DEI DONUM

PRUDENTIA ET CANDORE

REPORT

OF THE

PUBLIC HEALTH DEPARTMENT

OF THE

CITY OF DUNDEE

For the Years 1941-1945

W. L. BURGESS, C.B.E., M.D., F.R.C.P., D.P.H., D.T.M. & H.
MEDICAL OFFICER OF HEALTH

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CITY OF DUNDEE

With the Compliments of the Medical Officer of Health.

9 West Bell Street,
Dundee.

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MEDICAL OFFICER OF HEALTH

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DUNDEE:
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INDEX.

SUMMARY OF VITAL STATISTICS

The following is a summary of the principal statistics for the years 1941, 1942, 1943, 1944 and 1945:—

	1941.	1942.	1943.	1944.	1945.
Population, ...	163,000	158,500	154,703	154,845	156,999
No. of Deaths (corrected), ...	2,488	2,329	2,324	2,257	2,143
Death-rate per 1,000 population,	15.3	14.7	15.0	14.6	13.6
Deaths of Infants under 1 year,	253	187	197	190	162
Infantile Death-rate per 1,000 births, ...	89	68	69	60	57
Marriage-rate per 1,000 pop., ...	9.5	9.2	8.2	8.1	10.7
No. of Births registered (cor),	2,850	2,770	2,849	3,174	2,832
Birth-rate per 1,000 population,	16.3	15.9	16.3	18.0	16.1
Illegitimate Birth-rate per 100 births, ...	7.3	8.1	8.5	9.3	10.0
Sill Births per 1,000 Births (including still births), ...	43	45	38	44	31
No. of Deaths from Pulmonary Tuberculosis, ...	106	122	95	113	106
Death-rate per 1,000 from Pulmonary Tuberculosis, ...	.65	.77	.61	.73	.68
Death-rate for all forms of Tuberculosis, ...	.90	1.02	.79	.88	.86
Death-rate from Principal Epidemic Diseases, ...	.69	.33	.61	.16	.05
Deaths from Enteric Fever, ...	5	...	...	...	...

Report, 1941-1945

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

LADIES AND GENTLEMEN,

I submit herewith a summary report of the work of the Public Health Department during the war years. It covers the period 1941-45, brief reports having been issued for the years 1939 and 1940. No attempt is made to go into detail, the object being to put on record the principal happenings during the period under review. Reduced and inexperienced staff combined with increased work connected not only with the normal duties of a health department but also with air raid precautions, emergency hospital services and other war work were responsible for numerous difficulties. These were overcome in Dundee as elsewhere, and members of the staff undertook the additional duties very willingly.

While dealing mainly with the years 1941-45, comments are made on the earlier war years and also to some extent on progress made during the present year.

It cannot be said that the health of the City did not suffer by reason of the war. It certainly did, especially during the first year or two. The general death-rates were unusually high. The death-rates from tuberclosis showed a definite rise, and there was a marked increase in the incidence of venereal disease. The standard of cleanliness in children declined, and this was associated with an increased incidence of skin infections such as scabies and ringworm. School medical inspection revealed a lowering of hygienic standards. On the other hand the later war years were remarkable for the absence of epidemic diseases. The favourable trend of infantile mortality seemed to be unaffected or very slightly affected by the war, and so far as one can judge the general standard of nutrition

remained good. Taking everything into consideration, one cannot but feel that things might have been very much worse. At the beginning of the war many of us thought that it would be very difficult to maintain any reasonable standards especially in regard to nutrition and infectious disease. While housing, cleanliness, paternal care, etc., suffered it must not be thought that progress was not made. Actually the war years were definitely years of progress.

This introductory note draws attention to certain of the more outstanding matters. Fuller information is contained in the reports by the various medical officers which form separate sections of this volume.

Infant Deaths, Neo-Natal Deaths, Stillbirths, Maternal Deaths, Maternity and Infant Welfare Services, School Medical Services.

The publication of the report of a Sub-Committee of the Scientific Advisory Committee on Infant Mortality in Scotland stimulated interest in the efforts which require to be made to reduce infant mortality and morbidity. Infant Mortality and the Maternity and Infant Welfare Scheme were the subjects of several special reports submitted to the Public Health Committee from time to time during the war years.

The death-rates among infants are steadily falling in Dundee, and there is evidence in the figures that the war had no serious adverse effect except that there was an unusually high death-rate among infants in 1941. The average death-rate for the five-yearly period 1941-45 was 68 per 1,000 births, the lowest yet for any five-yearly period. Considering that the rate averaged 164 for the 1911-16 quinquennium, it must be admitted that progress has been made. In 1945 the rate was 57, the lowest ever for Dundee, and it looks as if that rate would be maintained or even improved during the present year.

It is well-known that the dangerous period of infancy is that immediately following birth. About half, and in 1945 more than half, of the under one-year-old deaths occurred at ages under one month, and about one-third during the first week after birth. Outstanding among the causes are prematurity and infection alone or together. On examining the certified causes of infant deaths as they occur from week to week, one cannot help being impressed with the fact that if these two conditions could be controlled infant mortality would be reduced to a very low figure. The real causes of

prematurity are not known, but its incidence can be at least reduced if the mother is given every assistance to achieve and maintain a high level of health during the whole period of her pregnancy. The avoidance of infections to which the new-born infant, especially if premature, are very susceptible, calls for special care by ensuring that the pregnant woman is protected, that the highest standard of midwifery is available to her during the actual confinement, and that adequate precautions are taken to protect the new-born infant against infections. These precautions must be of a special sort when the infant is premature, but they must be applied in every case. Breast feeding is of the greatest importance in this connection because it ensures that infection does not enter with the milk and also that the infant is rendered more able to resist infection should it occur. The outstanding type of infection causing mortality and morbidity in the new-born infant is broncho-pneumonia, and very special precautions are necessary to prevent the organisms responsible for this condition entering via the respiratory channels.

Other causes of infant deaths and disability are congenital defects of various sorts. The causes of these defects are unknown, but there is some evidence pointing to the possibility that a virus infecting the mother early in pregnancy may be a factor in the causation of certain of the defects. This possibility requires a great deal of further study, but it emphasises the need for improving the standard of ante-natal care throughout the whole period of pregnancy.

Stillbirths continue to occur and to give rise to considerable concern. The rate is still very high although the 1945 figure, namely 30.80 per 1,000 registered births, is the lowest so far recorded in Dundee. The maternal death-rate varied from 3.48 per 1,000 registered births in 1940 to 4.56 in 1941. The rate in 1945 was 3.5 per 1,000 registered births. These rates (stillbirth and maternal mortality) are due to causes which are not clear, but they are likely to improve provided the pregnant woman is given every care from early pregnancy until the infant is born.

Keeping all the above matters in mind, every effort was made during the war years to improve, so far as circumstances permitted, the maternity and infant welfare services. As an insufficient number of general medical practitioners in the city indicated their willingness to work under the Scheme prepared in terms of the

Maternity Services (Scotland) Act, 1937, it was not possible to establish an organised domiciliary midwifery service in the City. The Public Health Committee agreed, subject to the approval of the Department of Health for Scotland, to amend their Scheme so as to permit the general medical practitioner service to be supplemented by the employment of specialist obstetricians. The Department of Health for Scotland have not yet intimated any decision. As the impending National Health Service will no doubt cover domiciliary midwifery, it is unlikely that further progress will be made until the new proposals are known. The resources of the City for institutional midwifery were considerably increased by the opening in 1944 of a second maternity unit in Maryfield Hospital. This formed the subject of a special report, and it is sufficient to say here that between 75 and 80 per cent. of confinements in Dundee take place in maternity hospitals (Dundee Royal Infirmary and Maryfield Hospital) or in private nursing homes. It may be assumed that practically all the women admitted to an institution for confinement will have received ante-natal attention either at a clinic or from the medical practitioner engaged for the confinement. The ante-natal clinics at Maryfield Hospital are particularly busy and well attended. Expectant mothers are given every encouragement to attend, and with this object in view, an " advice bureau " is held twice weekly in the Public Health Office when expectant mothers attend, not for clinical attention, but in order to obtain advice and assistance in regard to the arrangements which should be made to look after their health during pregnancy and to have the appropriate skilled attention when the infant is due to arrive. It seems evident that this advice bureau is appreciated by the potential mothers, and the tendency is for them to come at a much earlier period in pregnancy, usually as soon as they are aware that they are pregnant.

The important part to be played by health visitors in advising mothers both before and after their infants are born is recognised by the Public Health Committee, who have authorised a considerable increase in the size of the staff, and have approved of the suggestion made to them that health visitors should attend regularly courses of instruction. Every winter courses of lectures are arranged specially for the health visitors, dealing with such matters as food and health, infant nutrition, breast-feeding, methods of artificial feeding, feeding disorders and neo-natal problems, diphtheria immunisation, and methods of teaching. These courses are appre-

ciated by the health visitors who feel much more confident, and I am sure their advice to the mothers will be much more convincing. The Committee have also authorised the sending of health visitors to refresher courses, conferences and summer schools. This widens their outlook and gives them some idea as to the kind of work that is being done elsewhere.

The Public Health Committee have also approved of the principle of establishing a convalescent home for expectant mothers, women recently confined and infants and children under five years of age. This also formed the subject of a special report and suitable premises are now being sought.

The number and distribution of the centres which are used for all child welfare purposes (ante-natal, infant, pre-school and school children, dental services, ultra-violet light, eyes, skins, ears, etc.) were considered from time to time. In 1941 an additional centre at Maryfield Hospital was set up,making seven in all. Recently the Public Health Committee approved of the recommendations contained in a special report on the subject. The proposals involve a change in situation of three of the existing centres and the addition of two more (Linlathen and Downfield). The premises suggested for use as centres can only be considered as temporary. As pointed out in the special report on the subject, the proper course to follow is to plan and erect for each district a building adequate in size and accommodation. That is not possible now, and in any case, it is likely that the clinics required for the medical services remaining with the Local Authority will in some cases at any rate be conducted in larger buildings forming the health centres which the Government propose to set up.

As infant mortality and morbidity are very high among illegitimate infants owing to lack of proper care of both mothers and infants, health visitors pay special attention to them. Unmarried mothers usually require reliable guidance and help in the solution of many social problems. In this matter both the Social Welfare Department and the Public Health Department have responsibilities and a working arrangement has been made in order to avoid overlapping. This was the subject of special reports by both the Director of Social Welfare and the Medical Officer of Health.

Some 15 nurseries were provided during the war for the care of the infants and under five years old children of mothers engaged in

war work. Of these, eight were erected for that purpose, the others being pre-war nurseries or were newly established in existing buildings. Arrangements were approved by the Corporation early this year whereby three of the nurseries are to be transferred to the Education Department as nursery schools; two, and possibly three, will cease to be nurseries, and nine or possibly ten will continue as day nurseries under the Public Health Department. This will not provide an adequate nursery service, but it is a very great improvement on the pre-war position. The main industry and many of the new industries begun or likely to be established in Dundee will employ at least as many women as were employed in industry during the war. The day nursery must therefore be considered as an important element in the welfare services of the City.

Dr Cuthbert, in his report, gives a very informative outline of the work of the school medical services during the war years. The general impression, in reading his report, is that school children did suffer in health especially in the early years. His medical officers found more children below par than in the session prior to the war. There was also an increase in incidence of such conditions as uncleanliness, scabies and ringworm, the incidence of which depend so much on parental care. The necessary corrective procedure was adopted so far as circumstances permitted, but in the case of ringworm facilities for effective treatment were not available until quite recently. There was also some difficulty owing to staff shortages in providing the appropriate treatment for visual defects. The end of the war has made it possible to put that right. The school medical staffs is considerably strengthened by the services of part-time specialists including pædiatricians and by the increase in the number of health visitors. The main difficulties are those of premises, especially treatment clinics. The number of these has been increased, and will be increased still further, but for reasons already given, we will have to be content for some time with unsatisfactory existing buildings or huts. The orthopædic service and the dental service referred to in other paragraphs of this part of the report deal with other sections of the population, but by far the greatest number of the patients who receive attention are school children.

Dental Service.

This provides another example of a service which has shown considerable development in spite of the war. In 1941, the whole-time dental staff was increased from 2 dental officers and 2 dental

attendants to 4 officers and 4 attendants. More recently (1946) another dental officer and attendant were added. Additional dental surgeries were also provided. The dental service is in charge of Mr Finlayson, the Senior Dental Officer, whose report, included in this volume, provides evidence of very definite progress. The teeth of school children at ages from 5 to 14 years were inspected every twelve months, and in the year ended July, 1943, the interval between inspections was reduced from twelve to seven months. Appropriate treatment is given to children whose parents consent. The consent rate is, however, too low in spite of personal approaches made to the non-consenting parents. That the re-organised service has given results is proved by the marked drop in the percentage of children found to require dental treatment, the enormous decline in the number of children attending the dental clinics for emergency attention, and the marked change for the better in the ratio of extractions of permanent teeth to fillings.

A beginning has also been made with orthodontic treatment of selected cases. This aims at putting badly arranged teeth into proper line.

The service by the whole-time dental staff is not confined to school children. In terms of a special report which I submitted in April, 1946, certain of the dental officers, under the direction of Mr Finlayson, hold prescribed sessions every week at Maryfield Hospital, Ashludie Sanatorium and the ante-natal clinics, King's Cross Hospital being visited at regular intervals. Thus, at Maryfield Hospital all willing ante-natal cases have their teeth examined and appropriate treatment given, all patients in the wards of the Hospital and all the inmates of the East House are given any dental treatment they require, and all resident nurses have their teeth examined every six months, the appropriate treatment being given or arranged. At Ashludie Sanatorium all patients have their teeth examined every month and the necessary treatment given, while the nurses are also attended to as for Maryfield Hospital. A dental service is also available to the staff and patients in King's Cross Hospital. The dental requirements of the Mental Hospital are provided by a part-time dentist, additional to the whole-time staff.

Pupils attending vocational courses such as the Trades School and the Training School for Nurses are included in the scheme, and regular routine inspection is carried out at the day nurseries and nursery schools and classes for children of 2-5 years, treatment being given to children whose parents consent.

Orthopaedic Service

Considerable progress was made during the later years of the war in establishing a regional orthopædic scheme covering the counties of Perthshire and Angus, the City of Dundee, and the Burghs of Perth and Arbroath. As a temporary measure, arrangements were made early in 1944 for an orthopædic surgeon to visit Dundee from Edinburgh on at least one, but usually two, days a month. Orthopædic clinics were established for children at Maryfield Hospital, and the necessary out-patient treatment was given mainly at Kemback Street Rheumatic and Orthopædic Clinic by arrangement with the Directors of that Institution. The necessary accommodation for in-patient treatment was provided at Stracathro Hospital by arrangement with the Department of Health for Scotland. While this temporary scheme was in operation, discussions were proceeding between the various authorities interested, and as a result an orthopædic surgeon has been appointed (I. S. Smillie, Esq., F.R.C.S., Ed.) and has now taken up duty. He is engaged in organising a service for the Eastern Region of Scotland. The appointment is shared by the various local authorities already mentioned, by the University of St Andrews, and by the Dundee Royal Infirmary. Now that a start has been made it is expected that the service will develop rapidly.

Nutrition.

For very good reasons the subject of nutrition has been much talked of and much written about during the war years. It can be said with some confidence that the available evidence supports the view that the state of nutrition of the population generally did not deteriorate to any extent during the war through insufficient food or through absence or short supply of any particular food elements. The rise in the death-rate from tuberculosis, particularly during the early war years, might be partly due to a decline in the nutrition level, but there are many other factors which can explain adequately the higher rate.

As pointed out in Dr Cuthbert's report, systematic inspections revealed a decline in the general nutritional state of school children. It would seem that the entrance group showed this more than any other. In clinic work also the medical officers had the general impression that there were very many more weary and white-faced children coming to the clinics. This was so particularly towards the end of the war. One does not require to seek very far for the responsible causes. Disturbances of family life with the father at the war and the mother engaged in industry cannot be said to be good for children of school or pre-school age. They lead to neglect.

Efforts made to compensate by establishing war-time nurseries, providing school meals of high nutritive value, and arranging for priorities in the distribution of certain foods helped considerably, but could not replace entirely parental care in the home.

The following paragraphs give some information regarding enquiries on the subject of nutrition carried out in Dundee, in some cases by members of our own staff and in others by research workers who visited the City.

During September and October, 1942, Professor V. P. Sydenstricker, Georgia University, U.S.A., carried out nutritional surveys in Scotland at Aberdeen, Glasgow, Edinburgh and Dundee. Subjects for examination were chosen from groups whose metabolic demands were presumably the highest, namely, children in the age group 10-14 years, adolescent boys, and pregnant and lactating women. In general the subjects chosen were from the lower income levels. The results obtained in Dundee, where only pregnant women and children were examined, were as follows:

Class	Number Examined.	Nutritional Assessment. Good.	Satisfactory.	Poor.
Pregnant women, ...	69	65	4	Nil
Children (12-14 years),	101	82	19	Nil

Folliculosis (i.e., an enlargement of the hair follicles) which Professor Sydenstricker suggested might be an indication of vitamin C deficiency, was found in approximately 6 per cent. of the children examined.

During 1943 a hæmoglobin survey of women attending the ante-natal clinics at Nelson Street, Ancrum Road and Maryfield Hospital was conducted by Dr McIntosh of this Department. Specimens of blood were examined at the first attendance which, in the majority of cases, was between the 3rd and 6th months of pregnancy. The results of this survey, which was confined to women who were not, at the time of their first attendance, taking any medicinal preparation containing iron were as follows:—

No. of specimens examined (Sahli method)	207
Range of hæmoglobin percentage	47 — 102
Mean, ...	76.24 per cent.
Less than 50 per cent.	1 or 0.48 per cent.
50—59 ,, ,, ...	9 or 4.35 ,, ,,
60—69 ,, ,, ...	28 or 13.53 ,, ,,
70—79 ,, ,, ...	97 or 46.86 ,, ,,
80—89 ,, ,, ...	61 or 29.47 ,, ,,
90+ ,, ,, ...	11 or 5.31 ,, ,,

Professor Stanley Davidson and his colleagues, as the result of surveys which they have conducted in Edinburgh, have suggested that clinical anæmia should be regarded for pregnant women as existing if the percentage of hæmoglobin falls below a level of 70 per cent. By applying this criterion to the Dundee figures, 18.36 per cent. of the women showed anæmia. This figure is almost identical with that (16. per cent.) recorded for a group of 392 upper artizan and lower middle class women attending an ante-natal clinic in the south-eastern suburbs of London between May, 1941, and March, 1942. Although the percentage of cases showing clinical anæmia compares well with other areas the introduction in 1943 of the routine administration of medicinal iron at the ante-natal clinics in Dundee was fully justified.

For adult female and male subjects clinical anæmia has been regarded as being present when values fall below 80 and 85 per cent. hæmoglobin respectively, and applying these criteria to subjects examined in Dundee between 1942 and 1946 the following results were obtained:

Group Examined	No. of Subjects.	Sex.	Mean Hb.%	Range.	Per Cent. Showing Clinical Anæmia.
C.D. Workers, ...	54	M	96.8(S)	63—123	5 or 9.26
Hospital Nurses, ...	65	F	92 (H)	80—106	Nil
Trade School Boys,	45	M	95.3(H)	84—108	1 or 2.22 } 1 or 0.94 (of 106)
Trade School Boys,	61	M	94.8(C)	85—105	Nil

S=Sahli Method. H=Haldane Method. C=Copper Sulphate Method.

A mobile team of the Oxford Nutrition Survey, under the direction of Dr A. P. Meiklejohn, carried out a nutritional Survey in Dundee during July and August, 1943. The sample of the population examined consisted of 70 families (256 individuals)—approximately 1 in 8 of those families living in the 9th and 10th health-visiting districts of the City having at least one child under the age of two years.

While a small percentage of persons showed evidence of malnutrition, the conclusion reached was that, " The state of nutritional health of a sample of the population in Dundee was little different from that revealed by previous surveys conducted in three other industrial communities in the United Kingdom, despite the fact that the average expenditure on food was the highest yet encountered. This apparent advantage was offset by the effect of the very bad housing conditions in Dundee."

During the period January to March, 1944, members of the staff of the Public Health Department, in co-operation with Dr R. P. Cook of the Physiology Department, University College, conducted a dietary and nutritional survey of a group of 45 boys aged 14-15 attending the Trades School. The general health of the boys was good. A detailed analysis of the dietary showed that the mid-day school meal furnished a valuable contribution to the total dietary of first-class protein, vitamin A, ascorbic acid, and calcium, the percentages being 44.4 + or – 10.3, 67.8 + or – 12.2, 57.8 + or – 12.6, 42.3 + or – 10.9 respectively. The only lesions possibly attributable to dietary deficiencies were gingivitis (inflammation of the gums) 29 per cent., and folliculosis (29 per cent.) An additional group of 61 boys was studied during December, 1945 (incidence of folliculosis, 39 per cent.). In view of the suggestion made by Professor Sydenstricker that folliculosis might be a manifestation of deficiency of vitamin C, a special investigation with the assistance of Dr T. Moore of the Dunn Nutritional Laboratories, Cambridge, was undertaken to test this hypothesis. The results showed that there was no significant difference between the figures obtained for the plasma levels of vitamin A, ascorbic acid, proteins, and hæmoglobin in respect of boys showing folliculosis and those not showing folliculosis. Therapeutic tests involving the administration of vitamin A and ascorbic acid were also carried out and showed that the vitamins had no effect on the skin lesions.

Detailed accounts of these studies have been published in the British Medical and Biochemical Journals.

In August, 1945, with the assistance of Dr R. P. Cook, a survey was made of the diets of patients and staff at King's Cross Hospital, which revealed a satisfactory level of all constituents. Special mention was made of the high percentages of first-class protein and vitamin C. Regarding a similar survey carried out at Ashludie Sanatorium in September, 1945, Dr Cook commented as follows:—" The diet is apparently satisfactory in all constituents. Inspection of the list of foodstuffs issued also shows considerable variety. It would appear that the patients at Ashludie Sanatorium are well fed."

In December, 1945, Dr Fulton and Dr Cook surveyed the diets of the children in the Day Nurseries at Cotton Road, Ellangowan, Lilybank, Polepark and Rankine Street. The dietary constituents were in all respects adequate and care (with variety of choice of foods) was shown in the preparation of meals.

Epidemic Infectious Diseases.

Contrary to expectation, Dundee was singularly free from epidemics during the war years. A severe epidemic of diphtheria in 1940-42, an outbreak of paratyphoid fever due to a food infection in 1941, and a moderate increase in incidence of cerebro-spinal fever in 1940 and to a lesser extent in 1941 were the only unusual happenings. The total annual number of notifications and intimations varied from about 3,000 in 1939 and 1945 to about 5,000 in 1941 and 1942. The figure for the last complete pre-war year (1938) was in the neighbourhood of 7,500.

Still more striking is the low death-rate from the principal epidemic diseases which prevailed during the war years. The year 1945 produced the lowest figure on record, namely .05 per 1,000 population. The average annual death-rate for the five years, 1941-45, was .37 per 1,000 population, just about half the average annual figure (.72) for the five years 1936-40. The death-rate from the principal epidemic diseases is steadily falling, but the sudden drop during the war years was certainly unexpected.

Diphtheria.—The behaviour of diphtheria in Dundee during the war years is of special interest. For some ten years prior to the war, Dundee had not experienced any marked increase in incidence, there being usually 350 to 450 notifications annually. There was some evidence of increased prevalence in 1939, but towards the middle of 1940, the disease assumed epidemic proportions. That year produced 1,353 cases, and the years 1941 and 1942 produced 1,228 and 903 cases respectively. Since then the annual figures have steadily declined to 342 in 1945, and it looks as if the 1946 notifications will be fewer still, probably below the 300 level.

The deaths from diphtheria provide a still more interesting picture, the outstanding feature of which is that not a single patient has died from diphtheria for over two and a half years—that is, from March, 1944, until the time of writing. Before then there were deaths from this cause every year, even in inter-epidemic years, the annual number usually reaching double figures. In the epidemic years, 1940-42, the mortality was of course high, these three years producing 150 deaths.

One naturally looks for an explanation for these recent favourable trends in incidence, and especially in fatality. The changes are too recent to attribute them to an improvement in social conditions. The epidemic of 1940-42 was much more extensive than that

of 1926-28, and only slightly less fatal. Change of type of the causative organism may have played a part, but it is difficult to avoid the conclusion that the improvement is a direct result of a very general acceptance by parents of diphtheria immunisation as a preventive measure. One is accustomed to expect a series of quiet years after a severe epidemic and that must be taken into account, but the recent post-epidemic years have been quieter than ever before, especially in the matter of deaths. There is evidence that a very high percentage of Dundee children are inoculated against diphtheria before entering school or immediately thereafter. In recent years enquiries have been made from the parents or guardians of all children entering school for the first time as to whether or not the children have been inoculated against diphtheria. During the school year 1943-44, 81.37% of school entrants provided a history of having been inoculated, and in a further 10% the parents authorised the children to be inoculated, which was done. That means that over 90% of the school entrants during that school year were given protection. The figures were sightly improved in the school year 1944-45, and it seems likely that these will be at least maintained during the 1945-46 session, for which the figures have not yet been worked out. The parents of something like 60% of the children who had been inoculated before entering school agreed to the administration of a maintenance dose. These figures are very satisfactory, and, if maintained, should go a long way in the eradication of diphtheria. A great deal of credit is due to the health visitors whose individual contacts in the homes of the people have proved very effective. General publicity by way of posters, exhibited in various business premises by the kindness of owners, have also helped, and we are indebted to clergymen of all denominations who by intimations to their congregations assisted the campaign. The cinema proprietors co-operated in a very helpful manner by exhibiting propaganda slides during the course of their programmes.

Enteric Fevers.—Apart from what might be called accidental outbreaks due to infected food or water, it can be said that typhoid and paratyphoid fevers are no longer giving much trouble in this country. In a mild way they remain endemic or sporadic. Occasionally cases arise which are infected from unknown sources and which do not appear to spread to any extent. This decline in incidence is a direct result of the improvement in sanitary conditions, especially in the methods of removal and disposal of sewage and also of the improvement in the habits of cleanliness of the

population generally, and especially among those concerned with the production, preparation, storage and distribution of food. It is important that the public should know that a complete water carriage sewage system in every house and building is not in itself sufficient. Every member of the community must adopt a high standard of cleanliness. This applies particularly to all those who are engaged in any way in the handling of food at home or at work. Any element of carelessness may have a serious effect. Such a lapse occurred in the year 1941 when food (synthetic cream) was infected by one who was either a carrier or was suffering from a mild attack of paratyphoid fever. This resulted in 367 cases of paratyphoid fever with 5 deaths.

Cerebro-Spinal Fever.—As was expected, there was a slight increase in the incidence of cerebro-spinal fever soon after the war started, the number of cases occurring in 1940 being 99. Since then the incidence has steadily declined and at the end of the war the total number of notifications exceeded by very little the average annual pre-war figures. Owing to improved methods of treatment by sulphonamides and latterly by penicillin also, the case mortality was exceedingly low. While still a very fatal disease, it is not nearly so dangerous as it used to be when specific methods of treatment were not available.

