an insecticide, found to be very efficacious, is sprayed on the walls and affected parts. The tenant is advised not to re-decorate with paper but to use a distemper or oil paint instead. While such treatment does not thoroughly exterminate the pest from older buildings, where in many cases they have become very deeply rooted, it certainly restricts their numbers, but in newer properties where bugs have been carried with furniture by the tenants when they remove, the eradication of the pest by this method is generally successful.

Verminous Persons.—Additional powers for the compulsory cleansing of persons found to be verminous have been obtained by Section 55 of the Dundee Corporation Order Confirmation Act, 1932, which reads:—

- (1). The Corporation may from time to time provide free of charge temporary shelter or house accommodation with any necessary attendants and apparatus for cleansing and freeing from vermin the person and clothes of any person who shall

be certified by the medical officer to be infested with vermin and may on the certificate of the medical officer cause any such person who consents to leave his house to be removed therefrom to such temporary shelter or house accommodation for the purpose of disinfecting and cleansing his person and clothing and in the like case and on the like certificate may cause any such person who does not consent to leave his house to be removed therefrom to and detained in any such temporary shelter or house accommodation in cases where the sheriff on the application of the Corporation and on being satisfied of the necessity of the removal and detention makes an order for the removal and detention subject to such conditions (if any) as are imposed by the order. The Corporation shall in every case cause the removal and detention to be effected and the conditions of any order satisfied without charge to the person removed.

- (2) Any person who wilfully disobeys or obstructs the execution of an order under this section shall be liable to a penalty not exceeding five pounds.
- (3) The cleansing of females under this section shall only be effected by a person duly qualified as a medical practitioner or by a female person being a member of the staff of the medical officer.
- (4) For the purpose of this section the word "house" includes any tent, van, shed or similar structure used for human habitation or any boat lying in any river, dock, canal or other water and used for the like purpose other than a boat within the jurisdiction of the trustees of the harbour of Dundee.
- (5) This section shall not apply to any person under the age of fourteen years.

Exemption for children has been allowed as Section 122 of the Children's Act, 1908, already governs them.

Whitewashing and Painting Common Stairs and Passages.

In June, Letter Intimations were sent to the various owners or agents of properties drawing their attention to the terms of "The General Police and Improvement Consolidation Act, 1862," which is embodied in "The Dundee Police and Improvement Consolidation Act, 1882, in respect of 1,110 common stairs and passages of tenemental properties throughout the city. While the response to these letters could be considered satisfactory, it was necessary

at a later date to issue 156 notices under Section 354 of the aforementioned Act on the proprietors who were deemed to have unnecessarily delayed the work, giving seven days for the completion thereof. Most of the work has now been done—in certain cases deferment was allowed until the spring, and, in respect of a number of properties, the notice was cancelled as the general condition of the buildings warranted their being dealt with in terms of the Housing (Scotland) Act, 1930.

To assist the poorer sections of the community in their efforts to keep their houses clean, the Department lends free of charge brushes suitable for whitewashing and distempering. This has obviously been greatly appreciated; brushes have been given out on 3,162 occasions for the cleaning of approximately 7,200 rooms. In very necessitous cases, on the recommendation of the Inspectors, ochre and whiting have been issued free.

Stables and Piggeries.

Stables.—In June a complaint was received from the R.S.P.C.A. Inspector regarding certain premises being unsuitable for stabling purposes. A survey of all stables in the city was at that time made, and, where necessary, limewashing of the premises was enforced and any minor repairs required carried out. To the 322 stables 806 visits were made.

Piggeries.—The keeping of pigs within the area of a large industrial city is greatly discouraged, and each year shows an appreciable drop in the number thereof. The time is not far distant when all piggeries will be entirely confined to rural and agricultural areas where there is less likelihood of nuisance arising and where such a business is more likely to prosper. These places are regularly visited by the Inspectors—in 1932 on 221 occasions.

A contravention of the Bye-laws for Regulating the Construction of Pig Stys was reported at the latter end of the year, when a dairyman was discovered to have housed in a building, formerly used as a cowshed (the registration for which had not been cancelled) a number of pigs. These premises were situated at less than 100 feet from occupied houses, while the construction did not wholly conform to the requirements of the Bye-Laws. A Letter Intimation was sent to the offender requesting the discontinuance of the premises as a piggery. The attention that letter

merited was not paid, and the matter was reported to the Public Health Committee as the Local Authority. The result was a notice in terms of the aforesaid Bye-laws and the Public Health (Scotland) Act, 1897, Section 35, was served on the delinquent giving fourteen days for the removal of the pigs and the discontinuance of the premises as a piggery. The terms of the notice have now been complied with.

Back Courts, Areas, and Footways, Etc.

8,320 square feet of paving slabs, or concrete with suitable fall to surface drains, were laid at properties where formerly the conditions did not allow of proper cleansing and sweeping.

Periodically at certain tenements it is necessary to serve notices upon the occupiers of the houses against the habit of throwing rubbish of all descriptions from their windows to the areas in rear. Though such practices are indeed reprehensible, it is practically impossible to detect the offenders. With the more open lay-outs of the new housing schemes this form of nuisance is fast disappearing, and it is seldom indeed that a complaint arises in this direction.

The validity of the notice on which we call upon house proprietors to take steps to cleanse and purify enclosed areas was questioned during the year by an agent acting on behalf of a house factor. The place in dispute was a sunken area immediately in rear of houses, and desposits of refuse had been allowed to accumulate therein. The matter was under weigh for some time, and eventually a decision was given by the Town Clerk that where these areas were of easy access the Cleansing Department be instructed to carry out the necessary work.

A small cul-de-sac leading off Foundry Lane has been the cause of repeated complaints. There is no doubt the surfaces of the footways and carriageway there are in a very bad condition, and the matter was brought under the notice of the City Engineer as requiring early treatment. At the end of the year the subject was still under consideration, but I have no doubt the necessary repairs will be effected as opportunity and the purse strings allow.

Schools.

These places are under the control of a separate Department, and only on rare occasions does the necessity arise for official action by this office. Gradually the older schools within the city

are being closed down and more suitable, hygienic, commodious buildings erected in their stead. With the large new housing communities now resident in the outer areas of the city the question of school accommodation has been prominently in the news and the subject of many reports.

St Martin's, Harcourt Street.—This school, one of a number transferred on the passing of the Education (Scotland) Act, 1918, to the care of the Education Authority, has been fast assuming a condition of unsuitability and was looked upon by us with a tolerant view. Last year, owing to numerous complaints regarding the condition of the playground, concrete slabs were laid down to form paths, but this was more of a temporary expedient. The feasibility of erecting a new school to accommodate the present scholars was considered by the Works Committee of the Education Committee, and the costs entailed in such a scheme as against that for the entire reconstruction of the existing buildings were submitted. It was agreed to recommend the question of reconditioning the present school buildings be not approved and that a new school be erected.

There is no doubt the recommendation is a wise one as the existing buildings, equipment and offices have reached the stage of zero on the thermometer of present-day requirements.

Complaints.

Complaints received at the office, either personally, by telephone or by letter, numbered 3,822 as against 3,921 last year. These were all given the attention of the Inspectors, and in 3,570 cases further action was necessary while on 252 occasions the complaints were found to be based on some trivial matter or the outcome of neighbours' quarrels. The Departments of the Chief Constable and the Superintendent of Cleansing assist us greatly by notification of nuisances discovered by the members of their respective staffs—assistance which is greatly appreciated.

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, 15,563 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.

10 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.

Plans Submitted to the Works Committee.

All plans of new buildings and those showing proposed improvements on existing buildings are scrutinised by me prior to their being submitted for approval by the Works Committee. In this way the Department maintains touch with all the building operations within the city and is able, when necessary, to record objections to plans not wholly conforming to the standard we now look upon as being necessary, and, further, on erections likely to restrict the ventilation and free circulation of air to buildings already existing.

Drainage and Structural Work.

Additions and improvements have been carried out at 125 properties in connection with which the following materials have been used .—

245	Water Closets,
98	Sinks,
5	Baths,
41	Basins,
43	Wash Tubs,
140	Lead Traps,
3,378	Feet of W.C. Soil Pipe,
1,410	Feet of W.C. Flushing Pipe,
2,412	Feet of Waste Pipe,
6,830	Feet Water Pipe,
4,253	Feet Ventilation Pipe,
478	Feet Cast-Iron Drain,
6	Cast-Iron Drain Traps,
6	Rooflights,
8	Roof Ventilators,
436	Yards Fireclay Drain Piping,
69	Drain Traps,
37	Inspection Chambers,
209	W.C. Apartments.

During the course of the progress of this work 1,819 inspections were made by the Plumber Inspector.

Water Closets.

245 water closets, new and renewed, together with all the necessary soil, flushing, water and ventilation pipes, were installed at 82 properties.

132 were installed within dwelling-houses;

94 were provided for tenemental properties in such positions as staircases, passages, courts, attic flats, etc.;

6 were installed in shops;

2 were installed in offices;

1 was installed in workplace;

1 was installed in hall; and

9 were renewed in houses, replacing pan and other obsolete fittings.

Additional water closets are asked for where it is considered the existing accommodation is insufficient for present-day needs. The ideal is to have such a convenience in every house, and that is advised where practicable. This, however, is not always found possible, so one W.C. for not more than two families, as near to the houses as can be arranged, is accepted as the next best proposition.

When Water Closets were first introduced on a large scale at tenemental properties, the occupants of which had formerly the use of common privies situated at rear of the buildings usually alongside the washing-house with the open ashpit attached, it was considered one W.C. for four families was adequate. A step certainly in the right direction, but experience has proved that such a proportion is quite inadequate.

At one property for which additional W.C.'s had been asked in outside casings, the agent agreed, rather than erect more casings, to install W.C.'s into 19 houses. At another two properties where the W.C.'s were against the staircases, the proprietor arranged to abolish these and introduce Water Closets into the 16 houses concerned.

Actions like these are to be commended, and indicate the desire of progressive owners of dwelling-house property to take the longer view, especially with the desire to keep a good class tenant who longs for the cheaper and better type of house being erected by the Corporation where every separate dwelling has a W.C. inside and probably a bathroom; as well as a combined wash-house and kitchenette.

Washing-Houses.

During the year one complete washing-house was erected as additional accommodation for four properties where the existing washing-house was inadequate. The latter was at the same time improved by the introduction of fixed tubs, etc.

At another property the washing-house was re-conditioned, fixed tubs installed and the means for lighting and ventilation improved.

In all, 43 enamelled fire-clay wash-tubs have been installed in washing-houses which were without such fittings or where formerly dilapidated wooden fixtures were in use.

Housing Survey.

The Department in their circular letter of date the 23rd December, 1932, require to be included in the Report by the Sanitary Inspector:—

“ 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.”

The first survey of the City was commenced in 1926 and completed by 1930, and in the latter year I submitted a comparative statement shewing the figures relating to each Ward of the City.

Towards the end of 1932 a start was again made to re-survey the area within our boundaries on the same lines as formerly, and I am hoping to be able to report the figures as applying to the City for 1932-1933 in my Report for next year.

Under this head 2,619 visits of inspection have been made.

Earth, Closets, Privies, and Privy Middens.

AS AT 31ST DECEMBER, 1932.

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, and Lodge - -	2	...	2	3	6
Castle Mains (North House) - -	1	...	1	...	3
Kirkgate Mains - - - -	1	...	1	1	1
Trottick N.W. Cottages - - - -	2	...	6	10	11
" N. " - - - -	2	...	6	9	11
" N.E. " - - - -	2	...	5	12	14
" E. " - - - -	1	...	1	2	3
" S. " - - - -	2	...	6	10	11
Balmuir Cottage - - - -	1	...	1	1	1
Balmuir Smithy - - - -	1	...	1	2	...
Magdalene's Kirkton (Cotton) - -	1	...	1	2	4
Balmuir (Cotton) - - - -	1	...	1	2	3
Harestane Mill - - - -	1	...	2	2	4
South Baldovan Farm - - - -	1	...	1	1	2
East Piternpton - - - -	1	...	1	1	1
Piternpton Railway Cottages - -	2	...	2	...	4
Piternpton Cottage - - - -	1	...	1	2	1
517 Strathmartine Road - - - -	1	...	1	1	5
Station Cottage, Cox Street - -	1	...	1	3	3
West Kirkton Cottages, Kirkton Road -	5	...	5	13	10
Fountainbleau (Hamlet) - - - -	7	...	7	15	13
Gellyburn 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	5	7
King's Cross Cottar House - - -	1	...	1	1	1
Hillside Farm - - - -	1	...	1	5	6
Blackness Nursery (Cottage) - -	‡1	...	1	2	2
Bingham Terrace (Gallowhill) - -	1	...	1	3	3
208-210 Arbroath Road - - - -	...	2	2	5	6
399 Arbroath Road (Craigie North Lodge)	1	...	1	1	4
Gotterstone Cottar Houses (North) -	...	5	5	15	12
do. do. do. (South) - -	2	...	2	6	7
51 Forthill Road (Pullar) - - - -	1	...	1	1	1
52 do. do. (McQuarrie's Houses) -	3	...	3	3	5
Balgillo Road (Watt) - - - -	1	...	1	2	1
do. do. (Keillor) - - - -	1	...	1	4	2
do. do. (Elrick) - - - -	1	...	1	1	1
East Balgillo Cottar House - - - -	1	...	1	2	3
do. do. do. (Grieve's House)	...	1	1	2	2
Barnhill Farm (Grieve's House) - -	1	...	1	1	2
434 King Street, Broughty Ferry - -	1	...	1	...	1
West Balgillo Cottar House - - - -	1	...	1	...	...

‡ House under Closing Order.

By reason of the extension of the Burgh Boundaries this list has been slightly added to as from last year. It is hoped that the Downfield Outfall Sewer Scheme, when completed, however, will allow of a number of these places being abolished in favour of more satisfactory accommodation.

Ashpits and Ash or Dust Bins.

As compared with last year, the progress made in the substitution of open insanitary ashpits for that of the more hygienic storage system of galvanised iron bins has been somewhat slower. Nevertheless we are glad to think that slowly but surely these nauseating, offensive, often dilapidated storages of putrifying matter, the cause of much nuisance and breeders of disease, will soon be counted—in this area at least—as amongst those things belonging to the past. The figures pertaining to 1932 are as follows:—

185 ashpits have been demolished, and replaced by
494 galvanised iron dust bins.

In addition,

1,042 bins which had become unfit for use were renewed,
and

34 bins were provided at properties where formerly
there was no storage system available.

In terms of Section 18 of the Dundee Corporation (General Powers) Order, 1930, the Local Authority is given adequate powers to require proprietors of property to provide portable ashbins in lieu of ashpits. The east end of the city is now being tackled, and a much-needed improvement in that part should be effected ere the passing of another year.

While writing under the above heading, it is appropriate to make mention of the collection of garden refuse instituted by the Superintendent of Cleansing. There is no doubt this innovation has been fully appreciated by those to whom the disposal of refuse of this nature presented a vexing problem. The necessity of burning prunings and decayed vegetation on the ground does not now arise, thus obviating much bickering among, and complaint from, householders in the vicinity.

Housing.

It has been well said, "Ye have the poor always with you." These words are as true to-day as when spoken by the Great Master himself, and, owing to the great industrial depression which now hangs like a pall, not only over our native land, but over the whole wide world—are perhaps relatively more expressive.

The chaotic condition of trade at present has, unquestionably brought a feeling of insecurity and anxiety to the minds of all, and the spectre of poverty to the homes of thousands. The strain is perhaps felt more severely by the honest, industrious workman—father of a family, and his worthy spouse—upon whose shoulders is placed the responsibility of eking out their meagre income in a struggle to provide the food, clothing and shelter necessary for the welfare and health of their household, and in addition, adding to their fears, is the dread of the dangers to themselves and their family consequent on being forced to live in an insanitary and unhealthy house.

It has also been said that the terms penury, dirt and slumdom are synonymous; that so long as there is poverty, so long will there be slums. Nothing is further from the truth; want does not and need not make dirt or slums. The slum house is an evil, created in ignorance by our forefathers, and perpetuated through lack of knowledge of its dangers, and the apathy of the general public.

The dirty house and occupier, both recognised as a menace to the community, is found, not only in the slums, but in places least expected. The occupier, however, can be arraigned before a Court of Summary Jurisdiction, penalised, and warned to keep the premises clean. There is no such method of dealing with the slum owner. The process of closing and demolishing slum houses, for various reasons, often takes months and sometimes years, and during the time of waiting for alternative accommodation the tenants are compelled to live in houses fast developing into ruins—because the owner, knowing he is to have his houses compulsorily closed, will not incur any further expenditure, even to keep the premises wind and water tight.

Associated with the problem of the slum house is the question of the provision of a sufficient number of houses to:—

- (a) Abate Overcrowding—including the segregation of sexes; and
- (b) Meet the needs of the normal growth of population.

Regarding — (a) The existence of overcrowding and its deplorable, yet unavoidable accomplice, the mixing of sexes, are, from the health and morality points of view, great dangers fraught with dire consequences, not only to the immediate sufferers but to society in general. Although it is difficult to assess the extent of the corruption—physical and moral—caused by these cankerous sores, it is well known they do exist in our midst and are blots on our vaunted civilisation.

The Medical Officer and myself both receive letters from anxious parents telling their tales of woe, and pleading for our assistance to enable them to find houses suitable to the requirements of grown-up, or in some cases, sickly families. The following is typical of the letters received :—

“ I am anxious to remove to a larger house but cannot get one. I have tried many factors but they don't have a house to give me. My factor would give me one, but he has not had a larger house for a long time, and I have searched all over for better accommodation. If there is a larger house you know of privately owned or owned by the Town Council I will be so glad to remove and take it. I am **helpless** in the matter and will willingly accept any assistance to secure another house.”

Enquiries made revealed the circumstances to be as follows :—Father, Mother, two sons aged 10 and 16 years, seven daughters aged 4, 8, 10, 17, 19, 21 and 22 years, and two grandchildren aged 10 and 11 months respectively. A total of 13 persons living in a two-roomed house, and one of the rooms measured only 864 cubic feet—sufficient for 2 persons.

The undernoted case was brought to our notice by Dr Hunter, Chief Tuberculosis Officer :—Father, mother, four daughters aged 5, 8, 13 and 17 years respectively, and aunt aged 62 years, who kept house. The house of two rooms is situated in a very congested area, and since taking occupancy some six years ago this family have had a continual struggle with ill-health. The family history is as follows :—a boy died from Tuberculosis about five years ago; the eldest daughter attended the Tuberculosis Dispensary for a long time; one daughter is at present an inmate of Auchterhouse Sanatorium, while another has been ill for a considerable period—said to be suffering from lung trouble.

These two cases, taken from amongst many, illustrate the lamentable conditions in which numbers of our fellow citizens are living.

The Registrar-General in his Report on the Census Figures for Dundee, issued towards the middle of the year, shows a table giving the numbers and sizes of the houses within the Burgh and the number of persons in each house.

TABLE 26.—HOUSES: Number of Rooms by Number of Persons.

Number of Persons in each House.	PRIVATE HOUSES WITH NUMBER OF ROOMS AS UNDER										Total Private Houses	Total Persons in Private Houses
	1	2	3	4	5	6	7	8	9	10 and over		
1	2,580	1,763	384	155	50	38	18	10	2	2	5,002	5,002
2	1,606	5,024	1,625	545	289	195	101	77	27	31	9,520	19,040
3	985	5,061	2,195	640	302	199	158	100	49	76	9,765	29,295
4	559	4,176	2,121	621	251	211	129	101	80	76	8,325	33,300
5	302	2,688	1,603	453	180	128	106	65	52	91	5,668	28,340
6	175	1,678	1,023	283	108	79	49	48	22	63	3,528	21,168
7	98	940	674	179	68	32	38	27	18	47	2,121	14,847
8	30	481	381	115	34	30	20	7	8	29	1,135	9,080
9	8	287	227	81	28	13	5	12	7	13	681	6,129
10	1	100	101	34	17	6	2	1	1	11	274	2,740
11	1	43	49	13	6	3	3	2	—	4	124	1,364
12	1	9	17	9	6	3	3	2	—	2	52	624
13	—	2	4	3	2	2	1	2	—	1	17	221
14	1	—	—	3	1	—	—	—	—	1	6	84
15 and over	—	—	1	2	1	1	1	1	2	2	11	201
Total Occupied Private Houses in												
1931	6,347	22,252	10,405	3,136	1,343	940	634	455	268	449	46,229	—
1921	6,650	21,843	7,538	2,502	1,136	807	619	440	233	434	42,202	—
Total Persons in Private Houses												
1931	14,588	81,824	44,485	13,216	5,450	3,734	2,623	1,939	1,228	2,348	—	171,435
1921	15,056	85,541	35,255	11,757	5,288	3,455	2,622	1,980	1,009	2,373	—	164,336

Let us analyse the foregoing table to ascertain if we can derive any data that might be educative and useful as a guide to the extent of **Overcrowding** within the City.

(1) The undernoted figures give the size and number of each class of house as well as the number of inhabitants—shown separately and in combination :—

		HOUSES				PERSONS			
Houses of	No.	Per Cent. of Total			No.	Per Cent. of Total			
1 Room,	6,347	13.7	61.9	84.4	14,588	8.5	56.2	82.2	
2 Rooms,	22,252	48.2			81,824	47.7			
3 Rooms,	10,405	22.5			44,485	26.0			
4 Rooms and over,	7,225	15.6	15.6	15.6	30,538	17.8	17.8	17.8	
Private Houses	46,229	100	100	100	171,435	100	100	100	

(2) The number of persons per house for all New Housing Schemes erected with the aid of Government Grant since 1930, is regulated by the Standard of Accommodation fixed by the Department of Health for Scotland, viz. :—

- 3 persons to a two-roomed house.
- 5 persons to a three-roomed house.
- 7 persons to a four-roomed house, and so on.

It will be observed there is no standard for one-roomed houses. For our purpose, however, we can take the maximum number of persons allowed by the Town Council to each one-roomed house erected by the Fleming Trust—2 persons.

If we apply these standards to the Registrar-General's Table shown above, we find that :—

2,161	one-roomed houses	are occupied by more than 2 persons.
10,404	two do.	do. do. do. 3 persons.
2,477	three do.	do. do. do. 5 persons.
260	four do.	do. do. do. 7 persons.

15,302 Overcrowded Houses; to which falls to be added—

33 five-roomed houses

6 six-roomed houses; and

1 seven-roomed house; giving a total of—

15,342 houses, or 33.18 per cent. of Dundee's dwellings in an overcrowded state,

Some may think these standards too stringent and may desire to know the approximate number of cases that might be called serious, for the purpose of arriving at a basic figure for immediate or future consideration. Let us assume, then, that a standard of three persons per room is reasonable and acceptable to all. We now arrive at the following figures:—

1,176	one-roomed	houses	have	more	than	3	persons.
1,862	two	do.	do.	do.		6	persons.
172	three	do.	do.	do.		9	persons.
8	four	do.	do.	do.		12	persons.

3,218 Overcrowded Houses; or 7 per cent. of the total 46,229 private houses within our area. If we estimate that two-thirds of these houses are insanitary and will be dealt with as such, this leaves a basic figure of 1,072 houses overcrowded more or less seriously.

Regarding — (b) To ascertain our needs under this heading we might reach a fairly reliable figure by reverting again to the Registrar-General's census figures.

The Total population of the City on 26th April, 1931, showed an increase of 7,270 persons over the census figures of 1921.

If we take that figure as the growth of population for ten years and divide it by 3.71, the number of persons per house as calculated by the Registrar-General, we find that 1960 houses were required to accommodate the 7,270 persons, or 196 houses each year.

It is evident from the foregoing that the policy of house building must continue, and that any scheme for the elimination of insanitary and unhealthy houses should be conjoined with, and form part of, a scheme for the erection of an equal number of houses to accommodate the displaced tenants, together with a sufficient number of houses to cope with overcrowding, as well as meet the normal growth of the population.

We now come to;—

Housing Requirements.