In the worst incidence year (1940) with 99 notifications, there were 9 deaths. There were also 9 deaths in 1941, with 57 notifications. In 1945 no deaths occurred although we had 22 cases of the disease.

Influenza.—No extensive epidemic of influenza occurred during the war years, and the half-expected pandemic did not appear. In the early mouths of 1940 and the late months of 1943 there was an increase in the number of deaths in which influenza was given as a cause. This made one apprehensive, but fortunately nothing like an epidemic occurred.

Other Epidemic Diseases.—There is nothing special to note regarding other epidemic diseases. As already stated, there was a decline in their incidence and we had no difficulty in their control or in providing hospital accommodation for those cases requiring it.

Tuberculosis.

As was expected, the steady decline in the death-rate from tuberculosis was interrupted during the war years when, indeed a definite increase in the rates occurred. The year 1939 was a low-record year, but during the three years immediately following, the

death-rates from all forms of tuberculosis rose to a climax in 1942, which provided a rate of 1.02 per 1000 population. Since then, the rate has shown a downward trend, but has not yet reached the 1939 level. The actual figures are contained in the tuberculosis tables included in this report. While 1942 was the peak year for deaths, 1945, the last complete year reviewed in this report, provides the highest number of notifications for all forms of tuberculosis, and the highest attack rate. Pulmonary tuberculosis was mainly responsible. The increased incidence and mortality are understandable and are no doubt related to a deterioration in housing conditions, increase of overcrowding, black-out, anxiety, multiplied opportunities for exposure to infection, long hours of work, irregular meals, etc., etc.

Details of work carried out at the Tuberculosis Dispensary in the Public Health Institute and at Ashludie Sanatorium are contained in Dr Hunter's and Dr Smith's sections of this report. Dr Smith emphasises once more that the vast majority of the pulmonary cases admitted to Ashludie Sanatorium fall into the classifications " moderately advanced " and " advanced." Excluding cases of pleural effusion, the percentages of cases in the categories of " early " and " moderately early " were during each of the years 1942-45 17, 19, 19, and 23 respectively.

It is to be hoped that the introduction of mass radiography will result in the recognition of many more cases in the early stage when treatment offers a greater chance of complete recovery. Recently the Corporation approved of special reports recommending the establishment in Dundee of a mass radiography unit, and the Tuberculosis Medical Officer was appointed Director of Mass Radiography with a whole-time Assistant Director. During the period 1942-45, a mass radiological survey was conducted by Dr McIntosh of this Department by means of fluoroscopy and full-size radiography. Of the 960 persons examined (C.D. workers, Corporation employees, nurses, Trades School boys), 7 (4 females and 3 males) or 0.73 per cent. were found to be suffering from active, and 17 (9 females and 8 males) or 1.77 per cent. from inactive pulmonary tuberculosis. At the time of the X-ray examination, each of the 7 persons suffering from active disease declared that he or she was fit and there were no subjective symptoms. Of the 7 active cases diagnosed, 4 were of minimal, 2 were of moderately advanced and 1 was of far advanced extent. Each of the 17

cases in the inactive group, from which healed primary foci were excluded, was of minimal extent. The number of persons examined is undoubtedly small, but the results illustrate what can be done by means of radiography.

The use of mass radiography will, it is certain, bring to light an increased number of early cases and an increased number of patients requiring sanatorium treatment. This will raise problems at Ashludie Sanatorium where all the available beds cannot be used because of the shortage of nursing staff. The position at that Institution has been improved by the employment of male assistant nurses and male orderlies, but on the female side, the nursing problem is very serious and does not show any signs of improvement. The training of nurses on a comprehensive system and on a regional basis seems to be the only way of providing the nursing skill necessary in special hospitals such as the Sanatorium. At the moment an effort is being made to secure the approval of the General Nursing Council for Scotland to a link-up of Ashludie Sanatorium with Maryfield General Hospital so that nurses in training at Ashludie Sanatorium may proceed to Maryfield Hospital and there complete the study necessary to entitle them to have their names entered in the register for general nurses of the General Nursing Council.

The system of maintenance allowances payable to cases of pulmonary tuberculosis likely to recover and to become fit for work again is operative in Dundee as elsewhere. Its application is, of course, limited. The early recognition of tuberculosis in supposedly healthy persons by mass radiography will call for the review of this maintenance scheme. Wage earners, who feel well, but who are found to have a focus of tuberculosis and who therefore require treatment in, say, a sanatorium, will not be willing to sustain financial loss by giving up work and submitting to institutional treatment, and it would seem necessary to revise the scale of payments so that they will approximate to the wages which the patients would earn if they were working. After all, at such time increased financial resources are indicated and not the other way round. It must also be remembered that every case of tuberculosis has been infected as the result of community life, and, further, that by going into a sanatorium he is not only benefitting himself but removing from the community a potential and almost certain source of infection to others.

The second-last paragraph in Dr Smith's report emphasises the need for the services of a thoracic surgeon at Ashludie Sanatorium. This is a matter which can only be dealt with on a regional basis and by co-operation with the local authorities in the region, with the University, and with the Dundee Royal Infirmary. Meantime, with the approval of the Public Health Committee, selected cases are being sent to Hairmyres Hospital, Lanarkshire.

The arrangements made by the Department of Health for Scotland whereby non-infectious cases of tuberculous pleurisy are admitted to Bridge of Earn Hospital for treatment has proved of very great value. This scheme came into operation early in October, 1945, and, up to the time of writing, 22 patients have received treatment.

Venereal Diseases.

It is only possible to measure the venereal disease incidence by the number of new patients attending venereal diseases centres. The figures contained in the report by Dr Keay, Special Medical Officer, Venereal Diseases Scheme, indicate a marked increase in exposures to infection during the war with a consequent increase in actual infections. That there is a growing appreciation of the need for obtaining skilled advice after exposure to risk is evident from the steep rise from year to year in the numbers seeking advice and found not to have venereal disease.

Dr Keay submits some interesting observations of the working of Defence Regulation 33B which introduced towards the end of 1942 a limited form of notification intended to reveal and compulsorily treat until free from infection those persons believed to be habitually spreading the disease by reason of their having infected at least two persons. The receipt of double notices resulted in contact being established with 24 sources of infection. This is a very small number, but it is satisfactory that all except one reacted to informal approach and submitted to examination and treatment. Of 208 persons who were the subject of single notices, 132 were contacted and examined. In 122 of these, infection was confirmed, but 76 failed to complete the prescribed course of treatment and surveillance. In those cases, of course, no compulsory powers exist. It would appear therefore that once brought to the surface, the complsory element is effective and should be applicable.

It is of course realised by all that notification itself is not sufficient. It must be followed by adequate and complete treatment

—in effect treatment of notified persons must be compulsory. A system of notification as commonly applied to the infectious diseases may not be satisfactory, but the suggestions contained in the Report on Venereal Diseases by the Medical Advisory Committee (Scotland) on the subject of notification are worth careful consideration. These suggestions recommend notification of every established case of venereal disease but provide strict anonymity for the patient who co-operates and respects his obligations. When a patient refuses to respect these obligations, compulsory powers would operate.

Dr Keay records his experience of the modern treatment of the venereal infections by sulphonamides and penicillin. This section should be of great interest to medical practitioners.

Cancer. Table 16 shows the cancer death-rates in Dundee for recent years. The rate, steadily rising to a peak in 1943, has fallen during the last two years. The numbers are too small and the time too short to permit of a reliable conclusion. One cannot say, for example, that the 1943 rate is the peak and that it will continue to fall. Next to heart conditions, cancer tops the list of killing diseases, and it is important that all available knowledge should be used to the full in order to bring it under control. It is fairly clear that social conditions, including occupation, play a part in its causation and, as these improve, we can expect a favourable trend in incidence and mortality. If begun early, treatment is slowly and steadily becoming more effective, especially when the disease is in an accessible situation (mouth, skin, etc.). Other factors in causation and therefore control are uncertain, but these are under investigation by numerous research workers in this country and all over the world.

Although the Dundee numbers are too small to justify conclusions favourable or otherwise, the rates for England and Wales for many years ending 1944 are encouraging. " For all malignant neoplasms combined female mortality has fallen slowly but constantly and male mortality shows signs of reaching its maximum." That conclusion is arrived at after making allowance for the change in age constitution of the population which results in an increasing proportion of people living at the advanced or cancer age periods The accessible sites and the digestive organs have registered considerable decreases in mortality during the ten years (ending 1944) whereas the other sites have registered increases. Thus cancer of

the lip deaths in England and Wales have declined continuously at every age since 1911. There is also a decline in cancer of the tongue, mouth, tonsils, and pharynx. On the other hand, cancer of the lung shows an increase, but there is evidence that the rate of increase of cancer in this organ is declining. It may be that to a large extent the rise in the death-rate from cancer of the lung is not a real increase, but the result of better diagnosis, and it is probably safe to conclude that that is to some extent at any rate, the correct explanation.

Briefly the position would appear to be that there is a decline or a reduction in the rate of increase in the death rates from cancer and that the decline is more marked in cancer of the accessible sites in the body. This may be because an earlier diagnosis is possible in such cases or because treatment by surgery or radiotherapy can be more effectively carried out—almost certainly both. It may be asked if the resources in Dundee in regard to surgery and radiotherapy are sufficient to meet the requirements of the population. The answer so far as surgery is concerned is in the affirmative, but it cannot be said that every patient found to be suffering from cancer can receive treatment by X-rays immediately a diagnosis is made. There may be some doubt also as to whether the facilities at the disposal of general medical practitioners for the diagnosis of cancer are sufficient. The treatment of cancer by deep X-ray therapy has been provided by the Directors of the Royal Infirmary, but difficulties in regard to personnel and apparatus arising from the war has made it impossible for them to do all they wish to do. These difficulties are likely to continue for some time. In a matter of this sort, Dundee cannot be considered as self-contained nor can the Dundee Region as envisaged in the new Health Service. To justify the apparatus and personnel necessary, there should be one organisation for a population of at least 1,000,000 and preferably 2,000,000 or more. It will therefore be necessary for the Dundee or Eastern Region of Scotland to work with another Region in order to ensure that the cancer organisation is complete and economically sound and that every case suspected to be suffering from cancer is thoroughly investigated and given immediately appropriate treatment by surgery, radiotherapy or both.

Reference should be made to the appropriate sections of this report for information regarding the work done in the four principal hospitals under the control of Dundee Corporation. Staff difficul- Hospitals.

ties were at all times serious, but more so towards the end and after the end of the war. Dr Bell, Physician Superintendent of the Mental Hospital, had a very difficult time, and had to carry on with an increasing number of patients resulting mainly from transfers from Larbert Mental Hospital. His staff, especially on the female side, was considerably reduced and he had great difficulty in securing the services of assistant medical officers—indeed for a time, he carried on alone.

Both Maryfield Hospital and Ashludie Sanatorium were used to some extent for war purposes, and both received a considerable number of service cases including war casualties. Dr W. A. Davidson was appointed whole-time Medical Superintendent to Maryfield Hospital in April, 1944, and Dr D. H. Smith whole-time Medical Superintendent to Ashludie Sanatorium in May, 1944.

Except for the years 1940-42, when an epidemic of diphtheria and typhoid fever made severe claims on accommodation, King's Cross Hospital was not by any means busy. A very temporary and somewhat unsatisfactory cubicle pavilion was erected on behalf of the Corporation by the Ministry of Works. This has proved very useful, but it is hoped that it will not be long before at least one permanent cubicle pavilion is provided.

Dr Drysdale in her report on King's Cross Hospital, gives some very interesting information regarding the modern methods of treating the acute infectious diseases. This should be of special interest to medical practitioners.

Housing and Sanitation.

The figures in the various tables contained in the report of the Chief Sanitary Inspector indicate the work done in connection with housing and sanitation during the war years. There can be no question that the standard of housing sustained a severe set-back. The total number of houses available in the City and their size distribution do not coincide with the total number and size distribution of families requiring housing accommodation. This state of affairs existed before the war, and, owing to the virtual stoppage of new building, the position is now worse than ever, as is the overcrowding which is the inevitable result. The position is aggravated by the fact that thousands of occupied houses are in an insanitary condition, many being considered

to be unfit for human habitation. Indeed, over 11,000 people occupy 3,000 odd houses which the Council decided to close under one or other of the procedures prescribed in the Housing (Scotland) Acts, 1925-35. Various attempts have been made by temporary expedients to relieve the situation, and in certain cases families have taken the law into their own hands. The solution is, of course, the provision of many thousands of new houses. The same problem exists everywhere in the country and is recognised as one of primary importance.

The Housing Committee and the Housing Department are vigorously marshalling their resources, and soon we hope that new houses will come off the line at a rate which will enable the Public Health Committee and the Public Health Department to do their part effectively by exercising their powers in regard to overcrowding, insanitary and unfit houses.

The Housing Committee are concentrating on the family house and are favouring the larger type. This is probably the correct procedure at the outset of a new housing drive. At the same time it is hoped that consideration will soon be given to the provision of suitable accommodation for old people. The care of the elderly is part of the general housing problem, but it is also part of a wider social problem. The number of people at the older ages is steadily increasing, and their welfare presents a problem which becomes more difficult as time goes on. The matter has been raised in committee and in reports from time to time, but no progress has been made. Perhaps this is due to the fact that it is not the function of any one particular existing committee. It seems necessary that the whole question should be gone into by one committee and perhaps a joint committee of existing committees might be constituted for the purpose.

The general welfare work in connection with the blind was continued on the usual lines during the years under review. It was difficult and mostly impossible to secure the services of two ophthalmic surgeons for certifying persons who had been reported as coming within the ambit of the Acts. In straightforward cases one surgeon was asked to do the necessary certifying, but in any cases of doubt a second opinion was always available. A summary of the work done at the Regional Clinic is as follows:— **Blind Persons.**

Year.	No. of Sessions.	No. of Persons Examined.	Domicile of Persons Examined Local.	Co.Angus	Co.Perth,	Result. Blind.	Not Blind.
1941,	... 7	50	36	6	8	35	15
1942,	... 12	58	50	4	4	34	24
1943,	... 10	61	55	2	4	34	21
1944,	... 13	67	53	8	3	33	31
1945,	... 16	65	56	5	4	35	30

During the same years 55 visits were made to applicants who were physically unfit to attend the Regional Clinic. Of these visits 14 were made to local applicants, 14 to applicants in the County of Angus, and 27 to applicants in Perth County.

The total number of blind persons in Dundee during the five years averaged 553, and, of these, the average number over 70 years of age amounted to 199.

The average number in receipt of Domiciliary Assistance over the five years was 321. The pre-war rates of domiciliary assistance to blind persons were increased during these years by approximately 2s 6d plus the actual rent paid. Additions have also been made in the allowances to dependent wives, children, etc. In assessing allowances the means of members of the family, other than those of the applicant and dependent/s, have not been taken into consideration since 10th November, 1944.

During 1942 and 1943 meetings of the Counties of Cities Association were held in Edinburgh to consider the application of uniform scales of assistance, but no success was achieved. Emanating from the first meeting a scale was actually arranged, but Dundee was the only Authority to adopt it. This scale was not considered satisfactory, and subsequent meetings were held, and it was ultimately agreed each Authority should fix its own scales. More recently (November, 1946) the question of a uniform scale for the four cities has again been raised.

With increased pensions payable from 4th October, 1946, under the National Insurance Act, 1946, the National League of the Blind made an appeal to the Public Health Committee to raise the income of blind persons by 10s per week and to disregard the allowances payable under the Family Allowances Act, 1945. The Committee agreed to grant an increase of 5s per week and also

improved the allowances to dependents of blind persons. It was also agreed to disregard the " family allowances " in assessing domiciliary assistance.

During the five years an average of 64 trained blind persons were employed in the Royal Dundee Institution for the Blind, for whom the Corporation pay a capitation sum of £100 per annum. Forty-nine of these were men and fifteen were women. Trained male blind persons enjoy the same wage as is paid by the Corporation to the lowest-paid manual worker in their employment, and trained female blind persons receive two-thirds of the wages paid to male workers. The basic rates of their wages remain static and are regulated by the Joint Industrial Council for Local Authorities by applying the cost of living bonuses.

Trainees (both male and female) employed in the Royal Dundee Institution for the Blind receive the same allowance as is provided under the Domiciliary Assistance Scheme, but no means test is applied. In addition the Directors of the Institution pay an allowance of 8s 6d per week during the first year of training, with an increase of 3s per week during each subsequent year of training in the case of males and of 1s per week in the case of females.

There are many other matters which could be dealt with in this general commentary, but, as already stated, the report is a summary covering several years, and space is somewhat limited. At the same time, I must refer to two officials who retired during the war. General.

Dr Margaret Scott Dickson retired in November, 1944, after more than twenty-seven years' service. She was Dundee's first Maternity and Infant Welfare Medical Officer, and during her period of office the Dundee infantile mortality rate was reduced from about 150 to about 60 per 1,000 births. She did excellent pioneer work, and her retiral deprived the Department of a most efficient official and many mothers and children of Dundee of a sincere friend.

In May, 1945, Mr A. A. Russell, the Chief Sanitary Inspector, retired, after giving over 43 years' service to the City. His period of office coincided with the development of the housing drive in this

country and, specialising in this class of the work, he carried out his very difficult duties in a most energetic and enthusiastic fashion.

All of us in the Department hope that these two officials will enjoy many years of happy retirement.

I have the honour to be,

Ladies and Gentlemen,

Your obedient servant,

W. L. BURGESS,
Medical Officer of Health.

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TABLE I.

Causes of Death (Corrected for Transfers) in Males and Females, 1939-1945.

	1939. Total.	1939. M.	1939. F.	1940. Total.	1940. M.	1940. F.	1941. Total.	1941. M.	1941. F.	1942. Total.	1942. M.	1942. F.	1943. Total.	1943. M.	1943. F.	1944. Total.	1944. M.	1944. F.	1945. Total.	1945. M.	1945. F.
Typhoid Fever,	—	—	—	—	—	—	5	—	5	1	—	1	—	—	—	—	—	—	—	—	—
Measles,	—	—	—	10	9	1	10	2	8	6	2	4	4	3	1	10	5	5	4	2	2
Scarlet Fever,	1	—	1	2	1	1	1	1	—	1	1	—	—	—	—	—	—	—	—	—	—
Whooping Cough,	8	3	5	9	4	5	17	7	10	5	—	5	14	4	10	—	—	—	1	1	—
Diphtheria,,	11	5	6	69	41	28	53	29	24	28	11	17	17	12	5	6	4	2	—	—	—
Influenza,	22	9	13	54	25	29	17	9	8	6	3	3	53	20	33	6	2	4	3	2	1
Cerebro-spinal Fever,	2	2	—	9	3	6	9	6	3	6	4	2	6	4	2	3	3	—	—	—	—
Other Epidemic Diseases,	13	3	10	9	4	5	7	5	2	22	11	11	7	5	2	10	5	5	5	2	3
Tuberculosis of Respiratory System,	109	55	54	102	51	51	106	52	54	122	59	63	95	48	47	113	53	60	106	57	49
Other Tuberculous Diseases,	22	16	6	36	21	15	40	23	17	40	16	24	27	11	16	23	9	14	29	14	15
Cancer, Malignant Disease,	320	139	181	297	135	162	300	122	178	322	141	181	367	162	205	337	159	178	341	159	182
Diabetes Mellitus,	19	4	15	35	11	24	19	7	12	18	4	14	20	7	13	9	2	7	16	4	12
Diseases of Nervous System,	286	136	150	279	129	150	283	120	163	301	131	170	286	133	153	282	119	163	280	122	158
Diseases of Circulatory System,	722	321	401	791	336	455	726	326	400	668	291	377	675	291	384	703	298	405	653	294	359
Bronchitis,	97	45	52	135	60	75	102	42	60	73	27	46	83	46	37	79	40	39	61	31	30
Pneumonia (all forms),	85	52	33	154	84	70	132	74	58	82	46	36	92	50	42	101	51	50	67	39	28
Other Respiratory Diseases,	39	16	23	48	29	19	35	18	17	44	17	27	41	17	24	42	23	19	30	12	18
Diarrhœa, etc. (all ages),	35	20	15	18	12	6	26	14	12	24	12	12	25	16	9	16	9	7	28	17	11
Appendicitis,	15	7	8	11	10	1	16	12	4	15	8	7	13	8	5	13	9	4	8	2	6
Other Digestive Diseases,	66	38	28	67	34	33	84	47	37	77	40	37	54	30	24	61	32	29	68	36	32
Acute and Chronic Nephritis,	72	29	43	79	31	48	62	28	34	54	27	27	56	30	26	47	19	28	56	21	35
Other Diseases of Genito-urinary System,	34	26	8	44	30	14	23	18	5	42	34	8	52	37	15	45	34	11	49	42	7
Puerperal Sepsis,	2	—	2	3	—	3	4	—	4	4	—	4	2	—	2	5	—	5	3	—	3
Other Puerperal Causes,	11	—	11	7	—	7	9	—	9	6	—	6	8	—	8	6	—	6	7	—	7
Congenital Debility, Premature Birth, Malformations, etc.,	122	68	54	95	55	40	132	77	55	107	60	47	96	53	43	101	55	46	100	64	36
Old Age,	85	23	62	72	16	56	58	16	42	47	14	33	66	19	47	49	14	35	42	5	37
Violent Deaths,	134	77	57	109	66	43	115	69	46	119	69	50	95	57	38	110	51	59	115	62	53
All Other Causes,	71	22	49	78	27	51	97	38	59	89	37	52	70	38	32	80	28	52	71	36	35
ALL CAUSES,	2,403	1,116	1,287	2,622	1,224	1,398	2,488	1,162	1,326	2,329	1,065	1,264	2,324	1,101	1,223	2,257	1,024	1,233	2,143	1,024	1,119

TABLE II.

Death-rates at Various Age-periods (from all causes) each year, 1939-1945.

Age Periods	1939. No. of Deaths.	1939. Death-Rate.	1940. No. of Deaths.	1940. Death-Rate.	1941. No. of Deaths.	1941. Death-Rate.	1942. No of Deaths.	1942. Death-Rate.	1943. No. of Deaths.	1943. Death-Rate.	1944. No. of Deaths.	1944. Death-Rate.	1945. No. of Deaths.	1945. Death-Rate.
All Ages,	2,403	13.5	2,622	15.9	2,488	15.3	2,329	14.7	2,324	15.0	2,257	14.6	2,143	13.6
0—5,	250	16.3	288	18.9	335	28.5	257	21.3	248	17.8	226	16.3	186	13.1
5—10,	17	1.0	48	3.0	40	1.7	43	1.9	43	1.5	32	1.1	32	1.1
10—15,	20	1.4	14	1.0										
15—25,	68	2.2	70	3.2	79	3.3	62	2.8	44	2.4	58	3.1	60	3.2
25—35,	119	4.3	95	3.9	84	3.6	62	2.7	67	3.5	56	2.9	65	3.4
35—45,	110	4.9	115	5.1	122	5.1	107	4.6	110	5.0	95	4.3	79	3.5
45—55,	206	10.2	243	12.1	190	9.0	191	9.3	207	10.4	210	10.5	213	14.9
55—65,	387	22.8	393	23.2	339	18.7	354	20.1	349	20.0	351	20.7	328	18.5
65—75,	589	59.9	701	71.5										
75—85,	510	159.5	531	166.4	1,279	75.3	1,253	76.0	1,256	78.7	1,229	77.0	1,180	72.7
85 +,	127	339.6	124	331.5										

TABLE III.

Death-rate (from all causes) each month during the years 1939-1945.

Month	1939.	1940.	1941.	1942.	1943.	1944.	1945.
January, ...	16.8	19.1	19.1	19.2	15.7	18.3	19.5
February, ...	13.7	22.5	16.0	16.5	18.1	13.9	15.6
March, ...	12.8	16.6	21.8	17.8	14.3	14.5	14.1
April, ...	12.6	13.8	16.2	15.2	12.9	12.7	12.6
May, ...	15.6	14.1	17.4	14.0	12.4	15.0	12.4
June, ...	11.5	10.3	14.5	12.6	14.1	12.9	11.7
July, ...	10.6	13.3	13.5	17.7	12.3	12.7	11.5
August, ...	11.6	12.1	11.6	13.0	11.3	12.3	9.5
September, ...	11.8	10.6	12.8	10.1	10.8	13.7	10.0
October, ...	15.1	12.1	13.1	12.7	12.9	13.4	10.5
November, ...	12.8	14.1	12.5	11.4	14.8	11.4	12.7
December, ...	16.4	15.9	13.2	15.7	20.7	14.8	17.3

TABLE IV.

Death-rate (from all causes) in various Wards each year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	13.5	11.8	15.9	14.3	13.9	14.6	10.6	14.1	13.5	12.9	13.2	13.9
1940,	15.9	12.2	13.2	15.8	14.8	18.0	11.2	18.7	16.1	14.7	14.9	15.4
1941,	15.3	12.9	14.2	15.5	16.8	23.4	11.1	16.7	14.5	14.8	18.6	12.4
1942,	14.7	12.0	12.0	15.7	17.1	20.4	9.8	18.6	12.1	15.9	17.9	12.6
1943,	15.0	13.1	13.3	16.0	18.8	21.6	11.9	17.3	11.7	15.0	15.2	13.0
1944,	14.6	11.5	12.2	14.8	18.1	21.9	11.3	19.8	12.9	13.3	15.7	11.6
1945,	13.6	10.0	12.0	14.0	17.1	20.5	8.4	19.0	11.4	12.6	17.2	11.6

TABLE V.

Birth-rate in Various Wards each Year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	15.8	15.2	13.3	16.7	21.1	16.9	13.2	19.0	14.0	14.6	18.3	15.5
1940,	16.6	15.4	12.8	21.9	20.4	20.6	11.8	14.5	13.9	14.8	12.1	17.9
1941,	17.5	16.1	13.4	19.7	24.2	24.8	14.3	18.7	13.7	14.2	14.5	18.5
1942,	17.5	16.7	16.2	21.6	22.3	22.6	13.6	19.7	14.1	14.6	16.1	16.2
1943,	16.3	15.0	12.1	21.2	23.1	21.6	10.9	19.2	11.8	15.0	14.3	15.5
1944,	18.0	19.4	18.7	23.8	27.1	29.3	14.8	24.7	15.4	18.9	18.6	17.2
1945,	16.1	16.2	12.9	20.2	21.8	24.9	10.1	19.3	11.3	14.1	14.6	13.5

TABLE VI.

Infantile Death-rate (per 1,000 births) in Various Wards each Year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	74	62	101	79	86	49	74	65	104	42	42	53
1940,	67	72	85	71	89	60	83	66	49	56	15	66
1941,	89	48	96	106	69	85	92	85	91	111	193	82
1942,	68	59	52	87	83	68	38	71	62	56	58	82
1943,	69	60	92	63	78	74	108	39	68	81	33	68
1944,	60	52	46	64	76	73	58	34	78	58	23	70
1945,	57	33	59	51	84	45	75	69	47	93	38	27

TABLE VII.