Past experience has taught us that the compilation of figures from time to time, and oft repeated descriptions in one form or another of insanitary and unhealthy houses, of overcrowding, &c., substantiating our requirements, frequently issued in the form of Special Reports, and each year in our Annual Report, are not producing the desired results. We are persuaded enough has been written of the reality of the dangers to the health and morals of many of our fellow citizens, directly attributable to the déplorable accommodation in which they and their children are compelled to live; and that the time has now come for a full and complete investigation respecting the unsatisfactory housing conditions referred to, the best and speediest method of improving them, and the resources we have at our disposal for the purpose; so that a feasible and comprehensive scheme can be drafted, embracing the improvement and closing of insanitary houses, the opening out and re-development of congested and unhealthy areas, and the provision of a **Set Number of Houses Annually**—the whole to proceed co-ordinately, and, as it were, by time-table. Thus, a systematic campaign planned on a basis of needs and means, essential to the success of such a project, could be launched and carried out in a well regulated and business-like manner.

Should there still be doubt in the minds of any of the necessity for such a scheme, we submit the following authoritative corroboration, quoted from (1) a letter sent to all Local Authorities by the instructions of the Secretary of State for Scotland:—

“ I am directed by the Secretary of State to suggest that the Local Authority should make an effort to accelerate the rate of progress in house building. It also appears that the Local Authority would be acting in the best interests of the Area if they were to consider the question of a substantial addition to their immediate programme.”

(2) From the Resolution passed at the National Housing and Town Planning Conference held at Scarborough on 25/28th November, 1932:—

“ That this Conference of Local Authorities of England and Wales and Scotland and of Associations interested in the Housing emphatically records its view that it is essential to pursue a continuous and progressive policy for the provision

of houses of good standard for occupation by the working classes, with special regard to the lower-paid wage earners, and strongly urges the Government to give every facility and encouragement (financial and otherwise) to secure this end."

To give some idea of the nature of the problem facing us in Dundee, let us go back to the year 1930, when after carefully considering reports prepared by the Medical Officer of Health in collaboration with the Chief Sanitary Inspector and the City Factor, the Town Council agreed in terms of the Housing (Scotland) Act, 1930, to "furnish the Department of Health for Scotland the following estimate of the number of houses likely to be provided by the Local Authority in the next three years:—

- (a) To be built consequent on 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 population:—300 Annually for the next three years.

A total of 3,024 houses to be provided by the Local Authority during the next three years."

How far we have actually succeeded in carrying out this programme will be seen from the following figures showing the number completed during the past two years, and the number in course of construction as at 31st December, 1932:—

HOUSES PROVIDED

Year	Rooms			Total
	2	3	4	
1931	144	234	—	378
1932	118	290	—	408
				786 Houses.

An average of 393 houses per annum or 39% of the agreed on figure of 1,000 houses per annum.

In addition to the above figure there were 766 houses in course of construction at the end of the year 1932, viz. :—

170 two-roomed houses
 506 three-roomed houses, and
 90 four-roomed houses.

766

If it be accepted that these houses will be completed by the end of 1933, we can add this figure to the 786 completed in 1931-32, and this will give a gross total of 1552 houses for three years, equal to 51% of 3,024 houses, the figure aspired to.

When the Housing (Scotland) Act, 1930, became operative it was generally agreed that its terms respecting financial aid would be an incentive, and give impetus to house building. We find from the records, however, that the years 1927-29, were the most productive, giving us a total of 1962 houses, or 410 more than will be ready by the end of 1933, thus showing that our efforts have a tendency to slow down rather than accelerate.

Reconditioning of Houses.

There is one aspect of the Housing Problem which has for some time received a considerable amount of attention, that is the reconditioning of old houses in preference to the procedure of demolition.

Many who have little or no knowledge of the Housing Laws have suggested, from time to time, that a more speedy and economical solution to the problem could be found by Local Authorities acquiring and reconstructing old buildings.

Either they forget, or do not know, that provision is made in the Housing (Scotland) Act, 1930, for the repair of old properties where that is considered a reasonable and financially sound proposition.

They also may not be aware that there are factors outside the defective structure of the building itself that may prevent the question of reconditioning being considered at all, e.g., absence of sunlight, congestion, lack of air space, etc.

If, however, any scheme could be advanced proving conclusively that such work would help us in our difficulties, it should receive serious consideration and support; and although practical experience has made many sceptical of its value, we shall, we hope, at an early date, have the findings of the Government Departmental Committee set up to consider every phase of this matter, so that all divergence of opinion may be removed and a consolidated and united effort made to reach the goal of healthy homes for all.

The following tables and comments are for the express purpose of providing the Town Council, and those members of the community who have been, and are, taking a keen and active interest in matters affecting the health and welfare of the citizens in general, with a brief and easily understood record of the work done during the past year to (a) eradicate the insanitary and unhealthy houses, recognised by all as a crime against our modern civilization, and (b) provide homes with all that tends towards the production of a healthy and virile race.

A great amount of adverse criticism has been uttered and written, not so much against the need for such work, but against the heavy financial cost involved. Undoubtedly the expense is great, and the benefits and profits difficult to reckon in monetary values; nevertheless, it is generally admitted, even by the most acrimonious, that the actual dividend of healthier families, work people and scholars, is of more real value than the currency, which unfortunately controls and limits all efforts to effect the betterment of the health of the slum dweller. "Conquest pursues where courage leads the way," is an axiom we would offer to those who have this cause at heart, that is, the elimination of slum property.

TABLE I.

Shows the number of houses which have been provided (by the Corporation and by Private Enterprise) during 1932 :—

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
By the Corporation	—	118	290	—	408
By Private Enterprise	—	—	11	107	118
By Fleming Trust (Gift of Robt. Fleming, Esq. LL.D.)	64	110	54	—	228
Total					754

754 New Houses in one year is a figure one might excusably consider very satisfactory; but our exuberance is somewhat modified when we examine it closely.

As the Fleming Trust Scheme is virtually completed, we must, in the future, look wholly to the Town Council for a supply of houses to meet our needs, and if the 472 houses Closed and Demolished—see Table II.—is accepted as a fair criterion of the number of houses we are to close annually, then the Corporation New Housing Figures will require to be substantially increased.

TABLE II.

Houses Closed by Order or Demolition Order; Voluntarily Closed, etc., during the year 1932 :—

	1	2	3	4 Rooms	Total
	Room	Rooms	Rooms	and over	
(a) Voluntarily—houses generally in very bad repair, very damp, and not reasonably fit for human habitation	8	8	5	5	26
(b) Converted into business premises, offices, shops, or workshops, etc.	—	2	—	—	2
(c) By absorption into other houses	8	—	—	2	10
(d) Closed by Order or Demolition Order	58	79	9	9	155
(e) Clearance Areas—					
1st Instalment,	46	75	9	5	135
2nd Instalment,	51	48	4	3	106
Queen St., Broughty Ferry	3	6	1	—	10
(f) Small's Wynd Improvement Scheme,	12	11	4	1	28
	—	—	—	—	—
	186	229	32	25	472

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
Total	1,020	3,049	152	4,221*

*These figures include 76 wooden huts erected in 1919-20.

The above table shows 4,221 houses have been provided by the Corporation, or an average of 301 houses per annum for the past 14 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
Total ...	866	885	187	220	2,158

This total of 2,158 houses which have gone out of use as such during these years gives an average of 154 per annum, against 4,221 provided or 301 per annum, and if we deduct the former figures from the latter we find the net increase of houses to the City to be 2,063 or an average of 147 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 reopened, 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 reopened, 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
Total . . .	89	240	64	93	486

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 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
Total	4	530	1,011	1,545

These three tables together give the sum of 2,551, which figure added to 4,221—the Corporation's quota, makes a grand total of 6,772 houses provided during the past 14 years—or an average of 484 houses per annum; deducting the 2,158 houses which have gone out of use during these years, gives us 4,614 additional houses within the City, equal to an average annual contribution of 330.

Already we have referred to:—

(a) The Fleming Trust Scheme—

A gift of some 496 dwelling-houses, viz. :—

192 Single Apartments;

158 Two Apartments; and

146 Three Apartments.

This year 228 houses have been provided, which, added to last year's figures, complete the Scheme of 496 houses.

We may now assume, taking the Department of Health for Scotland's Standard of Accommodation as a guide, that approximately 1600 persons have been rehoused in this Scheme. The accommodation and facilities provided, as well as the lay-out of the Area—in comparison with their former houses and environment—will mean to these fortunate householders a new outlook and interest in life, and a truer and fuller conception of what the word "Home" really stands for.

(b) The Peter Gray Housing Trust—

A scheme of 24 single apartment houses.

These houses have been in occupation for some time now, and those who occupy them have nothing but the highest praise for, and gratitude to, the family whose thought and benevolence is enabling them to enjoy housing conditions which are the envy of many single or widowed ladies.

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 neighbourhood, 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.

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.”

Section 43 (1) gives the purposes to which the Fund is to be applied, and reads as follows:—

“ The Corporation may establish a fund to be called “ the slum property equalisation fund ” (hereinafter in this Section called “ the fund ”) which shall be used in the acquisition and demolition of old properties and the clearing and laying out of the sites thereof where deemed advisable under the Housing (Scotland) Acts, 1925 and 1930, or any Acts extending and amending the same or any of such purposes under the said Acts and may make contributions to the fund out of such rate payable by owners and occupiers in equal proportions as the Corporation may determine. Provided that—

- (a) any sum so contributed shall not exceed in any year a sum representing the produce of a rate of one penny per pound on the rateable valuation of the City; and
- (b) such contributions shall cease to be made whenever the fund amounts to the sum of fifteen thousand pounds.”

The establishment of such a Fund has many points to commend it, and the benefits of having a convenient sum of money for the purpose described are so obvious that any comment would be superfluous.

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.

Finis can now be written so far as this Scheme is concerned. The recommendations of the Department of Health for Scotland that “ the best possible use to which the cleared area can be devoted will be for the purpose of an open space ” have now been given effect to.

The ground has been laid out in parts with shrubbery, and seats installed in convenient places for the use of old people seeking rest and fresh air; and part has been levelled, provided with swings, etc., and arranged as a safe and easily accessible playground for children residing in the vicinity—the whole opening up a congested and densely populated area and providing, in its stead, a very necessary air space for the surrounding buildings.

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	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
139	147	26	3	315

The position at the end of the year is as follows, viz. :—

Houses still in Occupation :—

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
57	57	16	—	130

This shows only 185 houses vacated, which is unfortunate, because, since the scheme was approved of in 1929, very few repairs have been effected, and the dwelling-houses—at the time considered insanitary and unhealthy—are rapidly deteriorating into hovels of the worst description.

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.

All these houses should be completed and ready for occupation shortly.

Housing (Scotland) Act, 1930.

The Medical Officer of Health and myself began in 1930 a systematic inspection of insanitary houses and areas within the City with the set purpose of "Representing" them to the Local Authority to be dealt with by Repair Notices; Closing or Demolition Orders; and where suitable, Improvement or Clearance Areas.

This work is still being proceeded with and the results up to date will be found in the following tables :—

Clearance Areas.

(First Instalment.)

The Representation embraces some 18 areas situated in Wards 1, 4, and 5, and involves 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 are 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, 1932, is :—

Houses still in Occupation.

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
22	30	3	1	56

This shows 271 houses have been Closed or Demolished viz. :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
114	134	16	7	271

It will be seen considerable progress has been made—80 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, Dundee, embrace 15 houses represented by the Medical Officer of Health and 1 house and 3 other premises included by the Director of Housing.

At the end of the year only 4 houses were in occupation and the work of erecting the :—

6 two-roomed houses, and
24 three-roomed houses

on the available part of the site was well advanced. It is hoped by the middle of 1933 the whole scheme will have been completed.

(Second Instalment.)

The Official Representation embracing 14 Areas, made by the Medical Officer of Health, was before the Town Council at their Meeting held on 4th February, 1932, and after enquiry they resolved and declared these 14 Areas to be Clearance Areas. At a subsequent Meeting, certain additional information was submitted for their consideration which enabled them to amend their former Resolution and delete Areas 19 and 20 and part of Area 31, thus reducing the number of areas from 14 to 12.

The 12 Approved Areas are situated in Wards, 5, 6, and 7, and comprise 265 dwelling-houses and 65 other premises, viz. :—

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
133	116	10	6	265

occupied by 822 persons.

The position at the 31st December, 1932 is :—

HOUSES STILL IN OCCUPATION.

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
23	43	2	2	70

This shows that 195 houses have been Closed or Demolished, viz. :—

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
110	73	8	4	195

or approximately 70% of the total.

The population of these 12 Areas has been certified against the New Housing Schemes in Lawton Road, Sandeman Street and Moncur Crescent.

The rate of progress made with this Scheme is very satisfactory, and if continued the whole of these 265 insanitary and unhealthy houses will have been demolished and the tenants transferred, within a matter of months, to modern houses equipped with baths, sinks, wash-tubs, etc., situated in open and healthy surroundings.

Bog Close and Bogwell Clearance Areas.

An Official Representation was made by the Medical Officer of Health, dated 31st March, 1932, comprising 2 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.

The Town Council at their Meeting held on 17th June, 1932, resolved and declared in terms of Section 1. of the Housing (Scotland) Act, 1930, the said Areas to be Clearance Areas and agreed to purchase by virtue of the powers contained in Section 3, the additional lands (including the buildings thereon) as being necessary for the satisfactory development of the said Areas.

At a later Meeting of the Corporation it was agreed to erect 36 three-roomed houses, and a start has now been made on the vacant part of the site.

Blackness Road (" Gowden Knowes ") Area.

A suggested scheme in terms of Section 6 (1) of the Housing (Scotland) Act, 1930, involving 18 buildings in Blackness Road, Watson's Lane and Wilkie's Lane—locally termed the " Gowden Knowes," in which " the housing conditions are injurious or dangerous to the health of the inhabitants by reason of the disrepair or sanitary defects of the dwelling-houses therein, and also by reason either of overcrowding in the area or of the narrowness or bad arrangement 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, that is to say—

- (i.) The execution of works on, or the demolition or closing of, those dwelling-houses which are unfit for human habitation ;
- (ii.) The demolition by the Authority after purchase of a building consisting partly of dwelling-houses which are unfit for human habitation and cannot at a reasonable expense be rendered so fit ;
- (iii.) The purchase by the Authority of any land which it is expedient for them to acquire 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 it is necessary to demolish them for that purpose ; and
- (iv.) The abatement of overcrowding in the area."

The area embraced 210 houses and 16 other premises, viz. :—

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
90	118	1	1	210

Since the Representation was made 39 houses have been Closed by Order and Demolished, viz. :—

1	2	3	4 Rooms	
Room	Rooms	Rooms	and over	Total
23	15	—	1	39

Leaving 171 houses still to be dealt with.

The whole question is under the consideration of the Town Council.

Insanitary Buildings.

Since the inauguration of the Post-War Housing Policy, adopted by the Town Council, for dealing with insanitary houses, buildings, and areas, 322 Representations have been made to the Local Authority for the Closing and Demolition of houses and buildings, the removal of Obstructive buildings, and the improvement or reconstruction of houses and buildings not in a reasonable state of repair ; and 38 Representations made for the improvement of insanitary and unhealthy areas or groups of areas.

The total number of houses involved is 3,068, and the following tables show, in detail, the position as it stood at 31st December 1932 :—

Year	No. of Representations	REPRESENTED. No. of Rooms				Total Houses	No. of other Premises
		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	—
360		1,355	1,464	177	72	= 3,068	300

*Improvement or Clearance Areas.

Of the 3,068 houses Represented :—

1123 were closed and demolished.

774 were closed and are standing empty.

153 were closed and are now used as club-rooms, etc.
(permission being granted by the Local Authority).

359 have been repaired or reconstructed.

620 are still in occupation, made up as follows :—

146 individual unfit houses.

130 Small's Wynd improvement scheme.

56 Clearance Areas (18)—1st Instalment.

70 Clearance Areas (14)—2nd Instalment.

4 Clearance Area—Queen Street (B.F.).

170 Blackness Road (Gowden Knowes) Area.

44 Bog Close and Bogwell Areas.

620 Total.

39 are being dealt with by notices, and these are at present under, or negotiation for, repair.

3,068

In addition to the above, two obstructive buildings have been demolished and the sites cleared.

Closing or Demolition Orders.

Section 16 (1).

14 Representations, involving 54 houses, were made to the Local Authority in terms of the above Section, viz. :—

- 29 one-roomed houses,
- 15 two-roomed houses,
- 7 three-roomed houses, and
- 3 four-roomed houses,

and these were disposed of as follows :—

Demolition Orders were served upon the owners of 46 houses, viz. :—

- 28 one-roomed houses,
- 11 two-roomed houses,
- 5 three-roomed houses,
- 2 four-roomed houses.

Three owners gave undertakings to repair 8 houses, viz. :—

- 1 one-roomed house.
- 4 two-roomed houses,
- 2 three-roomed houses, and
- 1 four-roomed house.

Repair Notices.

Section 14.

6 Representations, involving 27 houses, were made to the Local Authority in terms of the above Section, viz. :—

- 7 one-roomed houses,
- 12 two-roomed houses,
- 7 three-roomed houses, and
- 1 house of four or more rooms.

The owner of one five-roomed house requested in terms of Section 17 that a Demolition Order be substituted, and the Local Authority agreed.

Summary in regard to Housing conditions and alterations during 1932

I.—Particulars of Houses (279) Improved:—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) At properties that had been "Closed by Order" for a period	13	27	4	2
(b) At instance of Sanitary Inspector, but not "represented" to Committee	42	141	30	2
(c) After Plans had been submitted to and approved of by the Works Committee	—	—	2	9
(d) Two or more houses made into one	3	1	—	—
(e) Houses divided and improved	—	—	1	2

II.—Shops and other premises converted into dwelling-houses (9) during 1932:—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
(a) 4 Shops	1	3	—	—
(b) 1 Office	—	—	—	1
(c) 1 Workshop	—	—	1	—
(d) 1 Hall	—	1	—	—
(e) 2 Houses that had been Closed by Order or Demolition Order	2	—	—	—

III.—New Houses completed and ready for occupation during the year 1932:—

(a) Under the Corporation Housing Schemes.

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
Ward 8 (Tullideph)	—	24	24	—
Ward 5 (Fleming Trust)	64	110	54	—
Ward 7	—	94	266	—

Total, 636 houses,

(b) By Private Enterprise.

	1	2	3	4 Rooms
	Room	Rooms	Rooms	& over
Ward 1	—	—	1	21
Ward 3	—	—	2	3
Ward 4	—	—	—	23
Ward 5	—	—	—	5
Ward 7	—	—	7	23
Ward 8	—	—	—	16
Ward 9	—	—	—	2
Ward 10	—	—	—	4
Ward 11	—	—	1	10

Total, 118 houses.

Giving a grand total of 754 new houses erected throughout the year.

IV.—Particulars of dwelling-houses Closed (472) for human habitation during the year 1932 in whole or in part:—

	1	2	3	4 Rooms
	Room	Rooms	Rooms	& over
(a) Voluntarily — houses generally in very bad repair, very damp, and not reasonably fit for human habitation	8	8	5	5
(b) Converted into business premises, offices, shops or workshops, etc.,	—	2	—	—
(c) By absorption into other houses ...	8	—	—	2
(d) Closed by Order or Demolition Order,	58	79	9	9
(e) Clearance Areas,	112	140	18	9
Total	186	229	32	25

V.—Dwelling-houses Demolished (427) during the year 1932:—

	1	2	3	4 Rooms
	Room	Rooms	Rooms	& over
(a) Dwelling-houses that had been closed by order or demolition order,	37	54	7	3
(b) Dwelling-houses that had been closed voluntarily,	—	1	—	1
(c) School site,	—	1	1	—
(d) Business Extension,	—	—	—	1
(e) City Square Improvements,	5	4	1	3
(f) Clearance Areas,	115	138	14	9
(g) Small's Wynd Improvement Scheme,	16	11	4	1
Total	173	209	27	18

In addition to the above, 89 other premises were demolished, viz. :—

40 Workshops. 21 Stores. 28 Shops.

VI.—Net Results for 1932 :—

The net result for the year is that there are 341 more houses available for human habitation than at 31st December, 1931, i.e., houses of :—

1 Room	2 Rooms	3 Rooms	4 Rooms and over
105 less	31 more	328 more	87 more

VII.—The total number of Dwelling-houses (Private and Corporation) in course of erection (802)—all stages—at 31st December, 1932, is as follows :—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over
Ward 1	—	18	—	—
Ward 3	—	—	36	—
Ward 4	—	6	6	20
Ward 5	—	—	112	90
Ward 7	—	140	329	10
Ward 8	—	—	—	1
Ward 9	—	—	—	2
Ward 10	—	6	24	2
Total	—	170	507	125

VIII.—Estimated Number of Inhabited Houses excluding Institutions and other large establishments within the Burgh of Dundee as at 31st December, 1932—corrected (added to and deducted from). Based on Census Return of 26th April, 1931, viz :—46,229 houses.

Year.	1 Room Add. Deduct	2 Rooms Add. Deduct.	3 Rooms Add. Deduct.	4 Rooms and over Add. Deduct.	Total
From Census Return	6,347 or 13.7%	22,252 or 48.2%	10,405 or 22.5%	7,225 or 15.6%	46,229
1931 ...	— 27	— 4	286 —	54 —	309
1932 ...	— 105	31 —	328 —	87 —	341
	— 132	31 4	614 —	141 —	46,879

Thus giving at 31st Dec. 1932 :—

6,215	22,279	11,019	7,366
or 13.25%	or 47.52%	or 23.50%	or 15.73%

IX.—The Official Return submitted to the Department of Health for Scotland for the year ended 31st December, 1932 is :—

Housing (Inspection of District) Regulations (Scotland) 1928

- | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|
| 1. Number of dwelling-houses inspected | - | 403 |
| 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 | - | 87 |

Housing (Scotland) Act, 1925.

- | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------------------------------------------|
| 3. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :— | - | - | 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 | - | - | |
| 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) | (b) | |
| | Nil. | 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) | 8 |
|-------------------------------------------------------------------------------------------|---|

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) - - - - 1
10. Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1) - - - - 38
11. Number of dwelling-houses referred to in 10:—
 - (a) which have been rendered fit for human habitation - - - - (a) Nil.
 - (b) in respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit - - - - (b) Nil.
 - (c) in respect of which demolition orders* have been made under Section 16 (3) (c) 36
 - (d) in respect of which closing orders have been made under Section 16 (3) and (4) - (d) Nil.
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 unfit 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 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 1925.

The following tables show the number of applications made under the Rent and Mortgage Interest (Restrictions) Act, 1920 to 1925, and how disposed of:—

Year	BY TENANTS.			BY OWNERS.		
	No of Applications	Granted	Refused	No. of Application	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
	873	817	51	160	158	2

*4 Tenants had money returned—rents had never been increased; while 1 Tenant wished no further action taken; and 31 Houses were claimed by Factors to be de-controlled.

It will be observed that during the past 13 years 873 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, and that 713, or 82% were made during the year under review, or, to be more correct, during the last six months of the year, and of these 677, or 94%, were granted.

To some the huge percentage of certificates granted may appear extraordinary, and justify the opinion that the House Owners and Factors were reaping the benefits of the Act which empowered them to increase the Standard Rent by 15%, with an additional 25% for repairs, but were failing in the obligations imposed in consequence—to keep the houses in reasonable repair.

At first glance, the figures appear to be a justification of such belief, but it must be remembered that practically most of the properties, in which the tenants resided by whom the applications were made, belonged to the very old type that had served their day and generation—constantly being repaired and constantly in need of repair; and, as a matter of fact, many of the buildings were in Clearance Areas or had been scheduled to be included in such Areas, and the action taken by the tenants was only anticipating what would have been done later by the Town Clerk and Chief Sanitary Inspector, acting under the instructions of the Town Council as recorded in their Minutes, viz. :—

“ The Town Clerk and the Chief Sanitary Inspector to take steps where desired and required to ensure that the increases permitted by the Rents Restrictions Acts, and applied to a house which is not in a reasonable state of repair or unfit for human habitation, are suspended until the house has been put in a reasonable state of repair.”

The inclusion of these buildings in Clearance Areas involving their demolition in the near future, to a great extent explains the disparity of figures showing the number of applications by Owners for Reports certifying that the repairs required had been carried out, as against the number of applications made by tenants.