Death-Rate in Various Wards from Principal Epidemic Diseases each Year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	.32	.29	.25	.36	.57	.07	.29	.51	.52	.15	.37	.15
1940,	.98	.76	.36	.84	1.47	1.70	.93	.71	.84	1.17	.89	.89
1941,	.69	.83	.55	.78	1.05	.90	.38	.56	.62	.84	.60	.51
1942,	.33	.07	.56	.40	.45	.46	.52	.41	.29	.23	.41	.06
1943,	.61	.47	.29	.62	.46	1.26	.59	.42	.30	.95	.85	.53
1944,	.16	—	.1	.34	.20	.08	—	.25	.24	.18	.42	.06
1945	.05	—	—	.07	—	—	—	—	—	.16	.31	.06

TABLE VIII.

Pulmonary Tuberculosis Death-rate in Various Wards each Year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	.61	.53	.84	.36	.51	.82	.69	.36	.78	.72	.64	.51
1940,	.62	.50	.54	.45	1.22	.74	.43	.79	.67	.55	.30	.50
1941,	.65	.65	.27	.72	.99	.75	.50	.88	.62	.68	.30	.68
1942,	.77	.77	.47	.74	1.08	1.54	.58	.90	.47	.69	.93	.75
1943,	.61	.94	.39	.48	.73	.95	.53	.50	.66	.65	.42	.36
1944,	.73	.61	.58	.82	.72	1.42	.53	1.09	.78	.54	.32	65
1945,	.68	,33	.95	.47	,97	1.40	.13	.74	.65	.58	.63	.76

TABLE IX.

Tuberculosis (all forms) Death-rate in Various Wards each Year, 1939-1945.

Year	Whole City.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10 & 11.	12.
1939,	.74	.58	.84	.54	.68	.89	.80	.73	.94	.77	.64	.67
1940,	.84	.63	.63	.58	1.53	1.11	.87	1.18	.79	.78	.40	.61
1941,	.90	.83	.83	.98	1.43	1.05	.75	1.20	.91	1.01	.80	.78
1942,	1.02	.85	.47	1.07	1.40	2.08	.77	1.07	.64	.87	1.03	1.04
1943,	.79	1.48	.39	.55	1.11	1.18	.53	.59	.78	.89	.42	.53
1944,	.88	.87	.77	.96	.85	1.60	.72	1.09	1.02	.65	.42	.65
1945,	.86	.46	1.43	.68	1.48	1.63	.19	.83	.83	.70	.63	.76

TABLE X.

Deaths and Death-rates from various groups of causes each year since 1939 (all ages).

Disease Group	1939. Population 178,013. No. of Deaths.	Rate per 1,000 Pop.	1940. Population 165,074. No. of. Deaths.	Rate per 1,000 Pop.	1941. Population 163,000. No. of Deaths.	Rate per 1,000 Pop.	1942. Population 158,500. No. of Deaths.	Rate per 1,000 Pop.	1943. Population 154,703. No. of Deaths.	Rate per 1,000 Pop.	1944. Population 154,845. No. of Deaths.	Rate per 1,000 Pop.	1945. Population 156,999. No. of Deaths.	Rate per 1,000 Pop.
Congenital, ...	122	.69	95	.58	132	.81	107	.68	96	.62	101	.72	100	.64
Digestive, ...	116	.65	96	.58	126	.77	116	.73	92	.59	90	.58	104	.66
Respiratory, ...	221	1.24	337	2.04	269	1.65	199	1.26	216	1.39	222	1.43	158	1.01
Infective, ...	201	1.13	310	1.87	269	1.65	241	1.52	233	1.50	195	1.26	158	1.01
Circulatory, ...	722	4.05	791	4.79	726	4.45	668	4.22	675	4.36	703	4.54	653	4.16
Genito-urinary,	106	.59	123	.75	94	.58	102	.46	108	.70	92	.59	105	.67
Malignant, ...	320	1.80	297	1.79	300	1.84	322	2.03	367	2.37	337	2.18	341	2.17
Nervous, ...	286	1.60	279	1.69	283	1.74	301	1.90	286	1.85	282	1.82	280	1.78
Other Causes,	309	1.74	294	1.78	289	1.77	273	1.72	251	1.62	235	1.52	244	1.55
	2.403	13.50	2,622	15.87	2,488	15.26	2,329	14.70	2,324	15.00	2,257	14.64	2,143	13.65

TABLE XI.

Certified causes of death at various ages under 1 year during 1945.

Cause of Death.	WEEKS Under 1	1/2	2/3	3/4	Total	MONTHS Under 2	2/3	3/6	6/9	9/12	Total
Enteric Fever, ...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...
Measles, ...	...	...	...	...	...	...	...	1	2	...	3
Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough, ...	...	...	...	...	...	...	1	...	...	...	1
Diphtheria, ...	...	...	...	...	...	...	...	...	...	...	...
Infantile paralysis, ...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal meningitis, ...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis—											
Lung, ...	...	...	...	...	...	...	...	...	...	...	...
General, ...	...	...	...	...	...	...	...	...	...	1	1
Abdominal, ...	...	...	...	...	...	...	...	...	...	...	...
Brain, ...	...	...	...	...	...	1	...	...	...	...	1
Other Forms, ...	...	...	...	...	...	...	...	...	...	...	...
Influenza, ...	...	...	...	...	...	...	...	...	...	...	...
Other Infectious Diseases, ...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms),	2	...	...	...	2	8	1	4	4	2	21
Bronchitis, ...	...	...	...	...	...	1	...	1	2	1	5
Laryngitis, ...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Respiratory System, ...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis,	1	2	...	...	3	2	1	4	1	1	12
Other Diseases of Digestive System, ...	1	...	1	1	3	...	...	...	2	2	7
Meningitis (not T.B.),	...	...	...	...	...	1	1	...	...	1	3
Convulsions, ...	...	1	...	...	1	...	...	...	...	...	1
Other Diseases of Nervous System, ...	1	...	...	...	1	...	...	...	...	...	1
Congenital Malformations,	12	1	...	1	14	3	2	...	...	2	21
Congenital Debility, Icterus, Sclerema, Marasmus, ...	1	...	...	4	5	1	3	...	...	...	9
Premature Birth, ...	34	5	2	1	42	1	...	...	...	...	43
Injury at Birth, ...	11	...	...	...	11	...	...	...	...	...	11
Other Diseases peculiar to Early Infancy,	8	2	...	...	10	1	1	...	...	...	12
Suffocation, Over-laying,	...	...	...	1	1	...	...	...	...	...	1
Rickets, ...	...	...	...	...	...	...	...	...	...	...	...
Syphilis, ...	1	...	...	...	1	...	...	...	...	...	1
Violence, ...	...	...	...	...	...	1	...	2	...	1	4
All other causes, ...	...	2	...	...	2	...	...	...	2	...	4
Total, ...	72	13	3	8	96	20	10	12	13	11	162

TABLE XII.

Infant Mortality Rates from various groups of causes each year 1939-1945.

Year.	Congenital.	Digestive.	Respiratory.	Infectious Disease.	All Other Causes.	Rate per 1,000.
1939,	43	10	11	2	8	74
1940,	32	4	17	5	9	67
1941,	45	8	21	8	7	89
1942,	36	8	12	5	7	68
1943,	31	7	16	5	10	69
1944,	33	5	14	1	7	60
1945,	26	7	10	1	13	57

TABLE XIII.

Infant Mortality Rates from all causes at various age periods 1939-1945.

		DEATH-RATES			
Year.	Births.	Under 1 Week.	Under 1 Month.	Under 3 Months.	Under 1 Year.
1939,	2,807	30	44	54	74
1940,	2,872	25	32	44	67
1941,	2,850	38	46	60	89
1942,	2,770	23	32	38	68
1943,	2,849	21	30	41	69
1944,	3,174	18	29	35	60
1945,	2,832	25	34	37	57

TABLE XIV.

Number of Illegitimate Births, Number of Deaths (under 1 year) of Illegitimate Infants, and Death-rate per 1,000 Illegitimate Births since 1939.

Year.		Illegitimate Births.	Deaths of Illeg. Infants.	Rate per 1,000 Illeg. Births.
1939,	......	170	23	135
1940,	......	160	25	156
1941,	......	209	28	134
1942,	......	224	21	94
1943,	......	241	30	124
1944,	......	294	24	82
1945,	......	282	28	99

TABLE XV.

Table showing Number of Still-Births and rate per 1,000 Births, 1939-45.

Year.	No. of. Still-Births.	Total of Live Births and Still-Births.	Rate per 1,000 total Births (Live & Still).
1938, ...		Not Applicable.	
1939, ...	125	2,931	42.65
1940, ...	158	3,030	52.15
1941, ...	128	2,978	42.98
1942, ...	132	2,902	45,49
1943, ...	110	3,022	36.40
1944, ...	146	3,390	43.07
1945, ...	90	2,922	30,80

TABLE XVI.

MATERNAL MORTALITY

Certified causes of deaths of women from diseases and accidents connected with pregnancy and child-birth since 1939.

	1939	1940	1941	1942	1943	1944	1945
Accidents of Pregnancy, ...	8	5	5	3	7	3	0
Puerperal Hæmorrhage, ...	2	0	4	0	0	3	4
Puerperal Septicæmia, including Post-abortive Sepsis,	0	1	2	3	3	3	3
Toxæmia of Pregnancy, albuminuria, convulsions,	3	4	2	3	2	2	2
Other Puerperal diseases, ...	0	0	0	1	0	0	1
	13	10	13	10	12	11	10

TABLE XVII.

Maternal Mortality Rates — Number of Deaths per 1,000 Registered Births, 1939-1945.

1939.	1940.	1941.	1942.	1943.	1944.	1945.
4.60	3.48	4.56	3.61	3.51	3.47	3.5

TABLE XVII.

Annual death-rates per 100,000 population from certain of the Infectious Diseases, each year, 1939-1945.

Year.	Smallpox. No. of Deaths.	Smallpox. Death-rate per 100,000.	Scarlet Fever. No. of Deaths.	Scarlet Fever. Death-rate per 100,000.	Enteric Fever. No. of Deaths.	Enteric Fever. Death-rate per 100,000.	Diphtheria. No. of Deaths.	Diphtheria. Death-rate per 100,000.	Measles. No. of Deaths.	Measles. Death-rate per 100,000.	Whooping Cough. No. of Deaths.	Whooping Cough. Death-rate per 100,000.
1939, ...	0	—	1	.6	0	—	11	6.2	0	—	8	4.5
1940, ...	0	—	2	1.2	0	—	69	41.8	10	6.1	9	5.4
1941, ...	0	—	1	.6	5	3.1	53	32.5	10	6.1	17	10.4
1942, ...	0	—	1	.6	1	.6	28	17.7	6	3.8	5	3.2
1943, ...	0	—	0	—	0	—	17	11.0	4	2.6	14	9.0
1944, ...	0	—	0	—	0	—	6	3.9	10	6.5	0	—
1945, ...	0	—	0	—	0	—	0	—	4	2.5	1	.64

TABLE XIX.

Case Mortality (per cent.) from certain Infectious Diseases each year since 1939.

Year.	Smallpox. Cases.	Smallpox. Deaths.	Smallpox. Case Mortality.	Scarlet Fever. Cases.	Scarlet Fever. Deaths.	Scarlet Fever. Case Mortality.	Enteric Fever. Cases.	Enteric Fever. Deaths.	Enteric Fever. Case Mortality.	Diphtheria. Cases.	Diphtheria. Deaths.	Diphtheria. Case Mortality.	Measles. Cases.	Measles. Deaths.	Measles. Case Mortality.	Whooping Cough. Cases.	Whooping Cough. Deaths.	Whooping Cough. Case Mortality.
1939, ...	0	0	—	221	1	.4	1	0	—	507	11	2.1	2,400	0	—	471	8	1.7
1940, ...	0	0	—	172	2	1.1	13	0	—	1,353	69	5.1	1,255	10	.8	607	9	1.5
1941, ...	0	0	—	428	1	.2	367	5	1.4	1,228	53	4.3	789	10	1.3	728	17	2.3
1942, ...	0	0	—	720	1	.1	3	1	33.3	903	28	3.1	1,241	6	.5	236	5	2.1
1943, ...	0	0	—	429	0	—	8	0	—	512	17	3.3	669	4	.6	518	14	2.7
1944, ...	0	0	—	223	0	—	0	0	—	415	6	1.4	1,188	10	.84	352	0	—
1945, ...	0	0	—	224	0	—	0	0	—	342	0	—	306	4	1.31	164	1	.61

TABLE XX.

Death-rates per 100,000 each year since 1939, from the Respiratory Diseases (including Bronchitis, Pneumonia (all forms), Pleurisy, Asthma, Laryngitis, etc.).

Year.	Total Deaths.	Death-rate per 100,000.
1939,	221	124.1
1940,	337	204.1
1941,	269	165.0
1942,	199	125.6
1943,	216	139.6
1944,	222	143.4
1945,	158	100.6

TABLE XXI.

Deaths in which Influenza was given as a cause of death each month, January, 1939, to December, 1945.

Months.	1939.	1940.	1941.	1942.	1943.	1944.	1945.
January,	4	7	0	3	2	2	0
February,	10	29	4	1	5	0	2
March,	3	10	9	1	2	1	0
April,	1	3	2	0	3	0	0
May,	0	1	0	0	2	1	1
June,	0	0	1	0	2	0	0
July,	0	0	0	0	1	0	0
August,	0	0	0	0	0	0	0
September,	1	0	0	0	1	0	0
October,	1	1	1	0	0	0	0
November,	0	1	0	0	9	0	0
December,	2	2	0	1	26	2	0
	22	54	17	6	53	6	3

TABLE XXII.

Deaths in which Influenza appeared as a cause in death certificate, 1939-1945, classified in age periods.

Age Periods.	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Under 1 year, ...	1	2	5	1	1	0	0
1— 5 years, ...	0	0	1	1	0	0	0
5—15 years, ...	0	2	0	0	1	0	0
15—25 years, ...	0	5	1	0	1	0	0
25—45 years, ...	3	3	3	0	6	0	0
45—65 years, ...	6	19	3	2	15	2	0
65 and upwards, ...	12	23	4	2	29	4	3
	22	54	17	6	53	6	3

TABLE XXIII.

INFECTIOUS DISEASE.—Number of Cases of each disease notified and reported in Dundee during the year, 1945. Also number removed and number not removed to Hospital.

DISEASE	At Ages — Years. All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and upwards.	Cases removed to Hospital.	Cases not removed to Hospital.
Cerebro-spinal Fever,	22	4	8	2	3	2	2	—	22	—
Chickenpox*,	446	32	72	334	7	—	1	—	69	377
Diphtheria,	342	15	79	125	69	45	9	—	342	—
Dysentery,	197	15	82	47	9	19	16	9	182	15
Erysipelas,	125	1	—	4	12	39	46	23	58	67
Malaria,	1	—	—	—	—	1	—	—	1	—
Measles (Morbelli),*	313	32	112	175	3	1	—	—	71	242
Measles (Rubella)*,	161	6	26	124	3	2	—	—	7	154
Ophthalmia Neonatorum,	42	42	—	—	—	—	—	—	6	36
Pneumonia, Acute Influenzal,	8	2	—	—	2	3	1	—	—	8
Pneumonia, Acute Primary,	262	26	58	57	23	35	43	20	68	194
Poliomyelitis, acute,	2	—	1	—	1	—	—	—	2	—
Puerperal Fever,	9	—	—	—	1	8	—	—	9	—
Puerperal Pyrexia,	52	—	—	—	21	31	—	—	48	4
Scarlet Fever,	220	3	65	133	13	5	—	1	171	49
Tuberculosis, Pulmonary,	268	—	6	29	107	94	26	6	162	106
Tuberculosis, Non-pulmonary,	79	2	12	29	17	16	3	—	49	30
Typhoid Fever,	1	—	—	—	—	—	1	—	1	—
Paratyphoid A,	1	—	—	—	1	—	—	—	1	—
Paratyphoid B,	5	—	—	—	1	2	2	—	5	—
Whooping Cough,*	178	23	42	103	10	—	—	—	17	161
Mumps,	595	4	65	514	12	—	—	—	13	582
Enteritis,	33	15	18	—	—	—	—	—	29	4
Gastro-enteritis,	31	20	11	—	—	—	—	—	17	14
	3,393	242	647	1,677	315	303	150	59	1,350	2,043

*Not notifiable in Dundee during 1945.

Tuberculosis—Cases Notified in a previous year and removed to Hospital for first time during 1945.

Pulmonary, 23; Non-pulmonary, 5 — Total, 28.

TABLE XXIV.

Monthly Notifications and Intimations of Infectious Disease, Dundee, 1945.

DISEASE.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Cerebro-spinal Fever,	3	—	5	2	3	4	2	1	1	2	—	—	23
Chickenpox,*	35	50	77	28	13	12	9	9	33	37	70	84	457
Continued Fever (undulant),	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria,	27	20	33	18	25	21	32	32	43	34	34	23	342
Dysentery,	9	12	41	36	35	6	14	9	12	5	7	8	194
Erysipelas,	14	15	6	6	11	12	11	8	9	10	7	22	131
Malaria,	—	1	—	—	—	1	—	—	—	—	—	—	2
Measles (Morbelli),*	148	20	27	30	36	20	4	3	7	7	3	1	306
Measles (Rubella),*	7	9	11	29	29	44	—	2	3	3	1	6	144
Ophthalmia Neonatorum,	—	2	2	1	1	1	1	3	6	7	8	11	43
Pneumonia, acute Influenzal,	—	1	2	—	1	—	1	—	—	—	1	2	8
Pneumonia, acute Primary,	54	35	22	18	20	13	14	12	26	17	16	21	268
Poliomyelitis, acute,	—	—	—	—	—	—	—	1	—	—	—	1	2
Puerperal Fever,	—	2	1	1	—	1	—	1	1	1	—	—	8
Puerperal Pyrexia,	8	2	7	5	5	4	—	4	2	3	7	6	53
Scarlet Fever,	17	16	15	10	21	8	12	10	21	39	31	24	224
Tuberculosis, Pulmonary,	18	35	33	23	18	14	12	17	36	30	15	14	265
Tuberculosis, Non-pulmonary	7	9	11	10	4	7	1	7	9	7	4	3	79
Paratyphoid B,	—	—	—	—	—	1	—	2	—	2	1	—	6
Whooping Cough,*	19	6	9	6	5	17	9	19	6	15	23	30	164
Typhoid Fever,	—	—	1	—	—	—	—	—	—	—	—	2	3
Gastro-enteritis,	4	—	2	3	6	3	2	2	4	4	1	2	33
Enteritis,	4	4	4	3	2	2	3	2	7	1	1	3	36
Mumps,	164	124	140	72	56	26	3	5	4	5	4	4	609
	538	363	494	301	291	217	130	151	230	229	234	267	3,400

*Not notifiable during 1945.

TABLE XXV.

TUBERCULOSIS—Notifications and Deaths, with corresponding rates per 1,000 population at various age periods each year since 1939.

PULMONARY TUBERCULOSIS

Year.		0—5 No.	0—5 Per 1,000.	5—15 No.	5—15 Per 1,000.	15—25 No.	15—25 Per 1,000.	25—45 No.	25—45 Per 1,000.	45—65 No.	45—65 Per 1,000.	65 & over. No.	65 & over. Per 1,000.
1939	Notifications,	2	.13	36	1.17	49	1.56	69	1.38	30	.81	3	.22
	Deaths, ..	1	.07	2	.07	23	.73	50	1.0	31	.83	2	.15
1940	Notifications,	2	1,30	19	6.20	65	3.00	84	1.80	25	.67	6	.45
	Deaths, ..	0	.0	2	.06	21	.96	41	.98	21	.57	12	.90
1941	Notifications,	5	.40	20	.86	67	2.81	95	2.01	44	1,12	7	.41
	Deaths, ..	1	.08	2	.09	25	1.05	47	.99	28	.71	3	.18
1942	Notifications,	11	.91	22	.98	69	3.06	82	1.76	44	1.15	8	.49
	Deaths, ..	1	.08	1	.04	33	1.46	41	.88	36	.94	10	.61
1943	Notifications,	3	.21	22	.79	69	3.74	86	2.10	43	1.15	4	.25
	Deaths, ..	2	.14	0	.0	21	1.14	33	.81	38	1.02	1	.06
1944	Notifications,	6	.43	25	.89	93	5.03	78	1.91	37	.99	9	.56
	Deaths, ..	1	1.07	1	.04	24	1.30	43	1.05	38	1.02	6	.37
1945	Notifications,	6		29		103		101		80		5	
	Deaths, ..	2		3		27		45		23		6	

NON-PULMONARY TUBERCULOSIS.

Year.		0—5 No.	0—5 Per 1,000.	5—15 No.	5—15 Per 1,000.	15—25 No.	15—25 Per 1,000.	25—45 No.	25—45 Per 1,000.	45—65 No.	45—65 Per 1,000	65 & over. No.	65 & over. Per 1,000
1939	Notifications,	14	.91	22	.71	22	.70	11	.22	6	.15	1	.07
	Deaths, ..	3	.20	4	.13	7	.22	3	.06	3	.05	2	.15
1940	Notifications,	15	.98	27	.88	22	1.01	16	.34	1	.03	2	.15
	Deaths, ..	10	.65	5	.16	11	.50	6	.12	2	.05	2	.15
1941	Notifications,	28	2.25	31	1.34	22	.92	9	.19	8	.20	2	.12
	Deaths, ..	11	.88	5	.22	11	.46	9	.19	3	.08	1	.06
1942	Notifications,	42	3.48	69	3.06	26	1.15	23	.49	10	.26	1	.06
	Deaths, ..	17	1.41	9	.40	4	.18	6	.13	4	.10	0	.0
1943	Notifications,	21	1.50	40	1.43	15	.81	8	.20	3	.08	2	.12
	Deaths, ..	11	.79	8	.29	3	.16	2	.05	2	.05	1	.06
1944	Notifications,	14	1.00	24	.85	12	.65	5	.12	1	.03	1	.06
	Deaths, ..	3	.21	6	.21	6	.33	3	.07	4	.12	1	.06
1945	Notifications,	12		29		18		12		3		0	
	Deaths, ..	11		7		7		2		2		0	

TABLE XXVI.

TUBERCULOSIS.—Notifications and Deaths, with corresponding rates per 1,000 population for each year since 1939.

Year.	Estimated Population.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Tuberculosis (all forms).		Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Tuberculosis (all forms).	
		No.	per 1,000.	No.	per 1,000.	No.	per 1,000.	No.	per 1,000.	No.	per 1,000.	No.	per 1,000.
1939, ...	178,013	189	1.07	76	.43	265	1.50	109	.61	22	.13	131	.74
1940, ...	165,074	201	1,21	83	.50	284	1.71	103	.62	38	.23	141	.85
1941, ...	163,000	238	1.46	100	.61	338	2.07	106	.65	40	.25	146	.90
1942, ...	158,500	236	1.49	171	1.08	307	2.57	122	.77	40	.25	162	1.02
1943, ...	154,703	227	1.47	89	.57	316	2.04	95	.61	27	.18	122	.79
1944, ...	154,845	248	1.61	57	.37	305	1.97	113	.73	23	.15	136	.88
1945, ...	156,999	274	1.75	77	.50	351	2.24	106	.68	29	.18	135	.86

TABLE XXVII.

PULMONARY TUBERCULOSIS.—Notifications and Deaths with corresponding rates per 1,000 population for each sex each year since 1939.

	NOTIFICATIONS.				DEATHS.			
	Males.		Females.		Males.		Females.	
Year.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.
1939,	95	1.19	94	.96	55	.69	54	.55
1940,	92	1.35	109	1.02	51	.75	51	.53
1941,	126	1.72	112	1.25	53	.72	53	.59
1942,	119	1.43	117	1.14	62	.74	60	.59
1943,	124	1.79	103	1.21	49	.71	46	.54
1944,	112	1.61	136	1.57	54	.82	59	.69
1945,	153	2.17	121	1.40	57	.81	49	.57

TABLE XXVIII.

Pulmonary Tuberculosis—Deaths in Institutions each year since 1939.

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Total Deaths from Pulmonary Tuberculosis, ...	109	103	106	122	95	113	106
No. of Deaths from Pulmonary T.B. in Institutions,	70	61	62	87	54	79	52
Percentage of Total Deaths from Pul. T.B. dying in Institutions, ...	64.2	59.8	58.5	71.3	56.8	69.9	49.1

TABLE XXIX.

MALIGNANT DISEASES

Number of Deaths and Death-rates per 10,000 population each year since 1939.

Year	Males.	Females.	Total.	Rates.
1939, ...	139	181	320	17.98
1940, ...	135	162	297	17.99
1941, ...	122	178	300	18.40
1942, ...	141	181	322	20.32
1943, ...	162	205	367	23.72
1944, ...	159	178	337	21.76
1945, ...	159	182	341	21.72

TABLE

Age and Sex Distribution of Deaths from Malignant

Age Groups.		Buccal Cavity.								Pharynx, Oesophagus, Stomach, Liver and Annexa.						Peritoneum, Intestines and Rectum.						Female Genital Organs.					
		Fauces	Jaw	Larynx	Lip	Mouth	Nose	Tongue	Tonsil	Gall Bladder	Heart	Liver	Oesophagus	Pancreas	Stomach	Bowel	Caecum	Colon	Intestines	Peritoneum	Rectum	Cervix	Clitoris	Ovary	Uterus	Vulva	Breast
Under 20	M	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20-25	M	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
25-35	M	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
	F	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
35-45	M	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	...	...	1	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	1	1	...	1	...	...	1
45-55	M	...	...	...	...	...	...	...	...	...	1	1	3	2	7	...	1	6	...	...	1	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	2	1	...	3	3	...	9
55-65	M	...	...	1	...	2	...	2	...	...	1	1	3	1	11	...	2	4	...	...	1	...	...	...	...	...	...
	F	...	1	...	...	...	...	...	...	1	3	2	2	1	6	...	...	8	...	1	1	2	1	3	2	...	9
65-75	M	...	...	1	...	...	...	4	...	1	2	1	2	4	12	...	...	8	...	...	4	...	...	...	...	...	...
	F	...	...	...	...	...	...	...	1	...	...	1	3	7	18	2	2	4	...	...	2	...	...	1	...	...	5
75 and up	M	1	...	...	...	1	...	1	...	...	1	1	...	2	4	...	...	2	...	...	6	...	...	...	...	...	...
	F	...	...	1	1	...	...	...	...	2	1	1	1	3	10	...	1	6	2	...	1	...	...	...	3	1	6
TOTALS		1	1	3	1	3	1	7	4	9	2	8	14	20	78	2	6	39	2	1	20	4	1	8	8	1	31

XXX.

Diseases during 1945, showing parts of the body affected.

Skin.					Other or Unspecified Organs.																			TOTAL.	
Anus	Ear	Neck	Scalp	Skin	Bladder	Brain	Cervical Gland	Eyelid	Foot	Kidney	Lung	Papillary	Parotoid Tumour	Pelvis	Penis	Prostate	Renal	Ribs	Spine	Testicle	Thyroid	Urethra	Unknown		
							1			1													1	4	4
																								0	
																								0	1
																						1		1	
		1																						2	4
																								2	
											2										1			7	16
						1				1	1													9	
					1						9				1	1	1	1						36	61
											1	1												25	
											5			1										35	84
					1						3								1		1			49	
1	1				1				1		3		1			2				1	1		1	52	103
				1	1						1							1					1	51	
			1								1				1	1								23	68
	1				2			1													1			45	
1	2	1	1	1	6	1	1	1	1	2	26	1	1	1	2	4	1	2	1	1	4	1	3		341

TABLE XXXI.