The work itself was of a delicate and trying nature, and the abnormal increase of complaints created complications requiring care and tactfulness; otherwise, there might have been caused a good deal of friction and discord between landlord and tenant in which the Department would have been unavoidably involved.

It is therefore very gratifying to know that the work was carried out without bitterness, and if any difficulty did arise, either with tenant or factor, it was generally smoothed out and settled amicably.

The whole of the inspections, enquiries, and preparation of Certificates and Reports were executed by the Housing Section of the Department in addition to their other duties, and they are to be commended on the manner in which they endeavoured, by working at high pressure and sometimes till late at night, to cope with the extra duties unexpectedly thrust upon them.

Tents and Vans.

Excepting short sojourns of vans accompanying circuses and market pleasure caterers, there has only been one encampment of any size, and that was on the ground of an entertainments proprietor at the north end of the city. No serious complaints arose thereanent, there being ample public conveniences with a water supply laid on at this particular area. Any small item not meeting with the full approbation of the Inspectors was very soon rectified. To these places 102 visits were made.

Housing of Seasonal Outworkers.

In no case during the year were outworkers housed in premises provided by the employers, the employees all returning to their own homes at the end of each day's labour.

The question of revisal of the Bye-Laws under this head was considered in the light of the Model Bye-Laws recently issued by the Department of Health for Scotland on "Accommodation of Farm Workers." It was agreed that, while approving of the Department's Model Bye-Laws, no good purpose would be served meantime in this area by revising those already in force.

Common Lodging-Houses.

In terms of Section 89 of the Public Health (Scotland) Act, 1897, the 8 Common Lodging-Houses within the city were re-registered in May, 1932. In their supervision 387 visits of inspection were made by day and 8 by night, and any irregularities discovered were soon put right by the keepers. Generally they have been maintained satisfactorily.

At the lodging-house No. 19 Overgate, additional accommodation was provided, and these premises are now capable of housing 51 lodgers as against 38 formerly.

The accommodation, details of which are undernoted, has not been fully taxed at any time of the year.

55	Commercial Street	...	...	...	242	Lodgers.
3/5	Craig Street	...	...	...	137	"
19	Overgate	...	...	...	51	"
43	Overgate	...	...	...	43	"
25	North Lindsay Street	...	...	...	56½	"
*130	Overgate	...	...	...	38	"
*77	Overgate	...	...	...	34	"
*97	Overgate	...	...	...	91	"

(Those marked * have accommodation for both male and female lodgers.)

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 and Weekly Let Houses.

On the Register at the end of the year there were 96 keepers of Houses Let in Lodgings. Not constituting the whole of the houses in the city where lodgers are kept, our list is mainly of those where periodical inspection and supervision is necessary to ensure that they are maintained in a cleanly and proper state. To that end 308 visits by day and 4 by night were made. They can be looked upon as complying with the Bye-Laws thereanent, and, with few exceptions, gave little trouble to the Department. It is in Weekly Let Houses that are found the cases of overcrowding so often referred to in the demand for better housing, and to determine exactly how we stood in regard to this question visits were made to properties of this description during the latter months of the year between the times of 12 midnight and 4 a.m. Then, the exact and true aspect of the conditions under which certain members of the community are compelled to exist is brought forcibly to view—overcrowding, with its attendant evil, lack of sex separation, in a number of instances with members of separate families using the same sleeping rooms.

To these houses 302 visits were made by night, and the following examples are a few of those discovered by the Inspectors in their travels.

Case	No.		Sex Separation	Overcrowding	
	of Rooms in House	Persons Residing		400 c.f. per Adult Standard	New Housing Standard
A	2	10	No	4½ adults	7 persons
B	3	11	Yes	2½ adults	6 persons
C	2	11	No	4½ adults	8 persons
D	1	8	No	4 adults	No Standard
E	3	10	Yes	2½ adults	5 persons

One of the rooms in Case "C" was sub-let free of charge to a separate family—the room had no fireplace.

Factories and Workshops.

We have to record a slight drop in the total number of workshops, etc., there being 944 at the end of 1932 as against 990 for 1931. The decrease was mainly brought about by falls in the figures relating to Cabinetmakers, Milliners, Saddlers, and Watch and Jewellery Repairers, but somewhat counterbalanced by small increases in various other trades. If our figures can be accepted as an index of the trade of the city, we can look upon that as remaining at last year's fairly low level.

874 visits of inspection were made to these places.

In my report of last year mention was made of a workplace without proper convenience for the use of the employees. This matter was satisfactorily settled at the beginning of the year, when a fully equipped water closet was provided.

Two notices were served in terms of Section 29 of the Public Health (Scotland) Act, 1897, on the proprietor and agent of a property—part of which was let as shops, etc., and where there was no sanitary convenience. Adequate accommodation has now been provided.

Only in one instance was a report received from H.M. Inspector of Factories, viz. :—

Workroom Insufficiently Ventilated.

A ventilator was opened in the roof of the workroom concerned and the complaint took end.

Otherwise, only in three instances were nuisances found to exist in workshops—all of which were soon remedied when brought under the notice of the occupiers.

So far as this Department is concerned, cognisance is seldom taken of Factories, other than Bakehouses, the facilities for escape in case of fire, formerly under our care, now being in the hands of the Firemaster.

The following Workshops, etc., are upon the Register at 31st December, 1932 :—

TRADE OR BUSINESS.

	Workshops	Domestic Workshops	Homework	Workplaces
Blacksmiths, Cartwrights and Carriage Builders	18	0	0	0
Boot Repairers	81	9	0	0
Cabinetmakers, Joiners, and French Polishers	49	0	0	0
Cycle and Motor Mechanics, Enamellers and Vulcanisers	25	0	0	0
Dental Mechanics	29	8	0	0
Dress, Mantle, and Corset Makers	43	21	0	0
Engineers	8	0	0	0
Electro - Platers, Wire Workers, Blind Makers and Bellhangers	3	0	0	0
Florists	0	0	0	9
Furriers	4	0	0	0
Granite and Marble Cutters, and Masons	0	0	0	28
Hairdressers and Wigmakers	0	1	0	111
Hotels and Restaurants	0	0	0	40
Milliners	25	1	0	0
Painters	0	0	0	53
Photographers	11	0	0	0
Piano and Gramophone Repairers	8	0	0	0
Picture Framers, Gilders, and Glaziers	7	0	0	0
Plasterers	0	0	0	16
Plumbers and Tinsmiths	55	0	0	0
Saddlers and Leather Cutters	9	0	0	0
Slaters	0	0	0	20
Stamp Cutters, Engravers and Ticket Writers	4	0	0	0
Sugar Boilers	6	0	0	0
Tailors	57	11	2	0
Umbrella Makers and Repairers	3	0	0	0
Underclothing, Baby Linen, and Blouse Makers, Hosiers and Knitters... ..	30	0	0	0
Upholsterers and Carpet Sewers	13	0	0	0
Waste, Rag and Metal Merchants	0	0	0	11
Watch and Jewellery Repairers and Opticians	31	3	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.	59	5	0	17
	578	59	2	305

Bakehouses.

The following bakehouses are upon the Register :—

Occupied factory bakehouses	...	...	...	57
(Included in this number are 6 underground).				
Occupied workshop bakehouses	...	...	...	30
(Included in this number are 4 underground).				
Bakehouses empty but fit for occupation	...	...	...	2

To these premises 1,017 visits of inspection have been made during the year, in the course of which nuisances or defects numbering 54 were found to exist. Nothing of a particularly serious nature falls to be recorded, but with any nuisance found in premises where food is prepared or stored, the endeavour of the Department is to have remedial measures applied without any delay whatsoever. Those discovered generally related to dirty floors and benches, walls requiring limewashing, and storage of fuel in unsuitable places allowing of unnecessary dust to permeate the atmosphere of the bakehouse proper.

Two notable additions fall to be recorded in the list of Factory Bakehouses. One entirely new erection at the north end of the city has been provided on a particularly hygienic and efficient scale. Of brick and steel construction, the premises occupy an area of approximately 60 ft. x 45 ft. The internal finish from floor to ceiling of white glazed tiles lends itself to easy cleaning, while the ovens are faced with white glazed brickwork. A particularly up-to-date feature of this bakehouse is that a cold chamber, intended for the preservation of perishable goods has been provided—the plant is electrically driven. The toilet facilities for the staff are also in keeping with the remainder of the building.

An ambitious reconstruction of premises in the east end of the city has doubled the former accommodation, and, together with suitable additions to the dispatch room, make these premises one of the finest in the city.

Four bakehouses which had been empty for some time were removed from our list as being entirely unsuitable without much reconstruction for the purposes of this class of trade,

The Milk and Dairies (Scotland) Acts; and Orders.

Registers.—At the end of the year the Registers stood as follows :—

Dairymen or Cow-Keepers	...	...	...	...	36
Retail Purveyors of Milk	...	...	...	...	876
made up as under :—					
Purveyors from Shops	...	...	...	...	753
Producers (dairymen or cow-keepers)	...	...	...	...	36
Purveyors from vans	...	...	...	...	52
Purveyors resident outwith the City but registered to purvey milk within it from vans on streets	...	...	...	...	27
Purveyors from shops or milkhouses together with vans on streets	...	...	...	...	44

Milk (Special Designations) Order (Scotland), 1930.—In terms of this Order there are licensed :—

- 2 Producers of Pasteurised Milk and
- 215 Retail Sellers thereof.

A total of 217, as against 221 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
- 2 Dealers in Certified Milk.

There are 8 cowsheds where 23 milk cows are kept, exempt from Registration, under Section 2 of 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 as required by those dairies which are registered, these premises can be looked upon as quite satisfactory for the purpose which they serve. To Dairies proper 422 visits of inspection were paid, and to premises registered for the sale of milk there were 4,208 inspections.

That the production side of the milk trade is year by year fast disappearing from within the city will be clearly seen by the following table :—

Year	No. of Milk Cows in Registered Byres
1922	1,003
1923	960
1924	993
1925	958
1926	872
1927	801
1928	727
1929	736
1930	637
1931	641

and housed within the 36 registered byres for the year ended 31st December, 1932, there were only 584 milk cows, a decrease of 57 in comparison with last year. We therefore rely more than ever upon such far-off places as Wigtownshire in the south and Aberdeenshire in the north for the bulk of our milk supplies.

Generally speaking, these registered byres can be looked upon as being kept in a fairly clean state and regularly limewashed, while the animals are maintained in a well-groomed condition. No doubt there is still room for improvement in the manner under which the cows are milked, but in this respect each year shows evidence of a gradual betterment.

The following **improvements** were carried out at registered dairy premises during the year:—

Trottick Dairy.—2,223 square feet of setts were laid in the court with cement grouting.

5 Fairfield Road.—A shed at the north-east section was paved and drained and made suitable for the keeping of dry cows. An Alfa Laval Milking Machine was introduced and put into operation. Worked by a 1 h.p. motor, there are four sets of a capacity 1—10.

School Road Dairy.—Improved scalding apparatus was introduced, Wembley boiler and tank, steam jet, etc.

One dairy taken into account at the extension of the Burgh in 1907 and continuously registered since then, has in 1932 been discontinued as such—i.e., at **92 Americanmuir Road, Downfield.**

Forthill Farm Dairy.—These premises were altered extensively, a new milk-house and a bottling shed having been provided. The boiler-house and washing-house for cans and bottles are undergoing reconstruction; when completed, these alterations and additions should add greatly to the efficiency of this dairy.

So far as we are able to ascertain from systematic inspection, the requirements of Articles 5 to 26 of the Milk and Dairies (Scotland) Order, 1925, are generally being complied with, with the exception of the instance hereinafter mentioned.

Article 12.—Use of vessels belonging to another person without the consent of the owner.

A contravention of this Article was dealt with by warning, prosecution in this case not being deemed necessary.

As a result of complaints received that milk was being sold from premises not registered in terms of the Milk and Dairies (Scotland) Act, 1914, enquiries were made and it was discovered that at a lairage where beasts were awaiting sale at the Cattle Market, there were housed eight cows, the milk from which was being sold to the dwellers of houses in the near vicinity. The premises, while suitable as a lairage, were far from being in accordance with the standards necessary in terms of our Bye-Laws for Dairy Premises, while the manner under which the milking was done and the type of utensils used could not be looked upon as being in anywise satisfactory. The matter was reported to the Crown Procurator Fiscal for prosecution of the offenders in terms of the Milk and Dairies (Scotland) Act, 1914, particularly Section 7 (Sub-Sections (1) and (9)), and the Milk and Dairies (Amendment) Act, 1922, but the case went no further.