Number of Births per 1,000 population, Illegitimate Births per 100 Registered Births, and Marriages per 1,000 population, each year since 1939.

Year.	Birth-rate.	Illegitimate-rate.	Marriage-rate.
1939, ...	15.8	6.1	10.3
1940, ...	16.6	5.7	12.7
1941, ...	16.3	7.3	9.5
1942, ...	15.9	8.1	9.2
1943, ...	16.3	8.5	8.2
1944, ...	18.0	9.3	8.1
1945, ...	16.1	10.0	10.7

TABLE XXXII.

VACCINATION, 1938-1944

Year.	Total Births (excluding Transcripts received)	Successfully Vaccinated. No.	Per Cent.	Insusceptible to Vaccination. No.	Per Cent.	Died before Vaccination. No.	Per Cent.	Conscientious Objectors. No.	Per Cent.	Postponements or Unaccounted for No.	Per Cent.
1938, ...	3,394	815	24.0	20	.6	181	5.3	2,337	68.9	41	1.2
1939, ...	3,042	788	25.9	21	.7	189	6.2	1,954	64.2	90	3.0
1940, ...	3,046	853	28.0	34	1.1	161	5.3	1,944	63.8	54	1.8
1941, ...	3,105	1,072	34.5	19	.6	227	7.3	1,705	54.9	82	2.6
1942, ...	3.104	1,393	44.9	24	.8	161	5.2	1,437	46.3	89	2.9
1943, ...	3,248	1,425	44.0	33	1.0	165	5.1	1,525	46.9	100	3.0
1944, ...	3.549	1,574	44.4	44	1.2	160	4.5	1,661	46.8	110	3.1

TABLES XXXIII.

PORT SANITARY ADMINISTRATION

Details of Vessels Entering the Port, 1941-1945.

	1941.	1942.	1943.	1944.	1945.
No. of Arrivals—					
Foreign,	33	13	27	43	75
Coastwise,	349	480	454	412	444
Total,	382	493	481	455	519
Tonnage—					
Foreign,	93,854	39,875	73,720	150,370	172,126
Coastwise,	118,917	174,462	177,864	202,976	188,905
Total,	212,771	214,337	251,584	353,346	361,031
No. Inspected by Port M.O.,	33	10	26	35	38
No. Inspected by San. Inspector,	161	101	155	228	240
No. of Orders Issued,	33	13	28	43	75

In Tables XXXIII. and XXXIV. are presented full particulars of the Port Sanitary work.

The total shipping entering the Port varied from 212,771 tons in 1941 to 361,031 in 1945, which is about one-third of the average pre-war total of just under a million tons.

Despite war-time staffiing difficulties all vessels arriving at Dundee from foreign ports included in the list of infected ports issued by the Ministry of Health, were inspected by the Port Medical Officer.

The numbers of deratisation certificates granted were two in 1941 and two in 1945.

The number of deratisation exemption certificates which were granted during 1941-1945 were respectively 14, 10, 13, 13, 13—Total, 63.

The execution of the Port Sanitary Regulations were greatly facilitated through the friendly co-operation of the Royal Navy and Army authorities, the Customs officials, the Tay Pilots and the Ships' Officers.

TABLE XXXIV.

PORT SANITATION — Details of Action Taken.

	1941.	1942.	1943.	1944.	1945.	Total.
Total No. of verbal intimations,	33	13	28	43	75	192
Total No. of rat notices issued,	—	—	—	—	—	—
No. of ships from infected Ports (direct),	16	8	21	21	22	88
No. of ships from infected Ports (indirect),	1	—	—	11	5	17
No. of ships from free Ports (direct),	16	4	6	10	36	72
No. of ships from free Ports (indirect),	—	1	—	1	2	4
Nuisances and defects attended to,	35	17	22	29	35	139
Miscellaneous work carried out while vessels were in port,	38	24	42	64	45	213
No. of vessels subjected to measures of rat destruction, ...	4	13	13	21	3	54
On Ships—						
No. of dead rats recovered,	209	105	97	81	42	534
No. of dead rats examined bacteriologically,	—	—	—	—	—	—
No. of rats infected with Plague,	—	—	—	—	—	—
No. of rats infected with Trichinæ,	—	—	—	—	—	—
On Shore—						
No. rats destroyed (other than ships),	370	304	432	438	240	1,784
No. of rats examined bacteriologically,	12	—	—	—	—	12
No. of rats found infected with Plague,	—	—	—	—	—	—
No. of rats found infected with Trichinæ,	—	—	—	—	—	—
No. of vessels fumigated by SO2,	—	—	—	—	—	—
No. of vessels fumigated by HCN,	2	—	1	—	2	5
No. of dead rats recovered, ...	194	—	50	—	36	280
No. of vessels in which poisoning, etc., was employed, ...	2	13	12	21	1	49
No. of dead rats recovered, ...	15	105	47	81	6	254
Deratisation Certificates Issued,	2	—	—	—	2	4
Deratisation Exemption Certificates issued,	14	10	13	13	13	63

KING'S CROSS HOSPITAL

Combined Report for the years 1941-1945 inclusive
By Dr CONSTANCE F. DRYSDALE
Senior Resident Medical Officer.

The following table gives the total number of notifications or intimations of all diseases admitted to this hospital during the years 1941-1945 inclusive.

	1941.	1942.	1943.	1944.	1945.
No. of cases in hospital on 1st Jan.,	240	203	99	80	117
No. of cases admitted, ...	2,509	2,448	1,401	1,302	1,133
No. of cases discharged, ...	2,444	2,495	1,371	1,226	1,149
No. of deaths, ...	103	57	49	39	19
Mortality rate (per cent.), ...	4.11	2.2	3.49	3.0	1.67
No. of cases in hospital on 31st Dec.,	203	99	80	117	82
Average duration of stay in hospital in days, ...	27.18	22.2	18.89	20.21	21.57
Average daily no. of patients, ...	186.84	154.92	72.6	71.89	66.96
Highest daily no. of patients, ...	281	205	116	122	121
Lowest daily no. of patients, ...	95	99	32	38	35
No. of patient days, ...	68,197	56,545	26,502	26,313	24,440

Diphtheria.

During the years 1941-1945 there has been a decline in the incidence and severity of this disease. This is demonstrated in the tables printed below.

Cases and Deaths.

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as diphtheria with or without intercurrent infection, ...	1,305	1,011	544	420	348
No. of confirmed cases of diphtheria not admitted as such, ...	2	7	—	—	—
Total no. of confirmed cases of diphtheria with or without intercurrent infection, ...	902	659	251	216	115
No of deaths in cases admitted as diphtheria, ...	65	34	21	9	—
No. of deaths in confirmed cases, ...	58	30	19	7	—
Case mortality (per cent.), ...	6.4	4.6	7.57	3.24	—
No. of non-confirmed cases admitted as diphtheria, ...	403	359	293	204	233

The amended diagnosis in the non-accepted cases was as follows:—

	1941.	1942.	1943.	1944.	1945.
Acute follicular tonsillitis, ...	256	225	152	115	174
Peritonsillar abscess, ...	7	4	5	2	1
Vincent's angina, ...	24	26	29	21	7
Vincent's angina and acute follicular tonsillitis, ...	—	—	—	—	1
Temporary diphtheria carrier, ...	20	43	46	11	4
Simple croup, ...	13	8	17	19	22
				1 died	
Respiratory conditions, ...	18	6	—	6	4
	5 died	2 died		1 died	
Other infectious diseases, ...	—	5	16	13	3
Miscellaneous conditions, ...	44	23	16	10	13
	2 died	1 died	1 died		
No disease, ...	21	19	12	7	4
Total, ...	403	359	293	204	233

Classification.

Throughout cases have been classified according to the recommendations in the L.C.C. Publication No. 3225. The classification and the corresponding dosage of diphtheria antitoxin is briefly as follows:—

Extent of Lesion.	Clinical Severity.	Dosage of antitoxin.
Anterior nasal	Mild	5,000—10,000 units i.m.
Faucial	Mild	10,000—15,000 units i.m.
Faucial	Moderate	15,000—30,000 units i.m.
Nasopharyngeal	Severe	50,000—80,000 units i.v.
Nasopharyngeal	Very severe	80,000—100,000 units or more i.v.
Laryngeal	Moderate	20,000 units i.m.
Laryngeal	Severe	40,000 units i.m. or i.v.

The classification of confirmed cases of diphtheria occurring during the five years under consideration is as follows:—

	1941.	1942.	1943.	1944.	1945.
Anterior nasal, ...	14	15	16	5	2
	1 died		2 died		
Faucial mild, ...	215	133	46	39	18
	1 died				
Faucial moderate, ...	415	335	116	126	87
	13 died	2 died			
Nasopharyngeal severe, ...	117	158	48	39	6
	13 died	24 died	5 died	6 died	
Nasopharyngeal very severe, ...	71	—	16	5	1
	22 died		8 died		
Tracheobronchial, ...	—	—	—	1*	—
				died	
Laryngeal, ...	63	13	9	1	1
	8 died	4 died	4 died		
Post-diphtheritic palatal paresis, ...	7	5	—	—	—
Post-diphtheritic myocarditis, ...	2	—	—	—	—
Total, ...	904	659	251	216	115

*Died shortly after admission from Perth County; accepted as a Perth County death.

Complications.

The following table gives details of the incidence of complications:—

	1941.	1942.	1943.	1944.	1945.
Palatal paresis, ...	61	40	17	13	3
	6.65%	6.07%	6.77%	6.02%	2.63%
Nasal speech, ...	—	1	1	5	1
	——	0.15%	0.4%	2.31%	0.87%
Pharyngeal paresis, ...	10	2	1	1	—
	1.11%	0.3%	0.4%	0.49%	
Various other pareses, ...	8	4	—	—	—
	0.87%	0.67%			
Strabismus, ...	14	8	2	1	—
	1.55%	1.23%	0.8%	0.49%	
Paresis of ciliary muscle of accommodation, ...	9	6	5	3	1
	0.99%	0.9%	2.0%	1.39%	0.87%
Ptosis of eyelid, ...	1	—	—	—	—
	0.11%				
Adenitis — various types, ...	—	—	1	12	5
			0.4%	5.56%	4.35%
Tonsillitis, ...	—	—	3	3	5
			1.2%	1.39%	4.35%
Acute otitis media and otorrhœa, ...	—	—	—	11	9
				5.09%	7.83%
Cardiac lesions (myocarditis and extra-systolic irregularity, ...	118	63	22	13	3
	13.08%	9.7%	8.77%	6.02%	2.63%
Peripheral neuritis, ...	1	3	5	2	1
	0.11%	0.47%	2.0%	0.92%	0.87%
Respiratory conditions, ...	—	1	—	1	1
		0.15%		0.49%	0.87%
Toxic nephritis or albuminuria, ...	2	1	2	—	—
	0.22%	0.15%	0.8%		
Relapse attack, ...	1	1	—	—	—
	0.11%	0.15%			
Tracheotomy, ...	1	4	3	2	—
	0.11%	0.67%	1.2%	0.92%	

Diphtheria in the Immunised.

In recent years records have been kept of (a) the incidence of diphtheria in immunised children and (b) the clinical course of the disease.

The following table shows the number of cases of diphtheria in immunised children classified according to age group.

	1941.	1942.	1943.	1944.	1945.
0-4 years, ...	11	40	21	12	15
5-15 years, ...	68	137	63	75	40
Over 15 years, ...	—	4	7	8	5
Total, ...	79	181	91	91	60

The single death recorded (1942) over the five year period occurred in a child suffering from laryngeal diphtheria. The incidence of laryngeal diphtheria has fallen considerably during the past five years. This is probably a direct result of the immunisation campaign. Attention must be drawn to this extremely low death-rate as compared to the case mortality of the disease as a whole.

Mention has already been made of the decline in severity of the disease during the five years under consideration. This is clearly demonstrated in the table showing the incidence of complications. In comparing the years 1941 to 1945 there is a progressive decrease in the incidence of most complications. This decline is marked in the incidence of cardiac lesions — toxic myocarditis and extra-cystolic irregularity. In this instance there is a steady decrease from 13.08 per cent. in 1941 to 2.63 per cent. in 1945.

This appears to indicate that the severity and virulence of the disease have declined during the past five years. A possible explanation of this decline in clinical severity may be the interaction of the following three factors:—(1) A natural defervescence of the disease during the non-epidemic years 1943-45 following the epidemic of 1940-1942; (2) During the epidemic the causal organism in approximately 95 per cent. of cases was B. Diphtheriæ Gravis type 1, a strain characterised by its virulent and invasive properties. This organism was responsible for the high mortality rate recorded during the epidemic. In 1945 there has been a reversion to the less virulent intermediate strain of the bacillus. It is important to record that during 1945 no deaths from diphtheria occurred in the hospital. (3) The introduction of active immunisation against diphtheria has probably an important bearing on the decline in incidence and severity of the disease. It is recommended that all children should be actively immunised against diphtheria.

One feature which emerges from this review is the change in the age groups affected. It is now a disease not only of childhood but also of adults. This is probably due to the large number of children under 15 years now protected against diphtheria.

A notable feature worthy of record is the co-operation of general practitioners in the early diagnosis of diphtheria, and the prompt admission to hospital of all cases in which diphtheria is suspected. The tendency is now to admit cases for observation and diagnostic swabbing. This is of importance in the treatment of the disease.

Treatment.

Early and adequate dosage with diphtheria antitoxin is still the most reliable form of treatment. The serum is usually given intramuscularly, but in cases of severe or very severe infections the intravenous route is used. A short course of a suitable sulphonamide —sulphanilamide or sulphadiazine—is usually given to control any mixed infection. The value of penicillin in the treatment of diphtheria is doubtful. It has been used in one or two cases, but the results have been inconclusive.

Scarlet Fever.

Scarlet fever during the years under consideration shows a fair degree of uniformity apart from a peak in 1942. The numbers of cases and deaths are tabulated according to years.

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as scarlet fever with or without intercurrent infection,	291	465	280	159	169
No. of confirmed cases of scarlet fever not admitted as such,	4	1	5	—	—
Total no. of confirmed cases of scarlet fever with or without intercurrent infection,	221	390	200	103	144
No. of deaths in cases admitted as scarlet fever,	2*	1*	—	—	*1
Case mortality,	—	—	—	.096%	—

*Death not due to scarlet fever or its complications.

	1941.	1942.	1943.	1944.	1945.
Total no. of non-accepted cases, ...	74	76	85	56	25

The amended diagnoses in the non-accepted cases were as follows:—

	1941.	1942.	1943.	1944.	1945.
Tonsillitis,	24	20	17	17	12
Toxic or allergic rash,	19	15	22	9	4
Other infective conditions,	6	10	22	14	7
Pulmonary conditions,	5	—	4	1	—
Miscellaneous conditions,	12	13	4	12	2
No disease,	8	18	16	3	—
Total,	74	76	85	56	25

The outstanding feature of the disease during 1941-1944 has been its relatively mild character. This is demonstrated by the very low case mortality. Of the four deaths recorded, only one could be attributed to scarlet fever and that occurred in a diabetic. The other three deaths were due to causes not attributable to scarlet fever.

Towards the end of 1944 and during 1945 cases have again shown the classical signs and symptoms of the disease—the typical lesions of the throat, tongue and skin.

A study of the complications occurring during the past five year is tabulated below:—

	1941. No. of Cases & %	1942. No. of Cases & %	1943. No. of Cases & %	1944. No. of Cases & %	1945. No. of Cases & %
Rhinitis, ...	31	82	62	17	8
	13.78%	21.0%	30.24%	16.55%	5.56%
Adenitis, ...	13	21	26	15	64
	5.78%	5.6%	14.68%	14.56%	44.44%
Otitis media and Otorrhœa, ...	16	22	14	2	5
	7.11%	5.4%	6.83%	1.94%	4.17%
Mastoiditis, ...	—	*3	1	—	1
		0.77%	0.49%		0.69%
Myocarditis, ...	7	6	2	1	—
	3.11%	1.54%	0.98%	0.97%	
Albuminuria, ...	—	5	1	—	—
		1.28%	0.49%		
Nephritis, ...	—	1	1	2	1
		0.26%	0.49%	1.94%	0.69%
Arthritis, ...	1	3	—	—	1
	0.44%	0.77%			0.69%
Pansinusitis, ...	—	—	1	—	—
			0.49%		
Pulmonary complications, ...	4	4	—	1	1
	1.78%	1.02%		0.97%	0.69%
Relapse attack, ...	1	1	1	—	—
	0.44%	0.26%	0.49%		

*2 Required mastoidectomy

The above table shows a relatively low incidence of the more serious complications of scarlet fever. Nephritis occurred on an average of 0.67% and myocarditis on an average of 1.32% of cases during the five years. In 1943 the most common complication was rhinitis (30.24%), whereas in 1945 there was an increase in the incidence of cervical adenitis (44.44%), which was of a persistent type, necessitating a longer stay in hospital.

Chemotherapy is still the routine method of treatment. The drugs employed are sulphonilamide and sulphadiazine. Children tolerate the drugs and respond well to treatment. In cases where there is marked toxæmia, scarlet fever antitoxin is given by intra-muscular injection in addition to routine chemotherapy. In 1944, 18 cases (17.46%), in 1945, 20 cases (20.83%) received serum. The combined treatment appears to reduce the toxæmia and may lower the incidence of serious complications.

At the time of this report no cases have been treated with penicillin, as the comparatively mild nature of the disease has not merited its use. It is hoped that as the supply of penicillin increases it will be possible to treat a series of cases in this way.

Erysipelas.

The following tables gives details of cases admitted as Erysipelas during 1941-1945:—

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as erysipelas with or without intercurrent infection,	48	71	71	69	67
No. of confirmed cases of erysipelas with and without intercurrent infection,	43	66	61	67	59
No. of deaths,	1	1	—	1	1

The use of chemotherapy has greatly reduced the gravity of this condition. Towards the end of 1945 two cases were treated with penicillin with satisfactory results.

Puerperal and Post-Abortum Pyrexia.

Puerperal Pyrexia.	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as puerperal Pyrexia,	42	44	26	36	46
No. of cases in which post-partum infection was confirmed,	34	32	22	30	38
No. of deaths,	5	1	2	1	1
Case mortality,	12.5%	3.1%	8.7%	3.3%	2.6%
Types of infection:—					
Endometritis,	20 (1 died)	16	9	5	9
Endometritis with breast abscess,	—	—	—	2	—
Endometritis with P.A. of pregnancy,	—	—	—	1	—
Acute mastitis,	3	6	1	1	1
Mammary abscess,	2	—	5	12	7
Thrombophlebitis,	4 1 died	3 1 died	3	3	4
Pelvic cellulitis,	1	4	1	—	2
Pelvic peritonitis,	1 died	—	1 died	2	—
Retained Placenta,	—	—	—	—	3
Thrombophlebitis and mastitis,	—	2	—	—	—
Cystitis,	—	1	—	—	—
Pulmonary infarction,	—	—	—	—	1
Laceration to birth canal,	—	—	—	1	2
Septicæmia,	1 died	—	1 died	1	1 died
Puerperal Scarlet fever,	—	—	—	1	—
Phlebitis,	—	—	—	—	2
Pyelo-nephritis,	—	—	—	—	1
Pyelitis,	1	—	—	—	3
Puerperium after forceps delivery,	—	—	—	—	2
Miscellaneous,	1 died	—	1 died	1	—

Post-abortum Pyrexia.

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as post-abortum pyrexia,	8	15	17	13	12
No. of confirmed cases of post-abortum pyrexia not admitted as such, ...	—	—	—	—	1
No. of cases confirmed,	6	12	12	13	13
Deaths,	—	—	1	—	—
Case Mortality,	—	—	8.5%	—	—
Classification of cases according to final diagnosis:—					
Incomplete abortion,	—	—	4	—	—
Septic abortion,	6	12	10	11	12
Post-abortive peritonitis,	—	—	1 died	1	—
Post-abortive septicæmia,	—	—	1	—	—
Post-abortive hæmorrhage,	—	—	1	—	—
Endometritis and pelvic cellulitis, ...	—	—	—	1	—
Endometritis, pelvic cellulitis and pulmonary embolism,	—	—	—	—	1
Lobar pneumonia,	1	—	—	—	—
Pleurisy,	—	2	—	—	—
No disease,	1	1	—	—	—

In reviewing the incidence of puerperal and post-abortive pyrexia over the past five years, there is uniformity in the number of cases treated, and in the type of clinical infection. Viewing the same period with regard to treatment, the outlook is completely different, and it is encouraging to record the great advances made in the therapeutics of puerperal and post-abortive infection.

Uterine Infection.

In cases of uterine infection, emphasis has been laid on systemic treatment rather than local application. The treatment in use from 1941-45 has been adequate and intensive chemotherapy, the particular drugs being sulphanilamide and sulphadiazine. In most cases, a high concentration of the drug is required, and this is obtained rapidly by intramuscular injection of a suitable solution, followed by adequate dosage by mouth. Local application to the uterus—intrauterine glycerin—is very seldom required, and the trend is to leave the uterine cavity to drain naturally. The results of treatment by chemotherapy have been very satisfactory.

With the introduction of penicillin, a therapeutic agent of value is now available for the treatment of puerperal infection. During 1945 selected cases only were treated, as this drug was still in short

supply. Six patients were treated — three with puerperal infection and three septic abortions. In all the results were excellent, the patients making a complete recovery. As supplies become more plentiful it is hoped to treat more cases this way. From the few cases treated, however, one has the impression that early treatment with penicillin may control sepsis and so prevent the complications following uterine infection, viz., pelvic cellulitis and thrombophlebitis.

There are two methods of giving penicillin. (1) By continuous intramuscular drip, and (2) by three hourly intramuscular injections. Both methods have been used and both are satisfactory. The usual dosage is from 100,000 — 200,000 units daily, but the tendency now is to use higher dosage.

Septicæmia.

During the past five years, four cases of septicæmia have been admitted. Of these, three died. The fourth case made a complete recovery after treatment with penicillin—the first case to receive penicillin in this hospital.

This patient, a para. 2, aet. 31 years, was admitted in November, 1944, from another institution as a case of puerperal septicæmia. She had already had a full course of sulphonamide. On admission her condition was very poor and she showed clinically the characteristic signs of septicæmia. Blood culture was negative, but this was performed after she had had chemotherapy. She was put on a continuous intramuscular drip for ten days, having 100,000 units of penicillin daily. Her condition rapidly improved and she made a complete recovery without complications.

Breast Abscess.

The incidence of breast abscess appears to have increased slightly during 1944 and 1945. Treatment is still by incision and drainage, with a course of chemotherapy to prevent spread of the infection. Penicillin has not been used in the treatment of mammary abscess, but it is proposed to treat such cases when supplies are available.

Thrombophlebitis.

The incidence of this complication of pregnancy remains fairly uniform. Treatment is still adequate chemotherapy and complete rest with local applications of heat. Penicillin may prove valuable in the treatment of this condition.

MENINGITIS

The following table shows the numbers and classification of all types of meningitis admitted during the years 1941-1945:—

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as meningitis or C.S. fever with or without intercurrent infection, ...	54	39	17	20	22
No. of confirmed cases of meningitis not admitted as such, ...	2	—	5	—	2
Total no. of confirmed cases of meningitis (all types) with or without intercurrent infection, ...	43	32	20	12	16
No. of confirmed cases of meningitis classified according to type:—					
1. Meningococcal, ...	40	30	12	9	9
Deaths, ...	9	4	3	3	—
Case Mortality, ...	22.5%	13.3%	25%	33.3%	—
2. Pneumococcal, ...	1 died	1	2 died	—	1
3. Hæmophilus influenzæ, ...	1 died	—	1 died	—	1
4. H. Influenzæ and meningococcal,	—	—	—	—	1
5. Streptococcal, ...	—	—	—	—	1 died
6. Staphylococcal, ...	—	—	1 died	—	1 died
7. Tuberculous, ...	1 Transf.	—	4 died	1 died	1 died
8. Lymphocytic, ...	—	—	—	2 1 died	1
9. Lymphochoriomeningitis, ...	—	1	—	—	—
	1941.	1942.	1943.	1944.	1945.
Total no. of non-accepted cases, ...	13	7	2	8	8
Deaths, ...	—	—	1	2	—

The amended diagnoses in the non-accepted cases were as follows:—

	1941.	1942.	1943.	1944.	1945.
Meningismus, ...	1	3	—	2	1
Acute primary pneumonia, ...	4	2	1 died	3	1
Other infectious diseases, e.g., measles, bac. dysentery, etc., ...	1	1	1	—	1
Acute follicular tonsillitis, ...	1	—	—	—	1
Cerebral hæmorrhage or embolism, ...	1	—	—	—	1
Subarachnoid hæmorrhage, ...	—	—	—	—	1
? Cerebral abscess or tumour, ...	1	—	—	—	1
Concussion, ...	1	—	—	—	—
Hysteria, ...	1	—	—	—	—
Paratyphoid b. fever, ...	1	—	—	—	—
Acute hæmorrhagic measles, ...	—	—	—	1died	—
Acute polio-encephalo-myelitis, ...	—	—	—	1died	—
Miscellaneous, ...	1	1	—	1	1
Total, ...	13	7	2	8	8

Meningococcal Meningitis.

During 1941 and 1942 there was a rise in the incidence of meningococcal meningitis as compared with the later three years.

During the period under consideration chemotherapy has been extensively used in the treatment of this disease, sulphapyridine being used with success during the small epidemic of 1941 and 1942. As the various new chemotherapeutic agents appeared, sulphapyridine has been superseded by sulphathiazole, sulphamezathine and sulphadiazine, and it is only now used in cases which are found not to respond to the later drugs. The newer drugs are equally effective in controlling the infection, but are less toxic. The two drugs most commonly used are sulphadiazine and sulphamezathine.

Chemotherapy.

During the 1941-42 epidemic the opportunity was taken to assess treatment with chemotherapy as compared with anti-meningococcal serum. The results with chemotherapy have been very satisfactory and much superior to serum. The case mortality rate has been reduced and the number of patients developing serious complications and sequelæ has been almost negligible. Mention must also be made of the ready management of cases treated with the sulphonamides as compared with serum. In the former treatment the drug can usually be given by mouth, unless under special circumstances when intravenous or intramuscular administration is called for, and only one diagnostic lumbar puncture is necessary.

Penicillin.

With the introduction of penicillin a new form of treatment has been developed. During 1945, three cases have been treated with a combination of sulphamezathine by mouth and penicillin intrathecally. The routine course of sulphamezathine is given and, in addition, a daily intrathecal injection of 15,000—25,000 units of penicillin is administered after lumbar puncture. The penicillin used for intrathecal injection is specially filtered in order to obtain a pure solution, and we are indebted to Professor Tulloch and the staff of the Bacteriology Department for preparing this product.

In certain cases and specially if a meningococcal septicæmia is suspected, pencillin is administered systemically in addition to the intrathecal route.

The results in the three cases have been satisfactory, but probably no better than those obtained by early and intensive treatment with a suitable sulphonamide. The main value of penicillin in the treatment of meningococcal meningitis is that it gives an additional method of treating the disease, and this is valuable, particularly in very young infants and children or where chemotherapy is contraindicated.

Meantime, cases are receiving sulphadiazine or sulphathianzole by mouth and/or intramuscularly and penicillin intrathecally and intramuscularly.

Pneumococcal Meningitis.

During the past five years five cases have been treated. Three cases died, while two recovered; one by chemotherapy alone—sulphapyridine; and the other with sulphathiazole orally and daily intrathecal injections of penicillin. There is reason to believe that with the introduction of penicillin a further advance has been made in the treatment of this disease.

Hæmophilus Influenzæ Meningitis.

Four cases have been treated during 1941-1945, including one case of double infection with meningococcus type 1 and H. Influenzæ. Two of the four cases died and two recovered, including the case of double infection.

The two recoveries were the subject of very complete investigation. Both children were infected with H. Influenzæ Pittman type b., which proved to be penicillin-sensitive. In the child with the double infection, treatment with sulphamezathine orally and penicillin by intramuscular and intrathecal routes was commenced. A total of 250,000 units intrathecally and 1,200,000 units intramuscularly of penicillin was administered. The second case was more interesting in that the organism was sensitive to penicillin but insensitive to sulphonamide. In this case the child received 1,005,000 units intrathecally and 10,237,500 units intramuscularly of penicillin. Both children made complete recoveries. The two cases have been published in detail in the British Medical Journal (Dec. 8, 1945, vol. ii., p. 796; August 17, 1946, p. 223). It is interesting to note that of four cases only the two treated with penicillin recovered.

Streptococcal and Staphylococcal Meningitis.

The single case of streptococcal meningitis was one due to streptococcus viridans, which was insensitive to penicillin. This case—an infant of six weeks—died a few hours after admission to hospital. Of the two cases of staphyloccal meningitis, only one received penicillin. A single intrathecal dose was administered, but this had no effect on the clinical course of the disease. Both cases were fatal.

Tuberculous Meningitis.

The incidence of tuberculous meningitis appears to be greater after a child has had an acute infectious disease, particularly measles and whooping cough. This has been demonstrated in some of the cases under treatment. It is probable that such children have been infected previously with tuberculosis, and that this has been activated by the acute infection. Routine tests are now performed on all children admitted to this hospital, and the results have fully justified this work. It is also suggested that young children, particularly those under three years with positive tuberculin reactions, should be protected as far as possible from measles and whooping cough.

From the above outline of treatment of meningitis one concludes that the introduction of penicillin represents a definite advance in the therapeutics.

The following is a summary of the general principles of treatment adopted at the hospital. Lumbar puncture is performed on admission for diagnosis, and if the cerebro-spinal fluid is turbid, 25,000 units of penicillin are introduced intrathecally. If the fluid is purulent, sulphadiazine in addition is given by mouth in full dosage. Usually penicillin is given systemically 200,000—400,000 units daily, until a full bacteriological report is issued. If an organism has been isolated from the fluid, its penicillin sensitivity is ascertained, and in special cases its degree of sensitivity. The latter is useful in regulating the subsequent dosage of penicillin. If the fluid is slightly turbid and contains lymphocytes, the same procedure is followed until a final diagnosis is established. It is of the utmost importance to continue intensive treatment in a lymphocytic meningitis as, should the case turn out to be one of H. Influenzæ or early pneumococcal meningitis, early intensive and energetic treatment is

necessary to overcome the infection. In special cases it is of advantage to test the potency of all the commonly used sulphonamides against the infecting organism.

ANTERIOR POLIOMYELITIS

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as anterior poliomyelitis, ...	1	—	—	2	2
No. of confirmed cases of anterior poliomyelitis not admitted as such,	—	1	—	1*	—
The amended diagnoses in the non-confirmed cases were as follows:—					
Ac. pulmonary tuberculosis, ...	—	—	—	—	1 died
Hæmophilus Influenzæ meningitis, ...	—	—	—	—	1
Diphtheria and anterior poliomyelitis,	—	1 died	—	—	—
Total no. of confirmed cases of anterior poliomyelitis, ...	1	1 died	—	3 1 died	—

*This case, No. 866/34 was very interesting. A serviceman, aged 19 years, was admitted at 10 p.m. on 28.9.44, having reported to his medical officer the same evening with headache, stiffness of neck, and weakness of the legs. He was notified as cerebro-spinal meningitis. Lumbar puncture on admission produced a fluid under normal pressure containing 70 lymphocytes per c.mm. Sugar was present. The temperature, pulse and respirations were respectively 99.4° F., 120 per minute and 24 per minute. Next morning he felt a little better but his respirations had increased to over 30 per minute and he was slightly cyanosed. By noon he complained of pain and numbness in one leg, and later loss of power in that limb. By 4 p.m. he had pain and numbness followed by rapid loss of power in the other limb. Paresis rapidly ascended, and by 10 p.m. he had lost the power of both legs and arms and the abdominal reflexes had also gone. His respirations had increased to over 40, and he was very distressed using the accessory muscles of respiration. A diagnosis of acute anterior polio-encephalo-myelitis was made. Next day there was paresis of the diaphragm and intercostals, and he was placed in the Drinker respirator and required artificial respiration continuously day and night for several weeks. During the first week he was critically ill and the prognosis was considered almost hopeless. Gradually power returned to the affected muscles and he was able to remain out of the respirator for

increasingly long periods, but was never allowed to sleep outside it. During convalescence special massage and physiotherapy was arranged, and he was under the care of Mr W. V. Anderson, orthopædic surgeon. Despite daily massage and physiotherapy, full power never returned to the affected groups of muscles, and there remained gross wasting and weakness, particularly of the intercostals and spinal muscles. On 6.12.44 he developed bronchopneumonia and died on 13.12.44, having been in hospital for 77 days.

PRIMARY PNEUMONIA, MEASLES AND WHOOPING COUGH

Primary Pneumonia.

	1941.	1942.	1943.	1944.	1945.
Cases admitted as primary pneumonia with or without intercurrent infection,	—	2	21	51	48
No. of confirmed cases of primary pneumonia not admitted as such,	24	8	6	11	7
Total No. of confirmed cases of primary pneumonia with or without intercurrent infection,	24	10	24	52	49
No. of Deaths in confirmed cases of primary pneumonia,	3	2	2	—	—
Case mortality,	8.5%	20%	8.3%		

During the first half of the five-year period under consideration very few cases were admitted to hospital. In 1944 and 1945, however, young children suffering from acute primary pneumonia have been treated. There has been a marked decrease in the case mortality, as demonstrated in the above table.

Measles.

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as measles with or without intercurrent infection,	22	111	80	188	76
No. of confirmed cases of measles not admitted as such,	3	5	5	21	2
Total no. of confirmed cases of measles with or without intercurrent infection,	22	101	68	194	72
No. of Deaths in confirmed cases,	1	5	2	6	—
Case mortality,	4.6%	5.0%	2.9%	3.1%	

During 1941-1945 the incidence of measles has been comparatively low, although the figures do show a bi-annual increase in incidence which is characteristic of the epidemiology of the disease.

Whooping Cough.

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as whooping cough, with or without intercurrent infection, ...	8	7	65	36	24
No. of cases of whooping cough not admitted as such, ...	2	—	5	6	3
Total No. of confirmed cases of whooping cough with and without intercurrent infection, ...	10	5	57	33	21
No. of Deaths in confirmed cases of whooping cough, ...	1	3	5	—	1
Case mortality, ...	10%	60%	8.8%	—	4.8%

In considering the incidence of this disease during 1941-1945 it is noted that the number of cases treated in hospital is small, except for a sharp rise in 1943. The case mortality for 1941-1943 is high, but it is gratifying to record a sudden decrease in 1944, when no deaths occurred, and a case mortality of 4.76% in 1945.

Treatment.

Since the three diseases under consideration are essentially due to infection of the respiratory tract, it is convenient to consider them together. In all three conditions the case mortality was high, particularly in infants and young children. It is therefore very satisfactory to be able to report a decrease in the case mortality of all three conditions. This decrease is undoubtedly due to the wide use of chemotherapy, and the improvement in the drugs themselves. Of the three conditions, acute primary pneumonia responds best, then bronchitis and broncho-pneumonia associated with measles. The broncho-pneumonia complicating whooping cough is of a more resistant type, but a course of treatment with a suitable sulphonamide usually gives good results. Children tolerate the drugs very well, and the most recent ones—sulphamezathine and sulphadiazine—are much less toxic than their predecessors and do not cause sickness. Toxic effects have been negligible with no serious result. The drug most widely used in this hospital is sulphamezathine, and this is made up in emulsion form for ease in administration to young children.

Since the introduction of penicillin several cases of all three conditions have been treated with very good results. The method of administration is by three-hourly intramuscular injection, and 200,000 to 400,000 units are given daily for four to five days. It is hoped to continue penicillin treatment on a larger scale as soon as supplies are available.

ENTERIC FEVERS

The following are details of cases notified as enteric fever during 1941-1945:—

	1941.	1942.	1943.	1944.	1945.
No. of cases admitted as enteric fever, with or without intercurrent infection,	354	5	8	16	12
No. of confirmed cases of enteric fever not admitted as such,	7	—	2	—	2
Total no. of confirmed cases of enteric fever, with or without intercurrent infection,	306	2	5	9	9
Typhoid fever,	—	—	—	1	3
Paratyphoid-b. fever,	306	2	5	8	6
No. of deaths in confirmed cases of enteric fever,	8	—	—	—	—
Case mortality,	3%	—	—	—	—
No. of non-accepted cases,	55	3	5	7	5

The amended diagnosis in the non-accepted cases was as follows:—

	1941.	1942.	1943.	1944.	1945.
Enteritis, non-specific,	18	2	—	—	1
Bacillary food infection,	6	—	—	—	1
Bacillary dysentery,	3	—	—	1	1
Respiratory conditions,	13	—	3	2	—
Malaria,	—	—	—	1	—
Miscellaneous conditions,	7	1	1 died	1 died	1 died
No disease,	8	—	1	2	1
Total,	55	3	5	7	5

During February to October, 1941, an epidemic of paratyphoid-beta fever occured in Dundee, when 361 cases were admitted for investigation and treatment. Of these, 306 proved to be infected with B. parathyphosus B. These were divisible into three groups:—

(1)	Healthy carriers,	35
(2)	" Missed case " carriers,	9
(3)	Clinical cases of the disease,	262
		306

(1) Healthy Carriers.

Of the 35 cases diagnosed as healthy carriers, all except one were found as the result of investigation of contacts. In 34 cases B. paratyphosus-b. was recovered from the fæces before admission,

one case having the organism in the urine as well. The remaining case was detected by serological examination of the blood, but subsequently the organism was recovered on two occasions from the urine.

By means of primary and subsequent examinations of fæces and urine the types of carriers in this group were found to be as follow:—

Fæcal carriers only,	25
Fæcal and urinary carriers,	9
Urinary carriers only,	1

All the carriers in this group cleared, except one which remained persistently positive and was discharged as a known carrier. The criterion for discharge was the obtaining of three consecutive negative specimens at weekly intervals.

(2) " Missed case " Carriers.

While investigating contacts nine persons were found to be excreting B. paratyphosus-b in the fæces, and, in addition, gave histories of fairly recent illness consistent with a mild attack of paratyphoid fever. These were probably missed cases of paratyphoid B. fever who had remained carriers. Of these, five were fæcal carriers only and four were fæcal and urinary carriers.

(3) Cases of Paratyphoid-b Fever.

There were 262 cases of paratyphoid-beta fever treated during the epidemic, the age groups varying from young children to adults. Most of these ran the typical course of the disease, but 15, of 5.7% had the following complications:—

Hæmorrhage.—Intestinal hæmorhage was the most common and most serious complication, being present in 10 cases (3.8%), five of which proved fatal.

Perforation.—No cases occurred.

Tympanitis.—Severe distension occurred in one case associated with hæmorrhage.

Thrombo-phlebitis.—Thrombo-phlebitis, affecting the leg, occurred in one case.

Myocarditis.—There were four cases complicated by myocarditis. In each case recovery was complete, and there was no detectable abnormality on discharge.

Lobar pneumonia. — Lobar pneumonia interrupted the convalescence of one patient. A complete recovery was made.

Parotitis.—A unilateral septic parotitis developed in one case also complicated by intestinal hæmorrhage. This case proved fatal.

Second attacks.—None of the confirmed cases had ever suffered from the disease previously. One patient had had an attack of typhoid fever in 1920.

Mortality Rate.

There were eight fatal cases, giving a mortality rate of 3%. Of the fatal cases, five were due to hæmorrhage, one to myocardial degeneration and toxæmia, one to toxæmia in the puerperium, and one to paratyphoid B. fever in an infant of two months who had spina bifida.

Convalescence.

On the 254 recoveries, 41 obtained three consecutive negative specimens as soon as convalescent specimens were submitted. The types of " carrier states " in the remaining 213 (using the term " carrier state " to mean the occurrence of one or more positive results in convalescence) were as follows:—

(1) Fæcal carriers only 110
(2) Fæcal and urinary carriers, ... 89
(3) Urinary carriers only 14

Seventeen cases were discharged from the hospital without the necessary negative results. Of these, five obtained three conscutive negative results shortly after discharge; two left the district; and the remaining ten continued to excrete the organism and so give postive results one year after discharge from hospital.

Treatment of Persistent Carriers.

A variety of drugs have been tried to deal with the persistent paratyphoid carrier. Those tried out in this hospital have been (1) Sulphapyridine; (2) Tetra-sodium-iodophenolphthalein (Opacol); (3) Hexamine-acid sodium phosphate; and (4) Phthalyl sulphathiazole. In every case the result has been very disappointing, and no more can be expected than a series of negative results while the patient is undergoing treatment. As soon as the drug is withdrawn, the persistent carrier state returns. Particularly disappointing was the result obtained with phthalyl sulphathiazole. This new drug was favourably discussed in current medical literature for the treatment of enteric fever carriers. The experience of this hospital is that it is no better than its predecessors.

During 1942-45 the number of cases of enteric fever has been very small—21 cases of paratyphoid B. fever and 4 cases of typhoid fever. There have been no deaths and only one case of typhoid fever developed cerebral hæmorrhage but made a good recovery.

BACILLARY FOOD INFECTION

Between February and October, 1941, 17 cases of bacillary food infection were treated. These cases were notified as follows:—

	No. of Cases Notified.
Bacillary food infection, ...	1
Bacillary dysentery, ...	9
Paratyphoid-beta fever, ...	7

Of the 17 cases, 14 had symptoms of severe gastro-enteritis, while 3 were discovered during the routine examination of enteric fever contacts. Out of 17 cases, B. Potsdam was recovered in 13 cases, B. Aertrycke was recovered in 3 cases, and B. Thomson in one case.

During the remaining years of this period under consideration there have been isolated cases of bacillary food infection, usually of B. Aertrycke, but these have never proved serious or developed into epidemic proportions.

BACILLARY DYSENTERY.

During the five years under consideration the number of admissions of bacillary dysentery has been consistently high. Details

of notifications are shown in the table below according to years.

	1941.	1942.	1943.	1944.	1945.
No. of cases notified as dysentery with or without intercurrent infection,	279	319	184	220	194
No. of confirmed cases of dysentery not notified as such, ...	1	3	1	1	17
Total no. of confirmed cases including clinical cases with or without intercurrent disease, ...	157	147	124	144	107
No. of Deaths in confirmed cases of dysentery, ...	7	7	2	5	6
Ultimate diagnosis in all cases notified as dysentery:—					
Flexner group, ...	69	76	17	48	2
	1 died				
B. Sonne III., ...	1	16	33	35	43
				1 died	
Bacillary dysentery, clinical, ...	87	65	44	49	61
	2 died	2 died			2 died
Enteritis, non-specific, ...	92	78	49	59	94
	1 died	2 died			3 died
Newcastle, ...	—	52	28	11	1
Gettings, ...	—	—	—	1	—
B. Newcastle and B. Flexner, ...	—	1	—	—	—
B. Newcastle and B. Sonne III., ...	—	2	1	—	—
B. Ambiguus, ...	—	—	1	1	1
Bacilary food infection, ...	8	1	—	—	2
Other infectious diseases, ...	—	3	—	1	1
		1 died			
Ulcerative colitis, ...	—	2	—	1	—
		1 died		died	
Acute appendicitis, ...	—	2	—	—	—
		1 died			
Carrier of B. dysenteriæ, ...	—	5	—	—	—
Miscellaneous, ...	6	—	4	4	4
			2 died	3 died	1 died
No disease, ...	12	18	7	9	2
Paratyhpoid-beta fever, ...	2	—	1	—	—
Respiratory conditions, ...	3	—	—	3	—
	3 died				

During the five years covered by this report this disease has assumed more prominence than in previous years. This has been due in some measure to war conditions. The disease is not usually a serious one, and there is seldom constitutional upset except for a little diarrhœa with some blood and/or mucus in the stools. In the previously healthy child the condition is usually mild, but in a poorly nourished marasmic infant, it must be regarded as serious. Under treatment the condition generally clears up quickly and the

child appears to be free from infection. Unfortunately, certain children continue to excrete the organism and become carriers of the disease. These children may be the source of outbreaks of diarrhœa.

The majority of cases admitted have been among the lower age groups, mainly under five years. A number of cases of chronic diarrhœa occurring in adults over 60 years were also admitted.

The majority of deaths occurred at the extremes of life—very young infants and elderly patients. In the former, deaths were due to a combination of factors — marasmus, dehydration, diarrhœa, broncho-pneumonia and collapse. Further reference will be made to this when dealing with treatment of infantile diarrhœa. In the elderly group, death was due in some instances to chronic ulcerative colitis or to myocardial degeneration. The average case in a previously healthy child or adult cleared without serious consequences.

An investigation into the various methods of treatment has been carried out. Five methods of treatment have been used:—

(1) Aperients.
(2) Chalk mixture.
(3) Sulphaguanidine in low dosage.
(4) Sulphaguanidine in high dosage.
(5) Phthalyl sulphathiazole.

The results of these investigations are detailed briefly. Sulphaguanidine in high dosage and phthalyl sulphathiazole appear to be superior to aperients, chalk mixture and sulphaguanidine in low dosage. From the clinical aspect, sulphaguanidine is superior to phthalyl sulphathiazole in controlling the diarrhœa. In convalesecence 30% of cases treated with sulphaguanidine remained bacteriologically positive as against 20.8% cases treated with phthalyl sulphathiazole. Special note must be made of the fact that the cases treated with sulphaguanidine were mostly B. Flexner infections, while those treated with phthalyl sulphathiazole were B. Sonne III. infections.

Of the two drugs under consideration sulphaguanidine is the more valuable because of its rapidly constipating action. This is of very high importance in the treatment of infantile diarrhœa. Here a combination of sulphaguanidine and penicillin has been used with very satisfactory results in several cases. The rationale for this treatment is (a) to control the diarrhœa and prevent dehydration;

and (b) to precent broncho-pneumonia. In most cases the infants tolerate the treatment very well and respond quickly.

SCABIES AND PEDICULOSIS CAPITIS.

During 1941 and 1942, 567 received in-patient treatment for scabies and pediculosis capitis. A variety of applications was tried and the most effective appeared to be an emulsion containing 25% benzyl benzoate. The majority of these patients were children recommended by the school medical officer. When necessary, parents of these children received out-patient treatment. The scheme was discontinued because the children rapidly became reinfected on discharge from hospital.

The treatment of adults infected with scabies is carried on at out-patient clinics which are held in one of the wards every morning except Sunday. The method of treatment is benzyl benzoate emulsion, and the results have been fairly satisfactory. In mild cases one or two applications are usually sufficient. In severe cases with secondary sepsis the patient must attend for a longer period.

The delousing of verminous patients is carried out as required.

The control of pediculosis capitis has been one of the problems during the past five years. With war restrictions on Sassafras oil a more effective agent had to be sought. Lethane 384 Special has been used in an effort to control head infestation. The results have not been very satisfactory, and it is hoped that in the near future D.D.T. emulsion will be available to the public. The high incidence of head infestation among infants, children and female adults admitted to hospital or receiving out-patient treatment is a serious fact which cannot be overlooked.

THE CUBICLE ISOLATION WARD.

On the 26th September, 1944, the Cubicle Isolation Ward was opened. This building is of a temporary nature, and it is hoped to replace it with a modern fully-equipped permanent building. The present one can accommodate 10 bed and 15 cot cases.

This type of ward incorporates the most modern ideas in the management and nursing of cases of infectious diseases. Its purpose is to permit the admission of many types of infection in the same ward, while maintaining strict isolation of each patient. The practical value of this ward can be summarised under four headings:—

(1) Single cases of infectious diseases can be successfully isolated in one ward, and this leads to an economy in ward spacing; (2) Cases can be admitted for observation without risking the exposure to infection; (3) Outbreaks of concurrent infectious disease are unavoidable in a general ward, particularly during epidemics; if such occurs it is possible to isolate the susceptible contacts in the cubicle ward hence rendering it unnecessary to quarantine the general ward; (4) Its value in the training of nurses cannot be over emphasised since nursing in a cubicle isolation ward demands the highest standards of discipline and meticulous care in the handling of patients.

Since this ward has been open it has received a full share of interesting and instructive cases both from the medical and nursing point of view.

THE REGIONAL SERUM STORE.

During the past five years this hospital has been a regional serum store under the Emergency Hospital Scheme.

PENICILLIN.

Mention has been made under the various diseases of the extensive use of penicillin. This hospital was a subsidiary distributing centre supplying municipal hospitals and clinics in Dundee.

TUBERCULOSIS SECTION

Report for Years 1941-1945 (both years inclusive)
by Dr J. H. HUNTER, Chief Tuberculosis Officer.

NOTIFICATIONS

Year	Total	Pulmonary Males	Pulmonary Females	Non-Pulmonary Males	Non-Pulmonary Females
1941	338	126	112	55	45
1942	408	119	117	79	93
1943	316	124	103	35	54
1944	305	112	136	25	32
1945	351	153	121	35	42

PULMONARY TUBERCULOSIS

Years	Total	Under 1 Yr. M.	Under 1 Yr. F.	1-5 Yrs. M.	1-5 Yrs. F.	5-15 Yrs. M.	5-15 Yrs. F.	15-25 Yrs. M.	15-25 Yrs. F.	25-45 Yrs. M.	25-45 Yrs. F.	45-65 Yrs. M.	45-65 Yrs. F.	65-Over Yrs. M.	65-Over Yrs. F.
1941	238	—	—	2	3	12	8	18	49	55	40	33	11	6	1
1942	236	—	1	6	4	15	7	25	44	37	45	32	12	4	4
1943	227	—	—	2	1	15	7	21	48	50	36	33	10	3	1
1944	248	—	—	5	1	11	14	29	64	36	42	28	9	3	6
1945	274	—	—	4	2	15	14	47	56	60	41	23	7	4	1

During wartime the increase of tuberculosis among the civilian population is inevitable and may be regarded as a natural concomitant of war conditions. These conditions produce a lowering of the resistance and render the individual liable to a breakdown. The strain of extra hours of work and in many cases the harder nature of the work, the reduction in the quantity and quality of food, the blackout and the many anxieties associated with war activities are strong factors in the cause of this lowered resistance.

The figures for the increase in pulmonary tuberculosis do not follow the generally accepted trend for normal times, that of the 15-25 age group in females and 25-45 age group in males. While our figures show the age group 15-25 having the greater increase for both sexes, that for the male is greater than that for the female.

NON-PULMONARY.

NOTIFICATIONS—

		Under 1 Yr.		1-5 Yrs.		5-15 Yrs.		15-25 Yrs.		25-45 Yrs.		45-65 Yrs.		65-Over Yrs.	
Years	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941	100	2	—	15	11	18	13	10	12	5	4	4	4	1	1
1942	172	2	4	16	20	39	31	10	16	7	16	5	5	—	1
1943	89	1	—	4	16	20	20	6	9	2	6	1	2	1	1
1944	57	1	1	5	7	13	11	2	10	2	3	1	—	—	1
1945	77	—	3	5	7	16	13	9	10	4	7	1	2	—	—

MENINGES—

		Under 1 Yr.		1-5 Yrs.		5-15 Yrs.		15-25 Yrs.		25-45 Yrs.		45-65 Yrs.		65-Over Yrs.	
Year	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941	11	—	—	2	3	2	1	1	2	—	—	—	—	—	—
1942	15	2	3	1	1	2	4	—	1	—	1	—	—	—	—
1943	14	—	—	2	8	2	2	—	—	—	—	—	—	—	—
1944	13	—	1	2	1	1	1	3	2	1	—	—	—	—	—
1945	10	—	2	1	2	1	—	—	4	—	—	—	—	—	—

ABDOMEN—

		Under 1 Yr.		1-5 Yrs.		5-15 Yrs.		15-25 Yrs.		25-45 Yrs.		45-65 Yrs.		65-Over Yrs.	
Years	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941	26	1	—	4	1	8	3	2	3	3	1	—	—	—	—
1942	43	—	—	1	4	18	13	1	3	—	3	—	—	—	—
1943	26	1	—	—	3	6	12	2	—	—	1	1	—	—	—
1944	18	1	—	1	2	7	4	—	2	—	—	—	—	—	1
1945	9	—	—	—	—	5	2	—	—	1	—	—	1	—	—

GLANDS—

		Under 1 Yr.		1-5 Yrs.		5-15 Yrs.		15-25 Yrs.		25-45 Yrs.		45-65 Yrs.		65-Over Yrs.	
Years	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941	21	—	—	2	3	3	3	4	4	—	—	1	1	—	—
1942	70	—	1	9	11	14	10	4	9	—	7	1	3	—	1
1943	27	—	—	1	4	7	6	1	4	—	2	—	1	1	—
1944	14	—	—	2	3	2	4	—	2	1	—	—	—	—	—
1945	22	—	—	1	—	7	6	2	2	2	1	—	1	—	—

BONES AND JOINTS—

		Under 1 Yr.		1-5 Yrs.		5-15 Yrs.		15-25 Yrs.		25-45 Yrs.		45-65 Yrs.		65-Over Yrs.	
Years	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941	16	—	—	2	2	3	4	—	1	—	—	1	2	—	1
1942	21	—	—	3	3	6	1	1	3	—	3	1	—	—	—
1943	8	—	—	—	—	2	—	2	2	1	—	—	1	—	—
1944	7	—	—	—	1	2	—	—	4	—	—	—	—	—	—
1945	15	—	—	2	2	6	2	1	1	1	—	—	—	—	—

SPINE—

Years	Total	Under 1 Yr. M.	F.	1-5 Yrs. M.	F.	5-15 Yrs. M.	F.	15-25 Yrs. M.	F.	25-45 Yrs. M.	F.	45-65 Yrs. M.	F.	65-Over Yrs. M.	F.
1941	4	—	—	—	1	1	1	—	—	—	—	1	—	—	—
1942	4	—	—	—	—	—	1	1	—	1	—	1	—	—	—
1943	6	—	—	—	—	2	—	—	1	1	2	—	—	—	—
1944	5	—	—	—	—	1	—	—	1	—	2	1	—	—	—
1945	7	—	—	—	1	—	—	—	2	—	4	—	—	—	—

OTHER FORMS—

Years	Total	Under 1 Yr. M.	F.	1-5 Yrs. M.	F.	5-15 Yrs. M.	F.	15 25 Yrs. M.	F.	25-45 Yrs. M.	F.	45-65 Yrs. M.	F.	65-Over Yrs. M.	F.
1941	22	1	—	5	1	1	1	3	2	2	3	1	1	1	—
1942	19	—	—	1	1	1	1	3	1	5	2	2	1	—	1
1943	8	—	—	1	1	1	—	1	2	—	1	—	1	—	—
1944	2	—	—	—	—	—	—	—	—	1	1	—	—	—	—
1945	16	1	1	1	2	—	2	2	2	1	3	1	—	—	—

The non-pulmonary figures are too erratic for any inference to be drawn. Meningitis usually taken as an indication of tuberculosis incidence, does not show increase and in fact is lower than in pre-war years, the abdominal and glandular forms show a very irregular trend. The rises in these forms occur in the same years, and if analysed their source proves to be the Royal Infirmary, and one feels that the personal zeal of the R.M.O. accounts for these irregular increases. Any cases that report to the Tuberculosis Clinic give a history of operation being performed for appendicitis and enlarged glands in the abdomen being noted and notified as Tuberculosis. The cases are not confirmed by biopsy or other means and usually present no symptoms or appreciable signs of tuberculosis. To a certain extent the same applies to the notified glandular cases, and in some who did attend this clinic gave no sign of enlarged glands but a history of carious teeth, broken out heads, etc. Other forms do not show a marked increase.