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 70,829 tons 10 cwts. 1 qr., as against 69,325 tons 17 cwts. 3 qrs. last year, and 67,372 tons 5 cwts. 0 qrs. in 1930.

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	67	2	0
Butter	352	17	1
Cakes, Shortbread, Biscuits, &c. ...	2	1	0
Cereals	52	4	2
Cheese	440	4	1
Chemical Food	1	8	3
Cocoa and Cocoa Beans	204	17	2
Cocoa Butter	10	18	0
Cocoanuts, Cocoanut Stearine and Dessicated Cocoanut	56	12	1
Cocoanut Oil	2	2	0
Coffee	42	18	2
Confectionery	644	18	2
Cordials	2	6	3
Corn Four	2	3	2

					Tons.	Cwts.	Qrs.
Cream of Tartar	...	...	...	...	22	12	3
Cream (Tinned)	...	...	...	...	0	2	1
Custard Powder	...	...	...	...	4	0	3
Eggs	...	...	...	...	12	18	2
Eggs (Liquid and Dried)	...	...	...	...	0	2	0
Fish (Dried)	...	...	...	...	14	9	3
Fish (Tinned)	...	...	...	...	167	8	1
Flour	...	...	...	...	6,364	0	0
Fruit	...	...	...	...	1,381	0	1
Fruit (Dried)	...	...	...	...	567	10	2
Fruit (Pulp)	...	...	...	...	138	9	3
Fruit (Tinned)	...	...	...	...	590	2	2
Glucose	...	...	...	...	399	5	1
Lard and Lard Compound	...	...	...	...	715	17	1
Macaroni	...	...	...	...	7	7	1
Margarine	...	...	...	...	1,279	2	3
Meat Extract	...	...	...	...	45	5	1
Meat (Tinned)	...	...	...	...	286	19	2
Milk (Dried)	...	...	...	...	11	7	1
Milk (Tinned)	...	...	...	...	332	7	0
Nuts	...	...	...	...	23	18	2
Nut Oil	...	...	...	...	1	6	3
Peas, Beans, &c.	...	...	...	...	244	11	3
Pickles, Spices, Condiments and Sauces	...	...	...	...	37	18	1
Preserves	...	...	...	...	275	19	2
Rice	...	...	...	...	65	2	0
Sago	...	...	...	...	0	12	2
Sugar	...	...	...	...	1,093	9	2
Syrup	...	...	...	...	573	1	2
Tapioca	...	...	...	...	44	15	0
Treacle	...	...	...	...	447	10	2
Vegetables	...	...	...	...	631	9	2
Vegetables (Tinned)	...	...	...	...	78	10	3
Vinegar	...	...	...	...	65	14	3
					17,807	4	1

TABLE No. II.

Shows the amount and kind of foods arriving direct from abroad.

					Tons.	Cwts.	Qrs.
Butter	...	...	...	...	5	0	0
Cereals	...	...	...	...	28	18	1
Cheese	...	...	...	...	132	5	0
Cocoa Butter	...	...	...	...	40	4	0
Cocoanuts, &c.	...	...	...	...	34	16	0
Corn Flour	...	...	...	...	5	0	0
Flour	...	...	...	...	9,245	1	3
Fruit	...	...	...	...	3	13	2
Fruit (Dried)	...	...	...	...	1	2	2
Fruit (Pulp)	...	...	...	...	203	15	3

					Tons.	Cwts.	Qrs.
Fruit (Tinned)	...	...	...	...	14	17	2
Glucose	...	...	...	...	470	4	3
Lard	...	...	...	...	26	16	3
Macaroni	...	...	...	...	4	15	1
Margarine	...	...	...	...	2	15	3
Meat (Tinned)	...	...	...	...	28	15	1
Milk (Tinned)	...	...	...	...	500	7	2
Milk (Dried)	...	...	...	...	4	5	0
Nut Oil	...	...	...	...	2	3	0
Peas, Beans, &c.	...	...	...	...	291	18	0
Pickles, Spices, &c.	...	...	...	...	2	3	0
Rice	...	...	...	...	179	19	3
Sugar	...	...	...	...	41,154	8	1
Vegetables	...	...	...	...	625	14	1
Vegetables (Tinned)	...	...	...	...	13	5	1
					53,022	6	0

On no occasion was it found necessary to deal with or seize any of the foods arriving in the City by waterway.

Fish Inspection at the Fish Market, Carolina Port.

The Fish Market has been periodically inspected throughout the year and the fish offered for sale examined. Only on two occasions was it necessary to seize fish, when five 14 lb. boxes of kippers and 127 lbs. of halibut were found to be unfit for human consumption. Generally these premises, and appurtenances thereof, were found to be conducted in a cleanly manner, giving little cause for complaint.

Public Health (Meat) Regulations (Scotland) 1932, Article 15.

Article 15 of these Regulations, which came into force on 16th May, 1932, have continued the provisions of Article 10 of the Public Health (Meat Inspection) Regulations (Scotland), 1923, or Article 12 of the Public Health (Meat) Regulations (Scotland), 1924, and reads as follows:—

“ No person other than a person keeping open shop for the sale of meat or meat food products shall, by himself or by any person employed by him, sell or offer or expose for sale any meat or meat food product from any cart or other vehicle or from any basket, barrow, booth or stance unless he holds a certificate from the Local Authority of the area in which the accommodation used by him for the storage of meat or meat food products is situate approving such accommodation.”

The certificate of approval is for a stated period only—not more than one year.

In terms thereof, at 31st December, 1932, there were 3 certificates in force. One certificate, relating to part of a butcher's premises, lapsed during the year.

Public Slaughter-Houses and Dead Meat Market.

These premises, wholly under the charge of a Veterinary Inspector and a qualified Meat Inspector, are undergoing a vast reconstruction scheme, the benefits of which are now very apparent. The system of inspection prevailing is that of the "Clearing House," where all meat coming into the city must first of all be submitted for examination before being offered for sale. An obvious result of this method will be observed in the table showing the foods seized in shops, etc., where "meat" other than tinned meat is conspicuous by its absence.

Within the area under the control of the Local Authority there are no private slaughter-houses.

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,	13,486	179	4,459	189,945
Sheep,	27,879	51	2,348	3,544
Pigs,	3,883	12	221	3,279

Stronger powers have been given us in the prevention of contamination of meat supplies by Section 56 of the Dundee Corporation Order Confirmation Act, 1932, which reads :—

" Every person who within the city conveys through any public thoroughfare in an open cart, vehicle or receptacle a carcase or part of a carcase of an animal slaughtered for sale without the cart, vehicle, or receptacle being clean or without the said carcase or part of a carcase being so covered with a clean cloth as to be wholly hidden from view and protected from contamination by dust or otherwise shall be liable to a penalty not exceeding forty shillings for each offence."

Importation of Meat, Etc. (Wrapping Materials) Order of 1932.

The above Order came into force as from 1st November, 1932. By its terms imported meat from a prohibited country must be wrapped in cloths of prescribed pattern, while it is now prohibited to land in this country feeding stuffs, fertilisers, or horticultural produce, packed in bags or sacks made from meat wrappers. There is also a prohibition against packing, carrying,

selling, feeding or using for animals of feeding stuffs or bedding, or of fertilisers or horticultural produce, in sacks made from meat wrappers.

Food Inspection (Shops, Stalls, Barrows, etc.).

On 79 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.	
Meat (tinned) ...	Shops, or stalls, or barrows on streets, or food or wholesale stores, or railway stations.	0	9	1	12	Decomposition, etc.
Fish (tinned) ...		0	0	1	26	
Fish (cured) ...		0	0	2	14	
Fruit (tinned) ...		1	17	1	19	
Vegetables (tinned) ...		0	1	3	9	
Spiced Ham (tinned) ...		0	7	1	3	
Mutton (tinned) ...		0	5	3	4	
Soup (tinned) ...		0	0	0	23	
Fish ...		0	1	0	15	
Luncheon Roll ...		0	0	1	1	
Galantine ...		0	0	3	0	
Liquid Eggs ...		0	0	0	14	
Roast Chicken ...		0	0	0	12	
Milk (tinned) ...		0	0	0	14	
Tongues (tinned) ...		0	2	1	17	
Rabbit (tinned) ...		0	3	1	6	
Pork (tinned) ...		0	0	0	24	
Jellied Veal ...		0	2	1	6	
Tinned Ham and Tongue		0	0	1	10	
Chicken and Ham Roll ...		0	1	0	6	
Tomato Puree (tinned) ...		0	0	3	3	
Cocoa and Milk (tinned) ...		0	0	0	14	
Miscellaneous ...		0	0	0	5	

It will be noted that the majority of the foodstuffs seized comprise tinned meats and fruit. In most cases the reason for seizure was "decomposition."

Wholesale Dealers go over their stocks periodically and submit for examination large quantities of tinned products in anywise doubtful. Thus they are assured that the stocks carried by them are sound and wholesome.

The inspection of foods offered for sale from stalls, barrows, etc., is one which receives its due share by the Department's Food Inspectors. The vendors of fruits, etc., in the market-place at Shore Terrace are, in the majority, also shopkeepers, and any of

their stock remaining unsold is conveyed to their shop premises, thus ensuring proper storage. In regard to hawkers of fish from barrows on streets—the stocks carried amount only to a day's supply—sometimes less—and the question of storage overnight of unsold fish does not arise. These people are well aware of the necessity of "selling out" each day, and no difficulty has arisen in that direction.

The premises where foods are prepared, stored, or exposed for sale, were visited on 9,326 occasions. Occasionally it was found necessary to prescribe measures for the better storage of foodstuffs and also in regard to the cleanliness of the premises, but on the whole, these places were found to be maintained in a cleanly and satisfactory state.

Merchandise Marks Act, 1926, and Agricultural Produce (Grading and Marking) Act, 1928, Etc.

In the carrying out of the many Orders and Regulations embraced under this head 413 visits of inspection were made. Primarily the marking of butter and tomatoes gave most cause for official interference, but in no case was it necessary to institute proceedings against offenders.

In terms of Section 4 (1) of the 1928 Act and Article 7, Agricultural Produce (Grading and Marking) (Eggs) (Scotland) Regulations, 1929, one registration has been granted by the Local Authority.

Rag Flock Acts, 1911-1928.

During the year five 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	...	...	2.00 parts
One sample yielded	...	...	2.50 parts
One sample yielded	...	...	6.10 parts
One sample yielded	...	...	8.50 parts
One sample yielded	...	...	10.20 parts

The demands of the Acts were met, all the samples being well within the permissible standard of 30 parts chlorine per 100,000 parts flock.

The Public Health (Preservatives, Etc., in Food) Regulations (Scotland) 1925 to 1927.

50 official samples—27 of Mince and 23 of Sausages and Lorne Sausage were purchased throughout the year in terms of the above Regulations. Of these 12 were found to contain preservative in excess to that allowed, and the offending butchers were dealt with as follows:—

No.	Parts SO ₂ per 1,000,000 in Excess	Mince	Sausages	How dealt with
1	288	1	0	Fined £2
2	326	1	0	Fined £2
3	128	1	0	Fined £2
4	790	1	0	Fined £3
5	158	1	0	Warned
6	126	0	1	Warned
7	950	0	1	Fined £2
8	187	1	0	Warned
9	96	1	0	Warned
10	840	1	0	Fined £3
11	1014	1	0	Fined £2
12	755	1	0	Fined £2

The majority of the offences committed appear to have arisen through the lack of a proper method in making up the various fluids or powders used for the purpose. There is no doubt that the rule of "finger and thumb" prevails, and, so long as such is the case, then so long will excessive quantities of added preservative be found.

The danger to health arising from excessive preservative in our foodstuffs calls for the most rigid treatment of offenders, and all cases discovered in this area will be summarily dealt with.

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:—

	Purchased.	Certified to be	
		Genuine.	Adulterated.
1923	669	634	35
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

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.