ATTENDANCES AT TUBERCULOSIS SECTION

Year	Insured	Non-Insured	Total
1941	4870	915	5785
1942	5796	996	6792
1943	6707	1040	7747
1944	7347	893	8240
1945	7493	1228	8721

Attendances have shown a big increase due, in my opinion, to the great malnutrition present amongst the civilian population through bad feeding.

Many cases attended giving a typical history of tuberculous infection and in many cases with hæmoptyses, but a careful and complete examination failed to yield any indication of active tuberculosis.

LABORATORY WORK

Year	Postive	Negative	Total
1941	69	289	358
1942	64	338	402
1943	86	451	357
1944	96	446	542
1945	106	557	663

ARTIFICIAL SUNLIGHT

Year	Males	Females	Total
1941	721	685	1406
1942	1684	1538	3222
1943	2570	3050	5620
1944	2651	3207	5858
1945	1505	2876	4381

ARTIFICIAL PNEUMOTHORAX

Year	Males	Females	Total
1941	97	213	310
1942	179	304	483
1943	272	385	657
1944	406	524	930
1945	492	623	1115

ASHLUDIE SANATORIUM

Combined Report for the Five Years 1941-45 Inclusive

by Dr D. H. SMITH, Medical Superintendent.

During the year 1941, 149 patients were admitted and 152 discharged, this latter figure including 39 who died.

Admissions—	Male.	Female.	Children Under 12.	Total.
Tuberculosis of lungs and pleura,	64	61	2	127
Disseminated tuberculosis,	12	7	—	19
Non-tuberculous,	1	2	—	3
Discharges,	79	72	1	152
Deaths,	20	19	—	39
Number of beds occupied on Dec. 31, 1941,				98
Highest daily number of patients,				123
Lowest daily number of patients,				98
Average daily number of patients,				113
Average residence of those discharged,				348 days
Average residence of those who died,				176 days

Age and Sex Distributions of Admissions.

	Pulmonary.		Disseminated.		Non-tuberculous.		
Age.	M.	F.	M.	F.	M.	F.	Total.
0—5,	—	—	—	—	—	—	—
5—15,	5	4	—	—	—	—	9
15—25,	9	36	4	3	—	2	54
25—35,	16	18	7	2	—	—	43
35—45,	13	4	1	2	1	—	21
45—60,	18	1	—	—	—	—	19
Over 60,	3	—	—	—	—	—	3

Condition on Discharge.

	Male.	Female.	Children.	Total.
Much Improved,	17	19	1	37
Improved,	27	19	—	46
No Change,	15	6	—	21
Worse,	—	7	—	7
Died,	19	19	—	38
Non-Tuberculous,	1(D)	2	—	3

Disseminated Admissions — Site of Disease.

Spine,	6
Spine and Elbow,	1
Hip,	2
Knee,	1
Sternum,	1
Calcaneus,	1
Kidneys,	2
Kidneys and Prostate,	1
Abdomen,	2
Abdomen and Testicles,	1
Tuberculomata (Brain and Cord),	1

Diagnoses of Non-Tuberculous Cases.

Lung Abscess,	1 (Died)
Myocadritis,	1
No disease,	1

Cause of Deaths.

Pulmonary tuberculosis,	29 cases
Generalised tuberculosis,	9 ,,
Lung abscess,	1 case

Special Treatment of Pulmonary Admissions.

Artificial pneumothorax,	37 cases attempted
Bilateral artificial pneumothorax,	3 cases
Phrenic nerve operation,	11 cases
Closed internal pneumolysis,	8 cases
Thoracoplasty,	1 case (died)

During the year 1942, 198 patients were admitted and 154 discharged, this latter figure including 42 who died.

Admissions—	Male.	Female.	Children Under 12.	Total.
Tuberculosis of lungs and pleura,	78	86	—	164
Disseminated tuberculosis,	18	11	—	29
Non-tuberculous,	3	2	—	5
Discharges,	51	60	1	112
Deaths,	23	19	—	42
Number of beds occupied on 31st Dec., 1942,				141
Highest daily number of patients,				144
Lowest daily number of patients,				96
Average daily number of patients,				124
Average residence of those discharged,				295 days
Average residence of those who died,				125 days

Age and Sex Distribution of Admissions.

Age.	Pulmonary. M.	Pulmonary. F.	Disseminated. M.	Disseminated. F.	Non-tuberculous. M.	Non-tuberculous. F.	Total.
0—5, ...	—	—	—	—	—	—	—
5—15, ...	5	3	1	2	—	—	11
15—25, ...	23	34	9	8	—	1	75
25—35, ...	20	27	5	1	—	—	53
35—45, ...	13	16	—	—	—	—	29
45—60, ...	16	4	3	—	3	1	27
Over 60, ...	1	2	—	—	—	—	3

Condition on Discharge.

	Male.	Female.	Children.	Total.
Much Improved, ...	13	21	1	35
Improved, ...	26	22	—	48
No change, ...	4	13	—	17
Worse, ...	8	3	—	11
Died, ...	23	19	—	42
Non-tuberculous, ...	—	1	—	1

Classifications of Pulmonary Admissions.

Pleural Effusions.	Early.	Moderately Early.	Moderately Advanced.	Advanced.	Total.
14	14	12	39	85	164

Disseminated Admissions—Site of Disease.

Spine, ...	5
Abdominal glands and peritoneum, ...	5
Knee joint, ...	4
Epididymitis and orchitis, ...	4
Sacro-iliac joint, ...	1
Symphysis pubis, ...	1
Knee and elbow, ...	1
Foot, ...	1
Wrist and rib, ...	1
Elbow and sternum, ...	1
Elbow, ...	1
Rib, ...	1
Generalised tuberculomata, ...	1
Cervical glands, ...	1
Tuberculous pyæmia, ...	1

Diagnoses of Non-tuberculous Cases.

Bronchial carcinoma, ...	4
No disease, ...	1

Cause of Deaths.

Pulmonary tuberculosis, ...	38 cases
Pulmonary tuberculosis and tuberculous meningitis	1 case
Generalised tuberculosis, ...	2 cases
Bronchial carcinoma, ...	1 case

Special Treatment of Pulmonary Admissions.

Artificial pneumothorax, ...	39	cases attempted
Bilateral artificial pneumothorax, ...	8	,,
Monaldi drainage, ...	2	,,
Phrenic nerve operation, ...	10	,,
Oleothorax, ...	2	,,
Closed internal pneumolysis, ...	18	,,
Gold therapy, ...	15	,,

During the year 1943, 175 patients were admitted and 175 discharged, this latter figure including 28 who died.

Admissions—	Male.	Female.	Children Under 12.	Total.
Tuberculosis of lungs and pleura, ...	72	75	—	147
Disseminated tuberculosis, ...	10	13	—	23
Non-tuberculous, ...	4	1	—	5
Discharges, ...	79	67	1	147
Deaths, ...	8	20	—	28
Number of beds occupied on 31st Dec., 1943, ...				152
Highest daily number of patients, ...				152
Lowest daily number of patients, ...				119
Average daily number of patients, ...				134
Average residence of those discharged, ...				289 days
Average residence of those who died, ...				267 days

Age and Sex Distribution of Admissions.

	Pulmonary.		Disseminated.		Non-tuberculous.		
Age.	M.	F.	M.	F.	M.	F.	Total.
0—5, ...	—	—	—	—	—	—	—
5—15, ...	5	5	2	2	1	—	15
15—25, ...	20	41	5	5	—	—	71
25—35, ...	11	21	2	3	2	—	39
35—45, ...	20	6	1	—	1	—	28
45—60, ...	16	2	—	3	—	1	22
Over 60, ...	—	—	—	—	—	—	—

Condition on Discharge.

	Male.	Female.	Children.	Total.
Much Improved, ...	17	16	1	34
Improved, ...	40	34	—	74
No change, ...	11	13	—	24
Worse, ...	7	3	—	10
Died, ...	8	20	—	28
Non-tuberculous, ...	4	1	—	5

Classifications of Pulmonary Admissions.

Pleural Effusions.	Early.	Moderately Early.	Moderately Advanced.	Advanced.	Total.
16	11	14	28	78	147

Disseminated Admissions—Site of Disease.

Spine, ...	10
Spine and lungs, ...	1
Hip, ...	2
Ileocaecal, ...	1
Kidney, ...	1
Abdominal, ...	2
Glandular, ...	3
Foot, ...	1
Elbow and lungs, ...	1
Iridocyclitis and lungs, ...	1

Diagnoses of Non-tuberculous Cases.

Bronchial carcinoma, ...	2
Chronic appendicitis, ...	1
Rheumatism, ...	1
Non-tuberculous spontaneous pneumothorax,	1

Cause of Deaths.

Pulmonary tuberculosis, ...	22 cases
Pulmonary tuberculosis and tuberculous meningitis, ...	1 case
Generalised tuberculosis, ...	4 cases
Abdominal tuberculosis, ...	1 case

Special Treatment of Pulmonary Admissions.

Artificial pneumothorax, ...	37 cases attempted
Phrenic nerve operation, ...	5 ,,
Closed internal pneumolysis, ...	21 ,,
Monaldi drainage, ...	1 operation
Pneumoperitoneum, ...	1 case
Gold therapy, ...	8 cases

During the year 1944, 180 patients were admitted and 229 discharged, this latter figure including 42 who died.

Admissions—	Male.	Female.	Children Under 12.	Total.
Tuberculosis of lungs and pleura,	79	80	—	159
Disseminated tuberculosis,	5	12	—	17
Non-tuberculous,	2	2	—	4
Discharges,	95	89	3	187
Deaths,	15	27	—	32

Number of beds occupied on 31st December, 1944,	101
Highest daily number of patients,	162
Lowest daily number of patients,	100
Average daily number of patients,	133
Average residence of those discharged,	277 days
Average residence of those who died,	306 days

Age and Sex Distribution of Admissions.

Age.	Pulmonary. M.	Pulmonary. F.	Disseminated. M.	Disseminated. F.	Non-tuberculous. M.	Non-tuberculous. F.	Total.
0—5,	—	—	—	—	—	—	—
5—15,	4	5	—	—	—	—	9
15—25,	22	38	2	6	—	1	69
25—35,	19	24	2	5	—	1	51
35—45,	19	9	1	1	—	—	30
45—60,	15	4	—	—	2	—	21
Over 60,	—	—	—	—	—	—	—

Condition on Discharge.

	Male.	Female.	Children.	Total.
Much Improved,	19	29	1	49
Improved,	60	46	2	108
No change,	12	5	—	17
Worse,	2	7	—	9
Died,	15	27	—	42
Non-tuberculous,	2	2	—	4

Classifications of Pulmonary Admissions.

Pleural Effusions.	Early.	Moderately Early.	Moderately Advanced.	Advanced.	Total.
12	8	20	24	95	159

Disseminated Admissions—Site of Disease.

Spine,	4
Sacro-iliac joint and lungs,	1
Sacro-iliac joint and knee,	1
Chronic miliary tuberculosis,	1
Femur,	1
Ankle,	2
Ankle and lungs,	1
Glandular tuberculosis and lungs,	1
Glandular tuberculosis,	3
Tuberculous peritonitis,	2

Diagnoses of Non-tuberculous Cases.

Bronchial carcinoma,	1
Pulmonary fibrosis,	1
Influenza,	1
Bronchiectasis,	1

Cause of Deaths.

Pulmonary tuberculosis,	38 cases
Generalised tuberculosis,	3 cases
Generalised glandular tuberculosis,	1 case

Special Treatment of Pulmonary Admissions.

Artificial pneumothorax,	44 cases attempted
Bilateral artificial pneumothorax,	2 ,,
Phrenic nerve operation,	21 ,,
Closed internal pneumolysis,	30 ,,
Pneumoperitoneum,	2 ,,
Gold therapy,	14 ,,

During the year 1945, 173 patients were admitted and 136 discharged, this latter figure including 23 who died.

Admissions—	Male.	Female.	Children Under 12.	Total.
Tuberculosis of lungs and pleura,	61	90	—	151
Disseminated tuberculosis, ...	13	8	—	21
Non-tuberculous,	1	—	—	1
Discharges,	47	65	1	113
Deaths,	15	8	—	23
Number of beds occupied on 31st December, 1945, ...				143
Highest daily number of patients,				154
Lowest daily number of patients,				104
Average daily number of patients,				120
Average residence of those discharged,				274 days
Average residence of those who died,				198 days

Age and Sex Distribution of Admissions.

Age.	Pulmonary. M.	Pulmonary. F.	Disseminated. M.	Disseminated. F.	Non-tuberculous. M.	Non-tuberculous. F.	Total.
0—5, ...	—	—	—	—	—	—	—
5—15, ...	1	6	3	1	—	—	11
15—25, ...	27	45	6	3	—	—	81
25—35, ...	15	20	2	3	—	—	40
35—45, ...	11	18	—	1	—	—	30
45—60, ...	7	1	2	—	1	—	11
Over 60, ...	—	—	—	—	—	—	—

Condition on Discharge.

	Male.	Female.	Children.	Total.
Much Improved, ...	13	28	—	41
Improved, ...	23	23	1	47
No change, ...	5	12	—	17
Worse, ...	5	2	—	7
Died, ...	15	8	—	23
Non-tuberculous, ...	1	—	—	1

Classifications of Pulmonary Admissions.

Pleural Effusions.	Early.	Moderately Early.	Moderately Advanced.	Advanced.	Total.
5	15	19	28	84	151

Disseminated Admissions—Site of Disease.

Spine, ...	5
Hip, ...	4
Spine and Hip, ...	1
Spine and lungs, ...	1
sacro-iliac, ...	3
Chronic miliary tuberculosis, ...	2
Ankle and knee, ...	1
Ankle and elbow, ...	1
Elbow, ...	1
Kidney, ...	1
Glands of neck, ...	1

Diagnosis of Non-tuberculous Case.

Lympho-sarcoma of lung, ... 1

Cause of Deaths.

Pulmonary tuberculosis, ...	21 cases
Miliary tuberculosis, ...	2 cases

Special Treatment of Pulmonary Admissions.

Artificial pneumothorax,	75	cases attempted
Bilateral artificial pneumothorax,	3	,,
Phrenic nerve operation,	40	,,
Closed internal pneumolysis,	41	,,
Monaldi drainage,	1	operation
Pneumoperitoneum,	7	cases
Gold therapy,	23	,,
Thoracoplasty (in Hairmyres Hospital),	2	,,

COMMENTS

Little comment need be made about the admissions during the years 1941 to 1945 except to note that the great majority of the pulmonary cases fall into the classification of moderately advanced or advanced, which renders treatment disappointing and the eventual outlook for the patient unfavourable. It is to be hoped that a " Mass Radiography " unit will be available in Dundee in the near future in order that diagnosis may be made at a stage where treatment may offer a reasonable hope of recovery.

Treatment of pulmonary admissions has followed along the usual sanatorium regime plus various forms of collapse therapy in selected cases. It will be noted that in 1945 artificial pneumothorax was attempted in 75 cases out of a total of 151 pulmonary admissions. The scope of artificial pneumothorax has been considerably widened and the immediate and later results improved in the Sanatorium since 1041 when the operation of closed internal pneumolysis was instituted. This operation is performed now on nearly all cases of artificial pneumothorax which are not abandoned soon after induction. Eight such operations were performed during 1941 and 41 during 1945.

Cases of bone and joint tuberculosis were treated along the usual conservative lines with varying results.

In mid 1940 four hutted annexes (168 beds) were completed in Ashludie by the Department of Health for Scotland under the Emergency Medical Service Scheme. These were administered for the Department of Health for Scotland by the Public Health Department until October, 1945, when they were released from the E.M.S. Scheme and loaned to the Corporation for the treatment of cases of tuberculosis. In all, 1,672 service sick and wounded were

admitted to the Emergency Hospital plus 563 cases from the surgical and gynæcological waiting lists of Dundee Royal Infirmary, and 74 cases under the London Hospitals Evacuation Scheme. Fortunately these wards were not utilised for their original purpose, viz., admission of air-raid casualties. A total of 718 operations were performed in Ashludie for the Emergency Medical Service.

In 1942 the open verandahs of the hospital block were closed, with the result that the bed complement of the sanatorium was increased from 120 to 140. The bed state was further increased in October, 1945, by the use of the E.M.S. huts, and now stands at 180. It should be emphasised that the use of these hutted annexes can only be regarded as a temporary arrangement. When labour and material again become available two modern " sanatorium " wards should be constructed.

In June, 1944, a full-time Medical Superintendent was appointed. A house was purchased in Monifieth in December, 1945, for the use of this official.

The greatest difficulty facing the hospital during these years has been the acute shortage of nursing staff with the result that the available beds have never been fully utilised, at a time when there has been an increase in tuberculosis in the community. This has meant that there has always been a waiting list and the period of time between diagnosis and admission to hospital has frequently been much too long. While this state of affairs exists the position can only be regarded as most unsatisfactory. Although the shortage of nursing staff is general, it is much more marked in sanatoria, and it would appear that the only permanent solution to this problem is some form of comprehensive training for nurses, part of which would be spent in a sanatorium or tuberculosis hospital.

The standard of work in the X-ray department is considerably hampered by an inadequate electrical supply. The provision of a central electricity supply to the sanatorium is an urgent necessity.

It will be noted from reading this report that no major chest surgery has been carried out in this sanatorium in the years under consideration. Two cases had a thoracoplasty operation performed in Hairmyres Hospital, Lanarkshire. Surgery of chest is now well established as a rational and safe procedure in treating selected cases

of pulmonary tuberculosis, and should be available in Dundee to patients suffering from tuberculosis. The Society of Thoracic Surgeons is strongly of the opinion that the best results can only be obtained, and this is borne out in practice, if the surgeon in charge of a properly equipped unit has been specially trained in thoracic surgery. It is suggested that there is sufficient scope and work for a full-time thoracic surgeon in this region in combination with the University, the Royal Infirmary and the neighbouring Local Authorities, and it is recommended that negotiations be set in motion to explore the possibilities of such an appointment. If such an appointment is not possible then arrangements should be made to have selected cases sent for operation to a Local Authority which has a suitable thoracity unit.

In conclusion it should be stated that all members of the staff, and particularly the more senior members, have carried on the work during these years, often under great difficulties, in a most efficient manner. No praise is too high for them.

D. H. SMITH,
Medical Superintendent.

DUNDEE MENTAL HOSPITAL

Report by Dr A. ALLAN BELL

I have the honour to submit this Report concerning Dundee District Mental Hospital, Westgreen, for the war years 1941-45.

The information concerning the numbers and movements of patients is summarised in the following statistical tables for the five years' period.

NUMBER OF PATIENTS

Year	No. of Certified Patients on Register on May 15.			No. of Admissions to May 15.			No. of Discharges to May 15.			No. of Deaths to May 15.			Total No. Under Treatment.			Average Daily Number Resident.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1940,	304	312	616															
1941,	296	300	596	24	26	50	18	19	37	14	19	33	328	338	666	304.4	310.9	615.0
1942,	294	287	581	26	30	56	8	13	21	20	30	50	322	330	652	291.2	292.9	584.0
1943,	297	287	584	27	25	52	9	12	21	15	13	28	321	312	633	296.7	287.3	584.0
1944,	290	281	571	26	30	56	17	12	29	16	24	40	323	317	640	295.0	287.2	582,2
1945,	292	266	558	38	38	76	12	23	35	24	30	54	328	319	647	298.7	271.0	570.4

MENTAL ILLNESS OF ADMISSIONS

	Psychogenic Psychosis.							Physiogenic Psychosis.									
		Manic Depressive psychosis.															
Year Ending 15th May.	Schizophrenia.	Acute Mania.	Acute Melancholia.	Involutional Melancholia.	Paraphrenia.	Paranoia.	Epileptic psychosis.	Acute Confusional psychosis.	Alcoholic psychosis.	G.P.I.	Presenile psychosis.	Senile psychosis.	Organic psychosis.	Post Encephalitic psychosis.	Mental Deficiency.	Total.
1941,	8	6	4	2	5	0	2	9	0	3	3	2	0	1	5	50
1942,	16	5	3	7	6	0	2	9	0	1	0	2	0	0	5	56
1943,	12	2	2	7	5	1	2	4	3	5	0	3	0	2	4	52
1944,	10	5	7	2	5	0	5	8	1	1	1	4	0	0	7	56
1945,	14	6	6	5	7	1	5	6	0	5	0	13	1	2	5	76

DISCHARGES.

Year Ending 15th May	Total.	Percentage of Admissions.	Recovered.	Percentage of Admissions.	Relieved, Mainly Transferred.	Percentage of Admissions.	No. of Admissions.
1941,	37	74%	31	62%	6	12%	50
1942,	21	36%	15	26%	6	10%	56
1943,	21	40%	14	27%	7	13%	52
1944,	29	50%	23	41%	6	10%	56
1945,	35	46%	22	28%	13	17%	76

CAUSES OF DEATHS.

Year Ending 15th May.	Cardio Vascular Disease.	Acute Respiratory Disease.	Senility.	Pulmonary Tuberculosis.	Dementia Paralytica.	Carcinoma.	Cerebral Hæmorrhage.	Organic Brain Disease.	Acute Infectious Disease.	Gastro-Intestinal Disease.	Genito-Urinary Disease.	Diabetes.	Non-pulmonary Tuberculosis.	Cellulitis.	Total.
1941,	9	14	(8)	3	2	2	2	0	0	0	0	0	0	0	33
1942,	13	15	9(3)	4	1	0	1	3	1	1	1	1	0	0	50
1943,	3	4	4(3)	5	2	6	1	0	0	0	2	0	1	0	28
1944,	6	7	4(2)	8	3	4	0	1	0	2	1	0	3	1	40
1945,	10	10	10(2)	8	7	3	1	2	0	1	1	0	1	0	54

() Contributory.

DEATHS PER AGE GROUP.

Year Ending 15th May	—10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90+	Total	Percentage of Average No. Resident.
1941,	0	1	0	2	10	3	10	5	2	0	33	5.3
1942,	0	0	4	7	9	6	12	9	3	0	50	8.5
1943,	0	0	1	4	1	8	6	7	1	0	28	4.7
1944,	0	0	2	5	6	12	10	3	1	1	40	6.8
1945,	1	0	2	6	8	12	9	14	2	0	54	9.4

CHARGEABILITY OF PATIENTS

On 15th May.

Year Ending 15th May.	Dundee M.	Dundee F.	Dundee T.	Angus M.	Angus F.	Angus T.	Other Districts M.	Other Districts F.	Other Districts T.	Service Patients.
1941, ...	287	292	579	3	3	6	6	5	11	16
1942, ...	290	278	568	0	2	2	4	7	11	14
1943, ...	292	278	570	0	2	2	5	7	12	13
1944, ...	282	271	554	0	2	2	7	8	15	14
1945, ...	288	257	545	0	1	1	4	8	12	15

VOLUNTARY PATIENTS.

Year Ending May 15.	No. on 15th May. M.	F.	T.	No. of Admissions. M.	F.	T.	No. of Discharges. M.	F.	T.	No. of Deaths. M.	F.	T.
1940,	1	1	2									
1941,	1	1	2	1	0	1	1	0	1	0	0	0
1942,	0	1	1	0	0	0	1	0	1	0	0	0
1943,	1	1	2	2	0	2	1	0	1	0	0	0
1944,	2	0	2	3	2	5	2	1	3	0	2	2
1945,	2	1	3	4	1	5	3	0	3	1	0	1

LARBERT PATIENTS.

Year	No. of Certified on Register on 15th May. M.	F.	T.	No. of Admissions to 15th May. M.	F.	T.	No. of Discharges to 15th May. M.	F.	T	No. of Deaths to 15th May. M.	F.	T.	Service Patients.
1940,	58	78	136										3
1941,	53	73	126	0	0	0	3	0	3	2	5	7	3
1942,	48	65	113	0	0	0	1	0	1	4	8	12	3
1943,	48	73	121	1	11	12	0	2	2	1	1	2	3
1944,	50	66	116	7	6	13	0	6	6	5	7	12	3
1945,	46	64	110	2	3	5	3	1	4	3	4	7	3

LARBERT VOLUNTARY PATIENTS.

	Number of Patients on 15th May. M.	F.	T.	Number of Discharges to 15th May. M.	F.	T.
1940, ...	5	1	6			
1941, ...	5	1	6	0	0	0
1942, ...	3	1	4	2	0	2
1943, ...	3	1	4	0	0	0
1944, ...	3	1	4	0	0	0
1945, ...	3	1	4	0	0	0

General Administration.

Shortage of Staff.—In reviewing these war-time years, so full of strain and apprehension for everyone, it is felt that the greatest anxiety experienced was the responsibility thrown on all members of the staff due to the very serious shortage of nurses. When the Stirling District Mental Hospital patients numbering 152, 71 males and 81 females, were evacuated to us from Larbert at the beginning of hostilities, under the Emergency Medical Scheme, so that their hospital might be available for civilian air-raid casualties, they

were accompanied by a generous number of nurses, namely 17 female nurses and 14 male nurses. That caused us to have a total of 77 female nurses at the beginning of the war-time period comprising 60 Westgreen nurses and 17 Larbert ones. Unfortunately there was a rapid decline in the numbers of the younger members of the nursing staff, probably due to the counter-attraction of war-work and of the armed forces, offering greater freedom and less isolation, until there were only about 35 nurses left during the year 1940-1, so that it became necessary to ask them to work a 60-hour week instead of the 48-hour week, which was inaugurated early in the year 1938-9. Despite substantially increased remuneration, decreed from time to time by the Joint Conciliation Committee, the Joint Industrial Council and latterly the Taylor Committee, the diminution in numbers continued. This occurred although the nursing staff was supplemented by temporary married nurses who patriotically offered their much appreciated services, and also by married part-time nurses who rendered invaluable service, but whose numbers and usefulness were restricted by the totally inadequate transport service to the City, which did not in any way suit the requirements of the Hospital. Towards the end of the year 1944-5 the nursing position was as follows:—Larbert Nurses, Nil; Westgreen Nurses, 22 permanent staff, 8 temporary, and 10 part-time. For various reasons, including sickness and holidays, 10 of these were absent which, with the minimum of 9 on night duty, left 17 nurses available for day duty, 6 of whom were off duty daily, in rotation, in order to obtain their ordinary off-duty time. That left 14 nurses, 3 of whom were part-time, to be distributed among 3 large sick wards and 4 large day rooms, making an average of 2 nurses per ward. This meant that day rooms containing about 60 patients suffering from all varieties of mental disorder and liable to the most unpredictable impulses were left for long periods in the charge of one nurse. Moreover, the Admission Ward, which contains more than 30 bed-patients, including several seriously ill physically, and often containing several acutely excited or depressed recent patients, had also to be left in the care of one nurse, especially during meal hours. At that time the prospect of any improvement in these numbers was remote, and indeed there was every fear that the position would grow worse owing to the temporary married nurses leaving after the cessation of hostilities. The anxiety and strain of the responsibility on everyone was extreme, as there was the daily anticipation of some major catastrophe if not a serious accident or a suicidal attempt, then a homicidal attack on a patient or a member of the staff, or even the escape of a suicidal

or dangerous patient. That such a contingency did not arise, and that the recovery rate was maintained at a high level, was due entirely to the selfless devotion to duty of the older members of the staff who stayed at their posts in extremely adverse circumstances, often with their own nerves exhausted with the constancy of the unrelaxed tension, and frequently battling against physical ill-health, especially during the long, bleak winter months. The work which these nurses have performed in alleviating the sufferings of the more afflicted members of the community, whom everyone tends to forget, cannot be over-estimated and in many ways has not been sufficiently recognised or appreciated, especially when we remember the words of Hugo Grotius that the care of the human mind is the most noble branch of medicine.

A goodly number of male staff, namely, 17 in all, saw service in the various armed forces so that it was necessary to commence a 60-hour week in April, 1943, and although the shortage was never so acute on the male side the consistent strain, anxiety and vigilance was borne by all with a praiseworthy lack of complaint and with the utmost of harmonious co-operation and assistance. Tribute must be paid to two of the male nursing staff who made the supreme sacrifice, namely, Sergt.-Major John Morrison, Scots Guards, and Sergt. Alexander Steedman Watt, R.A.F.

It should be recorded that we were fortunately able to maintain the numbers of our Domestic and Laundry Staffs the latter of whom were allowed to live out, in order to provide accommodation for the Larbert nurses, a procedure which has proved to be extremely satisfactory.

Overcrowding.—The advent of the Larbert patients caused another serious difficulty to arise for about half of the war-time period, namely that of overcrowding. This showed itself especially at night time when so many patients required to sleep along the corridors, as all the dormitories were completely filled. This gave rise to the constant apprehension of an epidemic of a virulent influenza or of a specific fever occurring, owing to the general congested conditions. Fortunately this state of affairs was remedied by the Department of Health authorising the erection of two brick-built annexes, each containing two large day rooms, which allowed a day-room on both male and female sides to be transformed into a much-needed dormitory. These buildings, which were occupied in April, 1943, although plainly furnished and not ornate in appear-

ance, have suited their purpose admirably, being well lit and ventilated and extremely well heated by their own independent boilers, and in addition they have the supreme advantage of a constant supply of electricity obtained from the Grampian Electricity Supply Company.

Air Raid Precautions.—The problems associated with Air Raid Precautions raised many questions which required to be surmounted. For example, the obtaining of a complete black-out by means of painted blinds, screens and dimmed lights was satisfactorily accomplished and maintained, despite the desire of many patients to interfere with it and the large number of windows involved. The greatest difficulty associated with this was the provision of sufficient ventilation for the overcrowded dormitories in order to diminish the risk of pulmonary infections.

It should be remembered that not only the staff but all the patients were provided with gas masks, and the latter were very patiently trained in their use, the majority of them proving to be wonderfully amenable and co-operative.

All the members of the male staff, including the artisans, were formed into fire-fighting, demolition, first-aid and decontamination parties and were always ready and prepared, whenever a warning was sounded on the siren, to deal with any emergency which might arise.

The ambulatory patients were trained to occupy the large vaulted basements at these times of warning, and all conducted themselves in an exemplary fashion, appearing to realise the significance of the procedure. Towards the end of 1941-42 these basement shelters were subdivided and greatly strengthened by brick walls and wooden supports and were also made much more habitable at the instance of the Department of Health. About the same time the roofs of the tradesmen's shops were reinforced with concrete and brick baffle walls were erected. In addition, the hospital ward windows and the verandah roofs, were protected with wire netting, while many more apertures were cut in the ceilings in order to deal rapidly with incendiary bombs by means of the stirrup pumps and sand already stored under the roofs.

General Problems.—Amongst the other war-time administrative difficulties, that of maintaining a varied and satisfying dietary

both for the patients and the staff, proved to be one of the most outstanding, owing to the rationing and scarcity of the essential commodities. Clothing for the patients, unforms for the male nurses, and furnishings for the wards and day-rooms were only obtained after prolonged delays. Coal, soap and other essentials being restricted also added to the universal difficulties and often caused anxiety. All the problems associated with the patients' Identity Cards, Clothing Coupons, Ration Books and Personal Points were superadded to the correspondence and records concerning the Larbert patients which had already greatly augmented the routine office work.

Mental and Physical Treatment.

Despite all the inconveniences and difficulties enumerated above, the general health of the patients was fortunately maintained at a satisfactorily high level while no epidemics or accidents of a serious nature occurred.

The Admission Rate, contrary to expectation, remained surprisingly low during those troublesome years, in spite of all the dangers and hardships the civilian population had to withstand, and the proportion of the various types of mental disorder remained fairly constant with the exception of the sharp rise in the senile patients during the last year. Two only of our admissions could in any way be considered as due to the action of air bombing. The admission of several helpless, little, mentally defective patients of less than 10 years of age, added greatly to our nursing problems, as they require the constant care and attention of trained nurses, whose skill and knowledge should be devoted to promote the recovery of acute cases of mental illness. Moreover these helpless infants increase the responsibilities already thrown on the staff as they can only be nursed alongside the mental patients, any of whom could be a potential source of danger to them by dashing them to the ground in an impulsive attack. It is to be deplored that Dundee has not availed itself of the powers given under the Lunacy and Mental Deficiency (Scotland) Act, 1913, to erect accommodation for its mentally defective citizens. Indeed it is one of the two cities which have failed to do so in Scotland, and one of the few Lunacy Districts which have failed to shoulder this responsibility.

The Discharge Rate has been maintained throughout at a gratifying level in all probability due to some of our more recent methods of treatment.

The Death-Rate has been reasonably low despite the adverse conditions, while a goodly proportion of the deaths occurred amongst the more advanced age groups. Unfortunately the deaths from Tuberculosis have risen gradually, probably due to the unfavourable conditions described above.

The Number of Patients Resident has steadily declined, and it is to be sincerely hoped that this will be continued during the post-war years and that there will not be a recrudescence of mental disorder.

The general psychotherapeutic methods of treatment were somewhat restricted during the latter half of the period under discussion, as there was only one Assistant Medical Officer during that time. Despite that drawback, Convulsion Therapy was introduced, first of all by the use of Cardiazol or similar substance, and latterly by Electrically Induced Convulsions during 1940-1. This form of treatment has proved of great benefit in cases of Involutional Melancholia and in many cases of Schizophrenia especially of the Catatonic variety. In the former condition and in all cases of emotional depression it is almost a specific, producing many rapid recoveries in cases that would have continued for months without relief, or would have progressed into an incurable state, probably accompanied by various degrees of Dementia. Gratifying results have been obtained in the treatment of Epilepsy by supplementing the well established Pheno-barbitone with one of the Hydantoinates, e.g., Epanutin, while some cases of Acute Confusional Psychoses have reacted well to the use of the Sulphonamides. The latter drugs have proved of immense value in our many cases of acute bronchitis or broncho-penumonia, which either arise spontaneously or follow influenza or complicate the nursing of senile patients. They have also been of great value in cutting short cases of unspecific gastro-enteritis which used to be almost endemic in hospitals of this nature.

Recreational and Occupational Therapy.—It was only found possible to provide the patients with half of their usual winter concerts owing to the difficulty of transport and to the liquidation of many of the concert parties. This was compensated for by the usual

fortnightly dance being given weekly and by a monthly social evening, provided by the Staff Recreation Club, wherein the best of the patients of both sexes mixed freely while enjoying cards, dominoes, carpet bowls, darts, table tennis and other games. Fortunately we were always able to hold the patients' annual sports in spite of the difficulty of obtaining suitable presents and prizes. We are much indebted to the Chief Constable for always being able to provide us with a much appreciated pipe band, however much attenuated, upon these occasions.

The Occupational Therapy Department managed to continue its work uninterruptedly although it was extremely difficult to obtain material, and constantly proved itself to be a most valuable form of therapy by promoting and accelerating recovery in many cases.

New Construction and Repairs.

Although one of the painters and the upholsterer were on active service, and overcoming the extreme shortage of wood, glass and paint, the hospital tradesmen have managed to maintain the fabric of the institution in an excellent state of repair.

After a considerable amount of delay several new items of equipment for the laundry and the kitchen managed to be installed. In the former a steam pressing machine was introduced during the year 1940-1, and by saving a great amount of ironing with the old-fashioned hand irons, it obviated the necessity of sending out articles to outside laundries. A foul washing machine was provided during the year 1942-43 with inestimable benefit to the nursing staff in the nursing of their helpless, bedridden patients. In the kitchen there were instituted during the year 1942-43 a tea infuser with a generous capacity of 80 gallons and a fish frier which should be capable of supplying all the patients with fried fish as soon as conditions become normal. During the same year a complicated arrangement of hot pipes and large canopies was erected to overcome the condensation which flooded the kitchen during the winter months. Although this is not yet completed, it appears to have gone a long way towards overcoming the unbearable condition.

In the engineer's department the ancient electrical generator was replaced by a newer one during 1940-1, and in the course of

the following year the old iron calorifier and water storage tanks were replaced with new ones of copper and galvanised iron respectively. About one year later a second copper calorifier was introduced. On 21/1/44 the new steam economiser, which had been installed under the efficient guidance of Mr Barry Cuthill, was put into operation. At the same time he replaced the water pump in the basement premises with a much more accessible one in the boiler room.

A system of Alarm Bells was installed throughout the dormitories during the year 1940-41, to the much greater safety of the nursing staff, as they were cut off from all sources of assistance previously. Several new floors were laid in both the male and female wards during the year 1941-2, thus reducing the possibility of fractures occurring amongst the patients from that cause. A new type of overhead gas heating was introduced into the Occupational Therapy Department during the year 1941-2 replacing the old paraffin stoves which were both odorous and inefficient. A completely new cold water supply was led into the female side of the hospital, as the original piping had become too badly corroded, during the year 1942-3.

It is worthy of note that during the year 1941-2 three large underground water tanks with a capacity of 20,000 gallons, were rediscovered, the existence of which had never been known to the oldest member of the staff. They would have provided an admirable reserve in the case of an emergency arising during an air raid.

It is to be regretted that it was not found possible to erect the 16 timber houses which were authorised for the married male nurses during the year 1938.

Gardens and Grounds.

Every effort was made to produce more vegetables in the garden which was increased in consequence, while every available patient was sent to work there who could be spared from the farm. As a result of this, coupled with the shortage of the male staff, the hospital grounds have not been maintained at their customary level of neatness. At the same time the roads throughout the policies become worse and worse until some of them now resemble the dry beds of rivers, making walking and motoring nigh impossible.

During the last winter a large belt of trees at the south-east corner of the grounds was felled and the timber sold for war-time purposes. This was considered to be the first step in felling all the trees in the estate, as these have all become considerably overgrown and are liable to be blown over at every storm. Thereafter a new system of replanting could be adopted which for many years would not interfere with the beautiful view of the Tay and the Fife hills, with the beneficial effects upon the patients, which the original choice of this site for the hospital must have intended.

FARM MANAGER'S REPORT

Summary of Farm Operations for Five Years to 15th May, 1945

During this period the Dairy Herd has increased considerably and the milk production accordingly has increased. To house the additional stock a new byre for 50 cows was built in 1944, and for the more efficient handling of the milk and utensils a new Dairy, with power-driven refrigerator and suitable sterilising plant, was built at the same time.

The cropping programme was intensified and more crops for feeding the Dairy Herd were grown as the supply of purchased feeding stuffs had been severely reduced. The potato acreage during the first years was increased from 40-50 acres to 60-70 acres. To allow of this being done the Sheep Stock was disposed of in 1940 and additional land at prospective housing sites in Dundee was cultivated. The extent of this land was 50 acres.

Labour difficulties have not been too serious and use has been made of the better class of Patient Labour from the Mental Hospital.

Table of Livestock and Milk Production.

Year Ending 15th May.	Cows in Milk.	Total Herd.	Milk Supply to Institutions Yearly.
1941, ...	90	269	74,594½ gallons
1942, ...	114	278	70,780½ ,,
1943, ...	109	301	87,586½ ,,
1944, ...	113	316	85,728½ ,,
1945, ...	110	313	93,013½ ,,

(Signed) JAMES B. BOYD,

Farms Manager.

Personal.

I wish to take this opportunity of thanking all the members of the Hospital staff for their loyal assistance and active co-operation during all those difficult years. I must also thank the Medical Officer of Health for his unfailing guidance and advice in the administration of the Hospital. My gratitude must also be expressed to the successive Conveners of the Public Health Committee and to the members of the Hospital and Special Schemes Sub-committee for the interest they have always shown in the affairs of the Hospital, for the encouragement which they have always given to the various members of the staff, and for the confidence which they have consistently shown in the administration.

A. ALLAN BELL,
M.B., Ch.B., F.R.F.P.&S.G., D.P.M.,
Medical Superintendent.

MARYFIELD HOSPITAL

COMBINED REPORT FOR THE YEARS 1941-45 (inclusive)

By Dr W. A. DAVIDSON, Medical Superintendent.

Scope of the Hospital.

Maryfield Hospital is a general municipal hospital in every sense, being equipped and capable of receiving all varieties of medical, obstetrical and surgical cases.

The novel operation of prefrontal leucotomy has been performed regularly since October, 1945, on patients from Dundee Mental Hospital with very encouraging results.

Beds number 360, including 38 childrens' and 36 maternity. One 30-bed ward has been out of ordinary commission during the war, being reserved for air raid and other casualties, and to make good this loss of accommodation a 50-bed pavilion has been taken over from the Social Welfare Department. Special departments cater for midwifery, including ante-natal patients, for gynæcological, pædiatric, ophthalmic, ear, nose and throat, dental, psychiatric, dermatological and venereal conditions. Out-patient ante-natal clinics are held twice weekly, gynæcological once a week, and psychiatric according to demand with a maximum of three sessions each week. Improved dental services are about to be adopted over the existing weekly attendance of a dentist who deals with emergency conditions arising in patients as well as in women in attendance at the ante-natal clinics. Other out patient services conducted within the Hospital premises include weekly child welfare and diphtheria immunisation sessions as well as bi-monthly orthopædic clinics. It is intended to inaugurate a pædiatric out-patient department at an early date and to establish a dental surgery for patients, staff and persons attending the out-patient departments, particularly ante-natal cases. A dentist will be in attendance five forenoons each week, and will devote his attention so far as possible to conservative methods of treatment.

Emergency Hospital Service.

During the five years under review the Hospital was included in the Emergency Hospital Service, and beds to the number of 85 were earmarked for the admission of patients entitled to treatment under that service. Latterly the reservation was reduced as demands for admission fell with the cessation of hostilities, and by November, 1945, the number was 10. The most noteworthy groups of patients received comprised numerous convoys of wounded servicemen and evacuees from the London area. Of the former group, the first batch of wounded arrived on 5th July, 1944, direct from Europe. Admissions of emergency patients on behalf of the Service during each of the five years were 35, 21, 28, 216 and 157 (1945).

To meet the demands expected to be made on the Hospital in the course of the war, certain measures were adopted to upgrade its facilities. The Department of Health accordingly arranged for the erection and equipping of a blast-proof operating theatre, and lent temporarily a portable and a mobile X-ray apparatus. A cleansing unit was also provided for the treatment of persistent gas casualties and a serum sub-depot was established to serve the region.

Premises.

Nurses' Home.—The modern nurses' home with 144 bedrooms, suites with sun balconies for senior administrative staff, and recreation rooms was not completed until 1942, and was officially declared open in August, 1944, by the Right Honourable Thomas Johnstone, P.C., the then Secretary of State for Scotland. Each nurse has a bedroom of her own with wash-hand basin, built-in wardrobe, and the usual bedroom furnishings.

North East Block.—This building was also declared open by the Secretary of State in 1944, having been completed that year. It provides accommodation for maternity cases, and is available for the treatment of ante-natal conditions. The beds are disposed in two 6-bed, two 2-bed, and two single bed wards, and a spacious operating theatre is at hand. The same building houses an out-patient department with a separate entrance, and it is there that most clinics are held. Facilities for such services comprise records office, waiting and examination rooms, private consulting room, and toilet rooms for patients and staff.

Main Buildings.

Towards the end of 1945 a start was made to divide one of the ground floor wards into two 15-bed wards. These will have no

intercommunication and will be separately staffed for the treatment of gynæcological cases in one half and for female venereal patients in the other.

Maternity Services.

Reference to the figures given in the Appendix to this report shows the demand on the maternity services that are provided. It is not, however, mere numbers alone that reveal this, as the tendency since 1945 has been to encourage mothers to remain longer in Hospital. In the past a lying-in period of ten days has become the fashion, but there is little doubt that it would be beneficial to extend it to fourteen days. At the time of booking their admission to the maternity department, women are therefore asked if they can make arrangements for their households to be managed for a fortnight when they go into labour. Though well over 90 per cent. agreed to do so, many difficulties ultimately arise, and only about 20 per cent. of confined women find it possible to remain for the two weeks. The availability of the North East Block has almost doubled the maternity accommodation in the Hospital, but even so it is fully taxed. The increased birth-rate began to make its impression in Maryfield Hospital towards the end of 1945, and if it be maintained it will be difficult to meet the demands on accommodation and yet permit patients to remain for fourteen days. Either a limited number of bookings per month will have to be enforced or a general reversion to the ten-day lying-in period will result.

There is not a nursery associated with the two maternity wards, and infants sleep in cots slung at the foot of their mothers' beds. Informed opinion is divided on the merits of this arrangement, but in 1945 the Corporation decided to call for plans for a nursery incorporating a unit for premature infants. Steps were also taken late in 1945 to acquire four premature infants' cots of the type recommended by Dr Mary Crosse and to improvise means of humidifying the atmosphere for the better nursing of these cases. These measures are, of course, merely intended to be temporary until a planned unit becomes available.

X-Ray and Allied Facilities.

A two-valve diagnostic set was obtained in 1943, and although it has given good service it does not have the output necessary for the range and volume of work it is called on to do. It is accordingly planned to replace it with four-valve equipment and rotating anode tube. The portable apparatus loaned by the Department has been

an invaluable aid, and the Corporation have signified their intention to purchase it. The lack of a superficial X-ray therapy unit is keenly felt, but there are good prospects of one being obtained in 1946.

Considerable use is made of the ultra-violet and infra-red therapy lamps, and it is proposed also to acquire a Kromayer lamp with dignosis filter.

Food Service.

The dietary of patients in Maryfield Hospital between 1941 and 1944 has been inadequate, and a survey made in the latter year confirmed this assertion. Apart from the desirability of getting away from war-time restrictions, an obvious need was to place the control of catering as a whole in the hands of a qualified and experienced person. Reference is made later to the decision to appoint a dietitian food supervisor, and this official is now in charge of all processes relating to the purchase, preparation and serving of meals to patients and staff and for the planning of menus. Responsibility is direct to the Medical Superintendent.

A much more varied and full diet is now provided and, for patients, it consists of a two-course breakfast at 7.30 a.m., three-course lunch at midday and two-course supper at 6 p.m. In addition to this, light refreshments are served at 6 a.m., 11 a.m. and 9 p.m., and afternoon tea at 4 o'clock.

Numerous items of modern equipment are required as well as portable food containers for the carriage of meals between the kitchen and the wards. A serious lack is the absence of cold storage and refrigerator space.

Staff — Medical and Auxiliary Staff.

The new appointment of a full-time Medical Superintendent was created by the Corporation in April, 1944, on the occasion of the retiral of Dr J. B. Macdonald from the post of Medical Officer. Visiting specialists include three general physicians (of whom one is Professor of Medicine and another Professor of Materia Medica in the University of St Andrews), a general surgeon, specialists in the departments of midwifery and gynæcology, pædiatrics, ear, nose and throat, ophthalmology, psychiatry, venereal diseases (combined with dermatology) and diagnostic radiology. There are also three specialist anæsthetists and a qualified dentist.

It is with regret that the death of three visiting specialists is recorded. They were Dr G. H. S. Milln, radiologist, Dr James Ferguson, anæsthetist, and Mr James Laburn, dentist. Their posts have since been filled by Dr Thomas Sprunt, Dr Margaret Muir and Mr David Finlayson, radiologist, anæsthetist, and denist respectively.

The return from active service in 1945 of Major W. L. Kinnear, pædiatrician, is warmly welcomed.

The dispensary is in charge of a part-time senior pharmacist and, since July, 1944, he has been assisted by a whole-time qualified dispenser. Since 1945 the radiologist has had the services of a full-time radiographer, but before that the radiographer's time was divided between Maryfield Hospital, Ashludie Sanatorium and the Tuberculosis Dispensary.

It was decided in 1945 to proceed to the appointment of a fully-qualified dietitian food supervisor, but the post was not filled until after the close of the year.

Nursing Staff.

Miss E. Christie, matron of the Hospital since 1930, retired on grounds of ill-health in May, 1945, and was succeeded in September of that year by Miss M. A. Noble, formerly of the Royal Infirmary, Glasgow. Appointment of a second assistant matron was approved by the Corporation in January, 1946.

The number and quality of student nurses entering upon the three-year course of training have been disappointing, and the wastage rate within the first twelve months over the five-year period was 45 per cent. In 1942 it was 58 per cent., due perhaps to the influx of young women into the nursing profession in order to avoid other forms of national service. These factors and resignations from the Civil Nursing Reserve led to consideration being given to the employment of men as ward orderlies, and in the early months of 1946 a proportion of men with previous nursing or first-aid experience was temporarily engaged.

Salary scales as recommended by the Scottish Nurses' Salaries Committee were adopted as from April, 1943, but it was not till 1944 that is was possible to institute the 96-hour fortnight. The scale of annual leave of twenty-eight days is enjoyed by all trained nursing staff, but owing to lack of numbers, students can be spared only for twenty-one days each year.

Other Staff.

Additions to the clerical staff were approved by the Corporation in 1945, and special efforts are being made to improve the telephone switchboard service. Authority was also given to engage two more porters in 1945 as well as a gardener and a window cleaner. Further engagements of male staff have since been approved, and they comprise a second window cleaner, a seasonal groundsman, two painters, a plumber and a joiner, all for maintenance work. Of the skilled tradesmen the post of one painter alone has been filled.

Training.

A three-year period of training is in force for students preparing for admission to the general part of the State register. Two sister tutors are now employed on teaching duties, and members of the visiting staff give courses of lectures in their own specialities. Professor W. J. Tulloch, Dean of the Faculty of Medicine, University of St Andrews, instructs the senior class in bacteriology.

Successful students receive a parchment diploma on becoming state registered, and in future each will be given a silver enamelled badge bearing the coat-of-arms of Dundee and engraved with their name and registration number. Recently the Corporation have agreed to expend a sum of ten guineas each year on prizes for the best nurses, and the present Convener of the Public Health Committee, Dr J. D. Saggar, is to provide an annual prize for the most outstanding nurse.

Proposals are likely to be placed before the Corporation soon for the establishment of an ad hoc building for the training of nurses including a Part I. Centre for pupil midwives. The latter measure may relieve the current difficulties in staffing the maternity wards and will help generally to elevate the status of the Hospital.

General.

A fairly full report on accommodation, staffing, equipment, etc., was submitted by me to the Public Health Committee in January, 1945, and many of the recommendations put forward are in course of fulfilment. Later reports dealt with X-ray facilities and with the institution of a combined system of training nurses involving the affiliation of Ashludie Sanatorium (as a preliminary training school) with Maryfield Hospital.

Senior medical students are accepted for periods as resident clinical clerks and assist the junior medical officers in ward and

side-room duties. Vacancies are keenly sought, and there is no doubt that the arrangements, introduced some years ago by the Medical Officer of Health, are much appreciated by the students.

1945 and 1946 part of the final examination in medicine for the degrees of M.B., Ch.B. was conducted at the Hospital by the Professor of Medicine of St Andrews University and his co-examiners, and very useful clinical cases were available for the purposes on hand. Practical instruction in pædiatrics is given to final year students in the children's ward, and medical cases are demonstrated by one of the Professors to senior dental students. Another contribution to the training of undergraduates is to be found in the maternity department where students doing practical midwifery attend in pairs for a fortnight to conduct confinements.

Appendix.

An Appendix is attached with statistical information relating to the five-year period 1941-45 inclusive.

W. A. DAVIDSON,
Medical Superintendent.

APPENDIX.

Combined Report for the Years 1941-45 (inclusive)

Bed Accommodation,	360
Temporary Annexe Beds,	50

1.—Admissions, Discharges and Deaths.