	Purchased.	Certified to be	
		Genuine.	Adulterated.
Sweet Milk	169	163	6
Do. (Pasteurised) ...	13	13	0
Do. (Sterilised) ...	5	5	0
Do. (Certified) ...	6	6	0
Do. (Grade A.T.T.) ...	5	5	0
Margarine	18	18	0
Coffee	10	10	0
Whole Rice	11	11	0
Ground Rice	8	8	0
Ground Cinnamon ...	3	3	0
Lard	4	4	0
Sausages	18	16	2
Sausage (Lorne) ..	5	5	0
Pot Barley	5	5	0
Mince	27	17	10
White Pepper	13	13	0
Cream of Tartar ...	9	9	0
Ground Ginger	3	3	0
Tapioca	4	4	0
Butter (Salt or Fresh) ...	3	3	0
Total ...	339	321	18

II.—The following samples were taken in terms of Section 8 (1) (c) of the 1928 Act :—

	Taken	Genuine	Adulterated
Sweet or Fresh Butter ...	7	7	0

III.—The undernoted “ test ” samples were purchased or taken :—

	Purchased or Taken	Certified to be	
		Genuine	Adulterated
Sweet Milk	8	8	0
Do. (Pasteurised) ...	1	1	0
Do. (Grade A.T.T.) ...	22	20	2
Cream	1	1	0
Milk (Tinned)	26	26	0
Tapioca	9	9	0
Margarine	28	27	1
Coffee	4	4	0
Whole Rice	16	16	0
Ground Cinnamon	11	11	0
Lard	3	3	0
Sago	4	4	0

White Pepper	25	25	0
Barley	9	9	0
Cream of Tartar	16	16	0
Ground Ginger	12	12	0
Baking Soda	7	7	0
Ground Rice	11	11	0
Baking Powder	1	1	0
Flour	5	5	0
Oatmeal	4	4	0
Butter (Fresh or Salt)	10	10	0
Dripping	1	1	0
Sausages	13	9	4
Jams	4	4	0
Lemon Cheese	1	1	0
Salad Cream	1	1	0
Potted Meat	1	1	0
Castor Oil	2	2	0
Mince	22	16	6
Spreading Cheese	1	1	0
Lysol	2	2	0
Sauce	5	5	0
Wine	1	1	0
Epsom Salts	1	1	0
Borax	1	1	0
Olive Oil	1	1	0
Syrup of Figs	1	1	0
<hr/>			
Total	291	278	13
Add Table I.	339	321	18
Add Table II.	7	7	0
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Total	637	606	31

With a population of 176,833 this works out to 3.60 samples for every 1,000 persons, as against 3.71 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	3.50	—	3.50
February	19	—	19	3.38	—	3.38
March ...	18	—	18	3.42	—	3.42
April	16	1	17	3.63	4.56	3.69
May	14	—	14	3.54	—	3.54
June	16	1	17	3.90	3.52	3.94
July	16	—	16	3.64	—	3.64
August ...	16	—	16	3.63	—	3.63

September	17	—	17	3.94	—	3.94
October	16	—	16	3.71	—	3.71
November	18	—	18	3.57	—	3.57
December	16	—	16	3.46	—	3.46
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	198	2	200	3.61	4.04	3.61

The lowest milk fat recorded this year in official and test samples was 2.48 per cent. and the highest 6.89 per cent. The number of samples with milk fat below 3 per cent. was 6 and the number with milk fat of 4 per cent. and over was 20.

Test samples of the milk as supplied to King's Cross Hospital, and Infant Hospital, Broughty Ferry, were submitted on 25 occasions, and the results as declared by the City Analyst were as follows :—

King's Cross Hospital :—

18 samples of Grade "A." T.T. Milk averaged 3.73 per cent. of fat.

7 samples of Sweet Milk averaged 3.63 per cent. of fat.

The highest fat content in the Graded Milk was 4.23 per cent. and the lowest 3.30 per cent., while the figures of Sweet Milk were 4.20 per cent. and 3.30 per cent. respectively—the grand average over the 25 samples taken at this Hospital being 3.70 per cent.

Infant Hospital, Broughty Ferry :—

4 Samples of Grade "A." T.T. Milk were tested and reported on as follows :—

The highest fat content showed 4.53 per cent. and the lowest 3.63 per cent.—the average over the 4 samples was 4.00 per cent.

Of the six official samples of Sweet Milk reported by the Public Analyst to be adulterated it was only deemed necessary in one case to institute proceedings against the offender. He appeared before the Sheriff and was fined £1 10s for his offence. In the other five cases warnings sufficed. The samples of mince and sausages not conforming to the standard required are reported on in another section of this report.

Margarine, Etc.—556 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.

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 1932 was as follows :—

Water	87.62
Total Solids	12.38
Fat	3.61
Non-Fatty Solids	8.77
	<hr/>
	100.00
	<hr/>

The percentage of butter fat is 0.05 per cent. higher than that of previous year, which is a satisfactory average. The distribution frequencies of the Butter Fat and Non-Fatty Solids are as follows :—

Butter Fat	Frequencies	Non-Fatty Solids	Frequencies
Up to 2.69%	2	Up to 8.49%	—
2.70—2.79	2	8.50—8.59	40
2.80—2.89	2	8.60—8.69	37
2.90—2.99	—	8.70—8.79	54
3.00—3.09	5	8.80—8.89	41
3.10—3.19	7	8.90—8.99	29
3.20—3.29	19	9.00—9.09	19
3.30—3.39	24	9.10—9.19	4
3.40—3.49	27	9.20—9.29	4
3.50—3.59	23	9.30 and over ...	1
3.60—3.69	23		<hr/>
3.70—3.79	28		229
3.80—3.89	21		<hr/>
3.90—3.99	17		
4.00—4.09	10		
4.10—4.19	4		
4.20—4.29	3		
4.30—4.39	3		
4.40—4.49	2		
4.50—4.59	4		
4.60 and over	3		
	<hr/>		

Under the Sale of Milk Regulations, 1901, the presumptive standards are 3.00 per cent. of Butter Fat and 8.50 per cent. Non-Fatty Solids. Six samples were below the butter fat standard and were presumed to be not genuine. None of the samples were below the standard in Non-Fatty Solids.

Butter and Margarine.

46 samples of Margarine and 20 of Butter were examined. One of the Margarines contained 17.60 per cent. of water, which is 1.60 per cent. in excess of the maximum amount allowed. Three others approached the maximum with 15.91%, 15.95%, and 15.99% of water respectively. The highest water content in a butter was 15.74%. With the above exception all the samples were genuine and conformed to the preservative regulations. The percentages of water found in the samples were distributed as follows:—

Percentage of Water	Butter	Margarine
Below 10.00%	—	2
10.00—10.99	—	4
11.00—11.99	1	7
12.00—12.99	3	7
13.00—13.99	3	5
14.00—14.99	8	10
15.00—15.99	5	10
Over 16.00	—	1
	20	46
Average percentage of Water, 14.23% ...		13.38%

Spices.

White Pepper	38
Ground Cinnamon	14
Ground Ginger	15

The ash in the Ground Cinnamon varied from 3.55 per cent. to 6.70 per cent., the average being 4.65 per cent. The Ground Gingers varied from 3.63 per cent. to 5.60 per cent. with an average of 4.41 per cent., and the average of the White Peppers was 1.10 per cent.

Whole Rice and Pot Barley.

Of the 27 samples of Rice 15 were free from Talc facing and the maximum amount found was 0.42 per cent., which is well within the arbitrary maximum (0.50%). None of the 14 Pot Barleys were faced, and they conformed to the preservative regulations,

Preservatives Regulations.

49 samples of Mince and 36 samples of Sausages were examined particularly with regard to the content of sulphur dioxide. In Mince there were 16 contraventions, either in the presence of sulphur dioxide during the period when it is prohibited or having more than 450 parts per million in the summer months. Nine of the contraventions contained less than 450 parts sulphur dioxide per million indicating a persistent addition of preservative during the winter period. The three highest were 1,014, 1,240 and 1,570 parts sulphur dioxide per million parts of the mince which are grossly excessive.

Sausages.—6 of the sausages contained an excess of sulphur dioxide, the two highest being 1,360 and 1,400 parts respectively per million parts of the sausages. Those amounts are excessive.

Sulphur Dioxide in Parts per Million	Mince	Sausages
Absent	22	1
Up to 99 parts	3	4
100 — 199 „	4	7
200 — 299 „	7	8
300 — 399 „	1	4
400 — 450 „	5	6
450 — 499 „	—	—
500 — 599 „	—	3
600 — 699 „	1	1
700 and over	6	2
	—	—
	49	36

Full Cream Condensed Milk.

Five samples were examined and found to conform to the Regulations. The results of analyses are as follows:—

Butter Fat per cent.	Total Milk Solids per cent.
10.30	38.20
9.04	33.77
9.00	31.64
9.38	44.10
9.50	32.54
—	—
Average—9.44	33.85

Machine Skimmed Condensed Milk.

Twenty-one samples were submitted for analysis; all conform to Regulations. The Total Milk Solids and Butter Fat were as follows:—

Butter Fat per cent.	Total Milk Solids per cent.
0.51	30.22
0.37	30.70
0.27	27.41
0.26	29.47
0.27	29.83
0.30	30.10
0.24	30.95
0.16	29.79
0.21	29.14
0.19	28.90
0.27	27.85
0.16	30.42
0.24	29.12
0.54	27.52
0.16	29.97
0.24	28.39
0.21	29.60
0.45	29.23
0.35	30.25
0.43	29.42
0.80	29.27
<hr/>	
Average—0.31%	Average—29.40%

Jams and Jellies.

Four samples have been examined during the year, and all have been found to conform to the preservatives regulations and also to the fruit standard agreed upon by a Committee of Public Analysts and the Food Manufacturers' Federation. No official standards for Jam exists in this country.

The Full Fruit Standard for single-fruit jam ranges from minimum of 30 lbs. for blackcurrants to 42 lbs. for strawberries per 100 lb. of finished jam. The soluble solids of all jams shall be $68\frac{1}{2}$ per cent.

The analysis of Jams presents no difficulty, but owing to the natural variations in the composition of the ripe fruits, the deduc-

tions to be made from the analysis may raise controversy. As example, the amount of insoluble solids in raspberries—as shown in published figures—varies from 4.4% to 9.2%. One would naturally expect that the best fruit would contain the least insoluble solids or fibre, but before a definite statement can be made as to the amount of fruit in a particular jam the composition of the fruit itself must be known. If that is not known the deductions are mere conjecture, and at the best there can only be a presumption if the calculated figures are below the required unofficial standard.

In certain jams, raspberry for instance, there is a tendency for the pips and fibrous material to collect at the top of the jars before the jelly sets. It is important in sampling such articles to thoroughly mix the contents of the jar before dividing into three parts, otherwise the analysis of the three parts will show considerable variations."

Milk for Bacteriological Examination.

Samples were purchased or taken for Bacteriological examination as follows :—

Sweet Milk	50
„ (Pasteurised)	15
„ (Grade A. T.T.)	9
„ (Certified)	6
	—
	80

Burial Grounds.

The following interments were made at the undernoted Burial Grounds within the Burgh during the year :—

Eastern Necropolis	1,342
Western Necropolis	1,043
Western Cemetery (Perth Road)	166
Barnhill Cemetery	185
Parish Church Burying-Ground (Broughty Ferry)	7
Constitution Road Burying Ground	1
St. Luke's Episcopal Church, Downfield	—
New Mains Cemetery	15
Old Mains Cemetery	—
	—
Total	2,759

No material change has occurred on these places throughout the year. They have been maintained in a satisfactory manner,

Interments.

UNDER SECTION 69 OF THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

54 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 in interments—50 of these were granted and in 4 cases other arrangements were made for the burial. Of the 50 persons buried at the expense of the Local Authority, 7 were adults, 23 were juveniles, and the remaining 20 were still-born children. Towards the costs of interment £11 os 2d was recovered and this sum was handed over to the City Collector.

Smoke Nuisance.

With the continued depression of the staple industries of the city, nuisances caused by the excessive emission of smoke from works chimneys has, of late years, not been so much in evidence. During the year 23 observations—each of one hour's duration—were made, and from these it was necessary in 14 instances to send letters of warning to the offenders.

At one factory where repeated complaints had been made, three of the boilers were shut down and a 250 h.p. motor installed. Coming also under this head is the emission of smoke from steam wagons. Only in one instance was it necessary to stop an offender on the road and bring him to mind of the consequences of excessive emission of smoke and steam from his wagon. This form of nuisance is more readily acknowledged as such by the ordinary "man in the street" because he is directly inconvenienced by the pall of smoke at his own level—in the case of works chimneys the smoke discharged is on a higher plane, and, unless accompanied by smuts which fall to the ground, our citizen is not so mindful. Little does he realise the large sums of money expended each year in the eradication of diseases—some of which could be avoided were the sun's direct rays not impeded by the clouds of smoke so often seen over large cities—created not only by the chimneys of manufacturing plants but also by wanton carelessness in the stoking of the ordinary humble household fires.

Shop Acts.

In terms of the Shops Act, 1912, the various Closing Orders made thereunder, and the Shops (Hours of Closing) Act, 1928, 4,209 visits of inspection were made to shops. 151 contraventions, mainly comprising non-exhibition of the prescribed notices in terms

of the first-named Act; lack of seating facilities for female shop assistants, and inadequate meal time arrangements were dealt with. 53 hours of street patrol were carried out.

Twenty complaints were made at the office, all of which were investigated, and, where necessary, warnings were issued which had a salutary effect. Six prosecutions were instituted against shopkeepers in terms of the Shops (Hours of Closing) Act, 1928, and one under the Grocers' and Tea and Provision Merchants' Closing Order. In all seven cases the fines inflicted amounted to 15s each.

It is not my purpose to continually harp on a particular subject, but I must again draw attention to the fact that the fines imposed in these cases do not amount to the sum charged for "Prosecution Expenses." The result is that each year there is a debit against rates which undoubtedly should have been borne by the persons charged with the offence.

Circulars were again issued prior to the Christmas season, drawing shopkeepers' attention to the special exemptions granted at this particular time.

An application received from a Glasgow firm for an extension of the usual closing hours during the course of their exhibition in the Marryat Hall was submitted to the Local Authority, who refused same.

Places for Public Refreshment.—These places number 232, and periodical visits have been made to ensure that the terms of the Bye-Laws governing them have been adhered to.

An innovation in the shape of an all-night coffee stall falls to be recorded. This stall is of the transportable motor type, and well adapted for the purposes of the trade. It is kept in a particularly clean condition.

Theatres and Cinemas.

To these places of amusement 151 visits of inspection were made to ensure that their cleanliness, means of ventilation, adequacy of the water closet and lavatory facilities, and general maintenance were such that allowed no grounds for complaint, and it is satisfactory to report that throughout the year they have been kept in such a manner that permits of little at which patrons can cavil,

Offensive Trades.

Trades falling within this category are carried on in premises situated as follows :—

Old Air Station, Stannergate Road—Tallow Melter.

1 Park Street—Tanner.

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.

There was removed from our list in October the Arctic Tannery, and by its discontinuance another link in the already badly broken chain of relics of the Whaling Industry—at one time a flourishing trade in the city—has been severed.

Rats and Mice (Destruction) Act.

In the early part of the year a communication was received from the Department of Agriculture regarding the proposal to hold the week commencing 4th April as a special "Rat Week," and during that period to apply intensive measures for the destruction of the vermin. While agreeing that this particular form of bringing to the notice of the public the serious menace of rat infestation, and the methods whereby these pests could be kept in check is useful, it was ultimately decided that as steps are continually being taken in this direction during the whole of the year the Local Authority do not participate, other than by usual efforts, in this specially organised campaign. There can be little doubt that with continuous measures against these marauders the rat population has within recent years been greatly diminished. Only by persistent harrowing of the breeding grounds can we hope for any success, and it is along those lines the Inspectors are working. One or two infestations of note fell to be dealt with during the year. At a four-storey tenemental building in the north-end of the city all the houses at one section were found to be over-run. Examination of the drains showed that there was no intercepting trap on the main drain—allowing of a free access from the sewer. The paved passage and areas were also badly burrowed. Poison was laid in sewer, an intercepting trap provided, and the burrows filled up. Since then no further complaint has arisen,

Strong complaints were received from residents in a suburban district that infestation of the precincts of their houses by rats was taking place, and the complaint was the subject of much printed matter in the local papers. On investigation a dump in the near vicinity was suspected, and after deratisation efforts on the part of the staff of the Cleansing Department, the matter took end and no further complaint reached us.

In terms of the Rats and Mice (Destruction) Act, 1919, two notices were served on the occupiers of stable premises to take such steps as might be necessary and reasonably practicable to rid their buildings of rats. Trapping, netting and ferrets were employed—the stable some time after being demolished.

Fortunately we have been free from any invasion of the Musk Rat. This animal, which is larger than the ordinary brown rat, being approximately 22 inches in length, including tail, can be distinguished by its naked and curiously flattened tail, large and webbed hind feet; and body clothed with a dense fur of a dark reddish brown or blackish colour, frequents and infests streams, canals, ponds and ditches, doing great damage to the banks by burrowing and building obstructions in the beds thereof. Nocturnal in habits, its entrance to the burrows are generally under the water level, while it is capable of great damage to agricultural crops and fresh water fish.

Under Section 5 (2) of the Destructive Imported Animals Act, 1932, the occupier of any land who knows that Musk Rats are at liberty must notify the appropriate Department—in Scotland the Department of Agriculture for Scotland. Failure to do so renders such person liable to a penalty of Two Pounds.

Port Inspection.

During the year ended 31st December, 1932, the number of ships arriving at the Port was 939, 154 less than that for the year 1931. Of these, 303 came from Foreign Ports—5 more than during previous year—and 796 visits were paid to them. The number of vessels arriving direct from Foreign Ports was 108, while 195 called at Ports in this Country before reaching Dundee. In 81 cases vessels arrived from Infected Ports—6 direct and 75 indirect.

The Cargoes mainly consisted of Jute, Gunnies, Linseed, and Desiccated Cocoanut from India and Ceylon; Esparto Grass,

Phosphates, Pyrites, Cork, and Oilcake from Mediterranean Ports; Timber and Flax from Baltic Ports; Foodstuffs, Fancy Goods, Fertilizers, Moss Litter, Paper, and Steel from other Continental Areas, and Foodstuffs, Pitch, Ochre, etc., from U.S.A. and Canada.

Seven cargoes of Sugar for refining purposes arrived throughout the year—6 from West Indies and 1 from South Africa. The sugar was in good condition. It is worth while recording that the sugar from South Africa was partly contained in bags manufactured from Sisal Grass instead of Jute. (Sisal Grass is the prepared fibre of the Agave, a genus of herbaceous plants found in warmer parts of America and Mexico, and grows to a height of forty feet.) I understand that this was the largest cargo ever landed at this Port. It amounted to 9,300 tons.

The manufacture of Bitumen, etc.—started here during 1931—was the means of 2 large cargoes of crude oil residue in bulk arriving at the port. The oil was pumped from the ships direct to the works.

Nuisances, Etc.—During the inspection of vessels from Foreign Ports, 257 nuisances and defects were brought under the notice of Officers in charge of ships. Without exception, immediate remedial measures were applied. No outstanding nuisance or serious defect falls to be recorded, those found generally comprising:—Dirty forecastles, messrooms, and galleys; choked or defective water closets and urinals; foul water discharging on to the quay, etc.

In terms of The Public Health (Deratisation of Ships) Regulations (Scotland) 1929, and Article 28 of the International Sanitary Convention of Paris in 1926, 25 Deratisation Exemption Certificates were issued in respect of ships, which, after inspection, were found to be free from evidence of rats or the rat populations were reduced to a minimum by rat destruction efforts on the part of crews, etc. In all cases where slight evidence was found of rat infestation trapping was insisted on—this continuing over the period of the ship's stay at the Port, and daily visits were made to see that this was being carried out. In this connection 32 traps were purchased from local stores.

The various sheds and warehouses within the precincts of any Docks undoubtedly form good harbourage and feeding grounds

for rats, and it is an important point in the maintenance of these places that strenuous endeavours be made to keep the pest under control. The Harbour Trustees at this Port are alive to this fact, and an experienced rat-catcher is included on their staff. It is gratifying to learn that during the year his efforts have resulted in a kill numbering some 359. The employment of a permanent rat-catcher is an undoubted necessity if these depredators are to be kept at a minimum within the precincts managed by the Trustees.

Metal rat-guards or tarred canvas were fixed to the moorings of ships arriving from foreign ports, while 102 notices with special instructions to Masters, in terms of the Rats and Mice (Destruction) Act, 1919, were issued to the Officers in charge of ships.

Rat Infestation at Fish Dock.

Complaints were received, and on investigation found to be justified, regarding the premises at the Fish Dock, especially underneath the piers being over-run with rats. The Fish Dock, being tidal, presents a very difficult problem towards making the piers rat-proof, and it is there where the rats find excellent harbourage. At the instigation of the Department's Port Officer the occupiers and employees waged war on the rodents by means of poison, traps, dogs, and air guns. It is difficult to estimate the number of casualties in the enemy's ranks, but the nuisance was to a great extent abated, while aggressive measures are still being applied.

The Parrots (Prohibition of Import) Regulations (Scotland), 1930.

Only in one instance was it necessary for the terms of the above Regulations to be applied when a written undertaking was received that the birds were not to be landed here.

The Public Health (Port Administration, Infectious Diseases) Regulations (Scotland), 1930.

Ten cases of sickness were reported and dealt with as follows :—

- 4 were visited by private practitioners and treated on board.
- 1 was removed to Dundee Royal Infirmary.
- 2 were admitted to the Public Health Institute, and
- 1 was treated at the Public Health Institute.

One case of measles and one of typhoid fever were removed to King's Cross Hospital, the crew's quarters thereafter being fumigated, and the bedding, etc., disinfected.

Total number of Verbal Intimations,	157
Total number of Rat Notices issued	102
Total number of Visits to Ships	796
Number of Ships from Infected or Suspected Ports (direct)	6
Number of Ships from Infected or Suspected Ports (indirect)	75
Number of Ships from Free Ports (direct)	102
Number of Ships from Free Ports (indirect)	120
Total number of Ships from Foreign Ports	303
Nuisances and Defects attended to	257

Forecastles Cleaned	51
Messrooms Cleaned	27
Galleys and Store-Rooms Cleaned	32
Accumulations of Food Refuse	18
Choked or Defective W.C.'s	32
Dirty W.C.'s	46
Discharge of Foul Water on Quay	45
Bugs in Forecastle or other Quarters	6
—	257

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

Fresh Water Tanks Cleaned Out	24
Forecastles Washed or Painted	25
Bathrooms or Wash-Places Painted	23
Galleys Washed or Painted	30
W.C.s Painted	21
Forecastles Disinfected	2

Amount of shipping entering the Port :—

	Number	Tonnage
(a) Foreign	303	508,784
(b) Coastwise	636	240,250
Totals	939	749,034

1. Total number of vessels subjected to measures of rat destruction 35
2. (a) Number of vessels fumigated with SO₂ Nil
- (b) Number of dead rats found Nil
3. (a) Number of vessels fumigated with H.C.N. Nil
- (b) Number of dead rats found Nil

4. (a) Number of vessels on which other methods of rat destruction were employed	35
(b) Number of dead rats found	26
5. Total number of dead rats found on board ship	26
of which (a) Number examined bacteriologically	Nil
(b) Number found infected with plague	Nil
6. Number of Deratisation Certificates issued	Nil
7. Number of Deratisation Exemption Certificates issued ...	25
8. On shore (i.e., excluding ships)	
(a) Number of rats destroyed in docks, quays, wharves and warehouses	359
(b) Number examined bacteriologically	Nil
(c) Number found infected with plague	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.
530	7,159	3,402

General Prosecutions.

The prosecutions for the year were as under:—

Preservatives in Food (Sausages)	Shops Acts (Mince)	Food and Drugs (Adulteration) Act Milk
1	7	7
		1
	Total	
	16	

Detailed particulars of each are given under the various heads.

I am, Gentlemen,

Your obedient Servant,

ROBERT MITCHELL,

Chief Sanitary Inspector.