Admissions	Men.	Women.	Boys (under 10).	Girls (under 10).	Total.
1941,	938	2,214	737	717	4,606
1942,	999	2,185	727	677	4,588
1943,	1,215	2,382	789	701	5,087
1944,	1,202	2,233	630	582	4,647
1945,	1,160	2,208	604	509	4,481

Discharges.	Men.	Women.	Boys (under 10).	Girls (under 10).	Total.
1941,	717	1,971	675	681	4,044
1942,	773	1,932	692	656	4,053
1943,	914	2,080	759	676	4,429
1944,	972	2,001	613	558	4,144
1945,	937	1,954	581	495	3,967

Deaths.	Men.	Women.	Boys (under 10).	Girls	Total.
1941, ...	227	277	42	33	579
1942, ...	222	247	33	27	529
1943, ...	254	264	39	21	578
1944, ...	253	247	33	33	566
1945, ...	220	240	19	12	491

The smallest and the largest number of patients in Hospital each year and the relevant dates are shown below:—

	2.2.41	19.2.42	15.7.43	28.9.44	29.7.45
Smallest Number, ...	253	265	269	249	279
	25.3.31	20.3.42	5.2.43	28.3.44	2.3.45
Largest Number, ...	359	359	397	373	368

2.—Broad Classification of Conditions from which Discharged Patients Suffered Included:—

Classification.	1941.	1942.	1943.	1944.	1945.
Bone and joint diseases, ...	23	46	51	63	58
Circulatory diseases, ...	339	283	239	282	526
Digestive diseases, ...	274	284	261	305	395
Ductless gland diseases, ...	7	2	0	0	43
Infancy diseases and malformations,	46	47	50	44	64
General diseases, ...	128	91	71	81	128
Genito urinary, ...	238	226	178	288	411
Infectious diseases, ...	92	113	71	68	91
Malignant diseases, ...	106	104	97	130	129
Nervous diseases, ...	284	233	267	330	448
Observation (psychiatric) states, ...	120	122	111	134	171
Old age diseases, ...	78	83	120	186	125
Respiratory diseases, ...	564	404	420	416	462
Skin diseases, ...	335	383	337	250	381
Tuberculosis, ...	88	92	79	98	141
Violence and injury, ...	61	72	51	171	143

3.—Operations Performed.

	1941.	1942.	1943.	1944.	1945.	1941-45.
General surgical, ...	90	68	133	120	235	646
Gynæcological and Obstetrical—						
Major, ...	84	117	92	82	135	510
Minor, ...	101	171	155	200	83	710
Ophthalmic, ...	52	35	78	84	83	332
Ear, nose and throat, ...	22	54	43	75	45	239

4.—Maternity Department.

(a) The following confinements of pregnant women occurred during the period 1941-45:—

	1941.	1942.	1943.	1944.	1945.	1941-45.
Confinements, ...	762	791	829	764	688	3,834

(b) Causation of maternal deaths:—

Cause of Death.	1941.	1942.	1943.	1944.	1945.	1941-45.
Obstetrical shock,	1	1	1	—	—	3
Cardiac disease,	—	—	1	1	—	2
Hæmorrhage,	1	1	—	—	1	3
Placenta praevia,	—	—	—	1	—	1
Septicæmia,	—	—	—	1	—	1
Total,	2	2	2	3	1	10

(c) Causation of deaths of live-born infants:—

Cause of Death.	1941.	1942.	1943.	1944.	1945.	1941-45.
Prematurity,	18	11	11	13	5	58
Intracranial hæmorrhage,	5	1	4	4	2	16
Asphyxia,	1	3	3	—	—	7
Pneumonia,	3	2	—	—	—	5
Atelectasis,	—	—	—	1	2	3
Hæmolytic jaundice,	—	—	—	3	—	3
Gastro-enteritis,	—	—	—	—	1	1
Hæmophilia,	1	—	—	—	—	1
Atresia bile duct,	1	—	—	—	—	1
Spina bifiida, meningocele,	—	—	—	—	1	1
Hydrops fœtalis,	—	—	—	—	1	1
Other fœtal abnormality,	—	2	—	—	—	2
Total,	29	19	18	21	12	99

(d) Causation of still-births:—

Cause as registered.	1941.	1942.	1943.	1944.	1945.	1941-45.
Maceration,	12	12	6	2	5	37
Fœtal abnormality,	7	1	5	4	—	17
Fœtal ascites,	2	—	—	—	—	2
Hydrocephalus,	—	3	—	—	—	3
Anencephaly,	—	2	—	—	5	7
Prematurity,	5	2	5	5	4	21
Malpresentation,	—	—	—	2	—	2
Breech presentation,	4	3	4	7	—	18
Occipito-posterior,	—	1	—	—	—	1
Prolapsed cord,	2	—	3	3	3	11
Intra-uterine asphyxia,	5	15	9	5	4	38
Placenta praevia,	—	—	—	—	4	4
Antepartum hæmorrhage,	3	—	—	—	—	3
External accidental hæmorrhage,	—	—	—	—	1	1
Intracranial hæmorrhage,	—	—	1	1	1	3
Toxæmia of mother,	—	—	—	3	1	4
Pre-eclampsia,	—	—	—	—	1	1
Hæmolytic Anæmia,	—	—	—	1	—	1
Total,	40	39	33	33	29	174

(e) The number of ante-natal out-patients and the stage of pregnancy when they first visited the clinic:—

Stage of pregnancy.	1941.	1942.	1943.	1944.	1945.	1941-45.
2nd month, ...	9	16	35	41	32	133
3rd month, ...	60	71	114	105	121	471
4th month, ...	141	167	159	183	215	865
5th month, ...	191	203	217	228	223	1,062
6th month, ...	242	223	177	114	112	868
7th month, ...	131	95	66	44	66	402
8th month, ...	41	29	30	27	27	154
9th month, ...	13	16	23	9	13	74
Total, ...	828	820	821	751	809	4,029

An average of five visits to the clinic was paid by each ante-natal patient.

VENEREAL DISEASES

Report by Dr D. M. KEAY
Special Medical Officer, Venereal Diseases Scheme.

During the years 1941-1945, and in common with returns from other parts of the country, the number of patients attending this Clinic has shown a marked increase over the pre-war figures.

It is generally accepted that among factors contributing to the increase were the "black-out," boredom, the lack of emotional control commonly experienced during periods of stress, and to the complete mobilisation of labour which threw persons of varied outlook, habits and morals into close relationship unlikely to occur in normal circumstances. An appreciable part of the increase in male patients was due to a temporary influx of cases among Service and Merchant Navy personnel, and when these are deducted the figure for male syphilis shows little variation from the pre-war average, while gonorrhœa shows a decrease. Female syphilis also shows a decrease, although there was a marked rise in cases of gonorrhœa. It is probable that the general increase in numbers is an effect of war-time conditions and that a decline will occur when normal conditions return although it may take a year or two for these to become effective.

The figures in summary detail are as follows:—

	Syphilis.		Gonorrhœa.		Non-Specific Venereal Infection.		No V.D.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1941,	128	63	364	208	90	—	177	159	759	432
1942,	282	114	378	201	93	—	331	218	1,084	533
1943,	301	110	353	349	134	—	571	318	1,359	777
1944,	219	115	257	258	105	—	589	410	1,170	783
1945,	118	106	273	305	120	50	923	358	1,434	819

A study of these annual returns shows a very definite rise in the number of persons found not to be suffering from venereal disease.

This has been due, no doubt, to an increase in knowledge among the general public of the risks and dangers of venereal infections and has occurred as a direct result of the propaganda campaign against venereal diseases. This programme of public education has taken the form of simple statements of facts—how venereal disease is acquired, how it can be avoided, that it is infectious, and if promptly treated it can be cured.

The majority of non-infected patients may be regarded as having exposed themselves to the risk of contracting syphilis and gonorrhœa and therefore should be included in any assessment of the value of preventive propaganda. Due credit should be paid to the well meant intentions of those directing the campaign, but it is doubtful if it has reached the person who is not socially conscious. The large increase in the number of patients not suffering from V.D. without a corresponding increase in those who have acquired infection suggests that it has not.

More direct action is necessary to reach this type of person. Although in a general sense the propaganda campaign has shown results, in this special sense it has proved a failure.

Control of Venereal Diseases.

Regulation 33B was added to the Emergency Defence (General) Regulations in November, 1942.

Briefly, it enables medical officers of health to exercise powers of compulsion in certain well defined cases. Together with the rules and regulations issued under it, it gives detailed instructions to special practitioners and to medical officers of health on the action to be taken by them if a person who has acquired a venereal infection names the contact or person whom he or she suspects to be the source of that infection.

If one person is named as a contact by two or more patients the medical officer of health must serve a notice on the contact to attend for examination by a special practitioner, and if the contact is found to be suffering from communicable disease, the special practitioner, in his turn, must serve that contact with a compulsory notice to attend for treatment and to continue under treatment until free of infection. The medical officer of health is therefore given powers to apply compulsion in limited cases—that admittedly dangerous but small class of persons known to be spreading venereal disease and who are not under treatment. No official action can be taken on a single notice.

At the time of the introduction of Regulation 33B it was thought by many persons interested that its scope, which was necessarily limited in its application would be even more restricted

in its operative powers. There now seems little doubt that this foreboding was justified. Whereas the number of cases in which a first notification has been made is considerable, the number of cases in which the essential second notification has been received is small; consequently the regulation as designed has proved operable against a mere handful of infected persons.

Although the medical officer of health is not legally bound to move until he has received two notices relating to the same person, it has been claimed that Regulation 33B ensures that he obtains, at any rate, some of the information that he would have if V.D. were notifiable. It has also been stated in support of the regulation that informal approach is usually made on receipt of the first notice and that this approach together with assiduous persuasion will do more to combat V.D. than any other single measure. But this method of contacting possible sources of infection has always been a routine employed in any efficiently run clinic and cannot be claimed as a point in favour of the regulation. It must be obvious then that the new powers have not facilitated, to any appreciable degree, the tracing of contacts.

In addition to no official action being possible on a single notification, another weakness in the regulation lies in the fact that medical practitioners, other than special practitioners, may treat venereal patients with no obligation as regards notification of their contacts. On the other hand, they are at liberty to continue the treatment of any of these patients although they may be notifiable under the regulation.

Our own figures from November, 1942, to 31st December, 1945, are summarised as follows, and it would be interesting to know if they compare favourably or unfavourably with returns from other clinics of similar size.

Twenty-four contacts, 20 F. and 4 M., were named in each case by two or more patients. All attended for examination and treatment following informal approach. One person (F.) defaulted. Repeated attempts to secure this person's attendance failed and this case was reported to the Procurator-Fiscal. She disappeared from the district and could not be traced.

Single notices were received as follows:—

	F.	M.	Total.
Number of Single Notices, ...	156	52	208
Number Contacted and Examined, ...	83	49	132
Infection Confirmed, ...	74	48	122
Infection not Confirmed, ...	9	1	10
Refused Examination, ...	7	1	8
Failed to Trace, ...	86	2	68
Defaulted, ...	51	25	76

Unofficial approach to notified contacts revealed that the majority did not appear to know that they were infected and showed willingness and indeed eagerness to report for examination and treatment. This initial enthusiasm, however, was not always maintained. As shown in the foregoing analysis 122 persons— 74 F. and 48 M. — contacted undertook treatment; but 76 — 51 F. and 25 M. — failed to complete treatment and/or surveillance. A small number — 7 F. and 1 M. — refused to attend for examination, and one wonders if these two groups should be allowed to neglect their social obligations. In all probability patients who are notified even once can be classed as promiscuous and dangerous spreaders of disease. They escape coming under the terms of the regulations merely through lack of evidence.

The value of Regulation 33B in V.D. control could be augmented greatly by extending its provisions so that official action could follow receipt of one notification, and some authorities believe that this addition to the existing regulations would be simpler and more effective than seeking the inclusion of V.D. among notifiable infectious diseases. To my mind, this, although an improvement would be an inadequate compromise, in that it would refer only to suspected sources of infection.

If we are honestly concerned about the control of V.D., all persons suffering from a venereal disease in an infectious stage should be notifiable. It is true that notification is impossible until the patient seeks advice or until he or she has been named as a source of infection. It is equally true that notification by itself would not provide a complete solution to the problem, because it would not include compulsory treatment, and even to be reasonably successful it would require the active co-operation of all medical practitioners. Nevertheless, compulsory notification of all persons known to be suffering from V.D. in a communicable form would go a fair way in controlling the spread of the disease. This should

include ante-natal syphilis which is largely outwith the scope of the present regulations.

From time to time various arguments have been put forward both for and against compulsory notification. One argument against—the trump card of the advocate of voluntary effort—is the fear that the procedure would drive V.D. underground. It is an argument that is difficult to disprove, but even so it will be admitted that much V.D. is already underground and the spade work performed by voluntary methods has been unable to force it to the surface. Voluntary methods have been tried now for many years and have failed miserably. Compulsory measures can fare no worse.

Sulphonamide Treatment of Gonorrhœa.

A large number of reports from many authors has been published in which the writers have stated their preference for different sulphonamides, for varying doses, spacing and different methods of treatment. The extensive literature on the subject makes a full survey impossible.

However, it has been asserted that no matter what sulphonamide is used in gonorrhœa it may effect one of three things.

(1) It may provide rapid cure, both clinical and bacteriological;

(2) It may produce clinical cure in certain patients who remain asymptomatic carriers or who relapse when the drug is suspended—partial resistance; or

(3) It may fail to produce any effect whatever—total resistance.

In 1941, at the beginning of the period under review, Sulphapyridine was the preparation in routine use in this Clinic, but the persistence or re-appearance of gonococci in post-treatment tests began to show a higher incidence in successive series of cases observed. A possible explanation was that some of the strains of gonococci had become sulphapyridine resistant or that the number of patients who were constitutionally unable to utilise the drug effectively was increasing. There appears to be some evidence both clinical and experimental that a true sulphonamide resistant gonococcal strain does exist, but the majority of apparently resistant cases are only temporarily so resistant.

Several attempts have been made to estimate or determine the relative value of the sulphonamides in the treatment of gonorrhœa, and it is claimed that most satisfactory results are obtained with Sulphathiazole or Sulphadiazine. Our own results have confirmed this assertion, and these together with their low toxicity—which is important in out-patient practice—lead to their adoption for routine therapy.

Sulphadiazine is regarded as being even less toxic than Sulphathiazole, but as it was often in short supply it was reserved mainly for use as a " repeat sulphonamide." On evidence based on a large number of trials these two compounds are now generally regarded as specific in the treatment of gonorrhœa.

Different methods of treatment have been advocated by various authorities, and some of these were submitted to trial. They ranged from short intensive high dosage schemes of 1-3 days to longer, less intensive courses of 5-7 days' duration. Extended trial could not be given to all the methods suggested, but it was found that short intensive courses had little to recommend them, and it was decided for reasons stated later that the maximum dose of drug should be 25 grms. spread over 5 days and given at regular intervals.

Treatment of Gonorrhœa — Male Patients.

Specimens for bacteriological examination are taken before treatment is instituted. These include smears of the discharge and samples of blood for serological examination.

In order to render the patient non-infectious as soon as possible, the sulphonamide compounds prescribed are sulphathiazole or sulphadiazine. These preparations besides being of high therapeutic efficiency also cause a minimum of subjective discomfort. This constitutional sensitivity to sulphonamides may interfere with the routine treatment of gonorrhœa, but, on the first occasion in which sulphonamides are administered to a patient, it is unlikely to occur unless the total dosage exceeds 30 grms. and/or unless the treatment is extended beyond seven days.

A course of treatment therefore consists of 5 grms. daily for 5 days and, as an even distribution of the drug is desirable, patients are instructed to take 1 grm. (2 tablets) every 4 hours. The tablets are crushed and swallowed with ½ pint of water. Another half-pint of water is taken between doses. This guarantees a minimum of 5 pints of fluid in 24 hours. Pot Citrate gr. 30 t.i.d. is also prescribed although the value of this is open to doubt.

Local Treatment.—Wherever possible, male patients are instructed to irrigate at least once daily and this for two reasons:—

(1) The patient is under daily observation when undergoing chemo-therapy;

(2) Local treatment was found to reduce the incidence of non-specific urtheritis occurring as a sequela to a cured gonorrhœa.

Urethral irrigations are continued for 12 days, and, if at the end of that time the patient has obtained a clinical cure, he is submitted to his first surveillance test.

Surveillance.—In addition to clinical examination this comprises naked eye inspection (two glass test) of urine, the examination of a film smear of prostatic and vesicular secretions and, when necessary, of a centrifugalised urine.

Two similar examinations are conducted at weekly intervals.

If all three surveillance tests are satisfactory the above routine is repeated at the end of another four weeks with the addition of serological examinations (Gonococcus Complement Fixation test and Wasserman reaction).

Final Tests.—Final tests of cure are carried out three months after the first satisfactory surveillance test and comprise:—

(1) Clinical examination;
(2) Urine examination;
(3) Film smear of prostatic-vesicular secretion;
(4) Gonococcus Complement Fixation test and Wasserman reaction;
(5) Anterior urethroscopy;
(6) Passage of the largest sound that will traverse the urinary meatus.

If all these tests are satisfactory the patient is considered cured. The advisability of routine cultures, which is now generally admitted, is now under consideration.

When Sulphathiazole was first used about 90% of male patients responded to the drug as prescribed above, but the figure gradually dropped until in the last series observed only 82% per cent. were cured. This has repeated our experience with Sulphapyridine, although not to the same degree.

Sulphonamide tolerant patients who have not responded to a single course are not often cured by a further immediate treatment with the same or an alternate sulphonamide compound even if the daily dose is increased. In the course of our observations, however, it was noted that a number of patients who did not respond to a course of Sulphathiazole as outlined above did react to a similar course of Sulphadiazine administered after the lapse of seven days. This procedure, in the last series observed restored the cure rate to 90%. The remainder responded in time to injections of gonococcal vaccine, together with continued local treatment.

Penicillin in the Treatment of Gonorrhœa.

It is now well known that penicillin will cure uncomplicated gonorrhœa with a speed and certainty unapproached by any other method of treatment, and that it has a therapeutic value far in excess of any drug previously used.

This was to be expected because in 1941 research workers in Oxford found that the Gonococcus headed their list of pathogenic organisms given in order of their sensitivity to penicillin in culture. So much has already been published on the treatment of gonorrhœa with penicillin that a detailed survey is impossible.

As with the sulphonamides, the search for optimum dosage and administration of the drug has led to wide variation in total dosage, individual dose and interval between doses.

Schemes of treatment that have been recommended have varied from small, closely spaced doses of from 10,000 units to single injections of 300,000 units, with the duration of treatment extending from the time required to give one injection to 48 hours.

In the early surveys it was widely claimed that 100,000 units given in divided doses at intervals of 2-3 hours was the method of optimum effect and would give the highest percentage rate of cure. Later reports, however, have maintained that this total dosage is too small, and some results published recently have shown a failure rate as high as 30%.

Penicillin was first used in the Clinic in June, 1945. Until the end of the year its use was reserved, in the main, for the treatment of patients who failed to respond to at least one course of sulphonamide.

The results of treatment of male patients showed the highest cure rate (95%) was obtained with a total dosage of 250,000 units in aqueous solution administered in individual doses of 50,000 units every two hours. The results with anything less than 200,000 units were uniformally unsatisfactory.

In female patients 250,000 units in individual doses and spaced as above were given on two successive days. This scheme also showed a 95% rate of cure.

One drawback to penicillin in the treatment of gonorrhœa lies in the fact that the present recommended method of administration in divided doses at frequent intervals necessitates absence from work with consequent loss of pay and in many cases embarrassing explanations. Attempts to avoid this by using large single doses (300,000 units) of penicillin in aqueous solution were not therapeutically successful.

Another disadvantage is that penicillin in doses suitable for the treatment of gonorrhœa is said to lengthen the incubation period of syphilis and there is therefore a risk of masking co-existent specific infection. It is generally agreed, however, that the clinical appearances of the early lesions of the disease are unaltered and that the presence of Treponema Pallidum can be easily demonstrated by " dark field " illumination. The danger of masking syphilis is surmounted by increasing the observation cases of gonorrhœa treated with penicillin from the customary three months to six months.

Some have advised even longer surveillance, but as it has been shown that even in the treatment of syphilis itself with penicillin in a dosage of 2.4 mega units, cutaneous and mucous relapse phenomena appear within six months of treatment, this interval is probably sufficient. Actual evidence as to how often infection with syphilis and gonorrhœa may be simultaneous is conflicting. In one study of 500 males and 500 females with acute gonorrhœa, only 1.4% of the former and 3% of the latter had co-existing primary syphilis. When one remembers that the early signs of acute gonorrhœa are often missed or disregarded in the female and that the infection has usually been present for a few weeks before she reports for examination, the danger of concealing syphilis in either sex with penicillin appears to be exaggerated. Even although the risk is admitted, its importance is more theoretical than practical.

Penicillin in the Treatment of Syphilis.

It is a remarkable fact that the two principal forms of venereal disease should be amenable to the same drug.

Although penicillin treatment of syphilis ranks as the greatest advance in the routine treatment of the disease, the end results have yet to be evaluated. Prolonged observation of a very large number of cases will be necessary before its therapeutic value can be assessed even in syphilis in the very early stages. Articles concerning the use of penicillin in the treatment of syphilis are appearing almost daily in the medical press, and it is impossible to give an adequate selection here.

The drug was introduced as a routine treatment of early syphilis in the U.S. Army in June, 1944, and in the British Army four months later. Most of the information available for study has come from these two sources. The Americans appear to accord a higher place to penicillin treatment than we do in this country.

Enthusiastic hopes were placed on the excellent clinical results which penicillin quickly gave, but as time has gone on expectations have diminished. Recent trials hardly confirm the early optimism, and few here now rely on penicillin alone no matter at what stage of the disease treatment is begun, how frequent the injections or how large the total dosage. Much has been learned, but still a great deal remains undecided about the exact place of penicillin in the management of syphilis.

The original plans of treatment which aim at maintenance of relatively constant levels of penicillin in the blood over an arbitrary period of 7½-10 days provide the basis for the majority of treatment schedules in current use. This scheme necessitates admission to hospital. The number of cases we have been able to treat is far too small to have any real significance, but these together with cases that have been treated in and discharged from the Services and under surveillance here have shown that penicillin alone is not so effective as combined therapy in preventing early relapse.

A recent review at the Central Syphilis Register at the War Office revealed that in 270 cases of early syphilis treated with 2.4 mega units of penicillin and followed up for six months, the failure rate was 8%. Individual observers have quoted much higher figures, some as high as 20%.

In planning a scheme of treatment for routine use, a guide was given by an American observation that there is probably a synergistic action between penicillin and arsenoxide. The scheme now in use here consists of 2.4 mega units of penicillin administered in divided doses every three hours for seven and a half days, followed by 50% of the total amount of arsenic and bismuth of the accepted standard of treatment of the pre-penicillin days, e.g., a patient who would have received four " unit " courses of arsenic and bismuth now receives two courses along with penicillin.

The anti-spirochætal effect of the drug is not in doubt, but its ultimate value in the treatment of syphilis is very far from being assessed. It requires at least five years to estimate the value of any method of treatment of early syphilis, and therefore the dosage and treatment schedules employed for penicillin alone or in conjunction with arsenic and bismuth are of necessity experimental.

An exact assessment of their values is dependent on the lapse of time and procedure of investigation. In order that a solution may be reached as quickly as possible, there seems a good case for the setting up of a central organisation for the co-ordination of methods and for the correlation of their results.

BACTERIOLOGICAL SERVICES

By Prof. W. J. TULLOCH

The work of this Department has been of the same nature as in previous years but naturally modified to some extent by the conditions brought about by war.

This Department of Bacteriology became, on the outbreak of hositilities, the Scottish East Central Emergency Laboratory and, therefore, a section of the National Health Service under the Commissioner of this area.

Since September, 1939, the policy followed has been to focus attention solely upon the control of communicable diseases and the examination of water and milk supplies, eliminating all that was not essential.

During 1942, however, the prevalence of diphtheria in the city and the surrounding country necessitated an intensive investigation of that malady, epecially as that condition presented certain peculiar features during the year under consideration. This intensive examination of diphtheria cases still continues as it may prove valuable in investigating the epidemiology of the disease.

I. — Venereal Diseases.

The total number of tests performed was 17,083, 10,377 being made for the investigation of syphilis and 6,706 being performed for the diagnosis of gonorrhœa. The total number, therefore, was almost the same as in the previous year.

II.—Diphtheria-Swabs, Widal Tests for Enteric Fever, and Sputa for Tuberculosis.

There were 1,104 swabs examined from suspected cases of diphtheria during 1945, while 135 specimens of blood were submitted for the Widal reaction and 248 specimens of sputum were tested for the presence of B. tuberculosis.

III.—Blood Cultures and Examination of Fæces and Urine for Enteric Bacilli.

In suspected cases of enteric, 15 blood cultures, 163 specimens of stool and 143 of urine were examined during 1945.

IV.—Examination of Suspected Tuberculous Material other than Sputum.

Of these, 648 were investigated during the year under consideration.

V.—Puerperal Sepsis.

The control of this condition involved the examination of 7 specimens of morbid material, a very marked decrease as compared with previous years.

VI.—Examination of Milk for Cleanliness.

The routine examination of milk was continued notwithstanding the conditions brought about by war, as it was deemed wise, if possible, to maintain the scrutiny of this very essential foodstuff.

The examples examined were:—

Certified,	34 samples
T.T.,	2 ,,
Pasteurised,	23 ,,
Standard,	55 ,,
Undesignated,	249 ,,
Sterilized,	9 ,,

On the whole the findings were satisfactory.

In the case of pasteurised milk the phosphatase and methylene blue tests were applied, and all 23 specimens satisfied the requirements in respect of them.

VII.—Examination of Milk for Presence of B. Tuberculosis.

The biological test for the presence of B. tuberculosis in milk was resumed in 1943 as a routine procedure. Of 125 samples tested during 1945, 3 proved to be infected with B. tuberculosis.

VIII.—Examination of Water for Cleanliness.

During 1945 the water supply of the City has been under weekly supervision, 477 samples being examined.

In addition, 10 further specimens of water, derived from sources other than the Municipal supply, were tested, making a total of 487 samples.

IX.—Bacillary Dysentery.

During 1941 Dr Brodie of this Department elaborated new methods whereby the accuracy of laboratory investigation of bacillary dysentery has been much enhanced.

During 1945, 1,189 specimens from 535 suspected cases of bacillary dysentery were examined, and of these 90 proved to be actual cases of the disease.

Among the 90 cases none were from institutional outbreaks.

X.—Meningitis.

In 153 instances primary meningitis was suspected, and of them only 7 proved to be cases of true cerebro-spinal fever; 2 were infected with bacillus hæmophilus, 2 with Staphylococcus aureus and 2 with Streptococcus viridans.

XI.—Bacillary Food Infection.

There were 11 cases of suspected bacillary food infection during 1945; of these four proved positive and seven negative. The infecting organism in two was the Aertrycke bacillus and in two the Potsdam bacillus.

XII.—Miscellaneous Investigations.

(a) Leptospirosis, ...	6
(b) Pyrexia of Unknown Origin, ...	110
(c) Vincent's Angina, ...	13
(d) Pleural pus, ...	30
(e) Pus from abscess, ...	19
(f) Anthrax, ...	2
(g) Throat swabs for Streptococcus hæmolyticus, ...	145
(h) Preparation of autogenous vaccine, ...	1
(i.) Cultural and biological examination of sputum and gastric lavage, ...	29
(j) Other examinations, ...	24
(k) Tests of sterilizers, ...	1

W. J. TULLOCH.

MATERNITY AND INFANT WELFARE SERVICES.

Summary Report for Years 1941-1945 (Inclusive).

By Dr ANNIE A. FULTON

Vital Statistics — Birth-rate.

During these years the birth-rate, except for a rise in 1944, kept more or less stationary and was lower than the rate for Scotland as a whole. The illegitimate rate, on the other hand, was higher than the rate for Scotland and the proportion of illegitimate births steadily rose following the general trend. This is a matter for concern owing to the lessened chances for survival of the illegitimate child.

TABLE I.

	Live Birth-rate.		Illegitimate Rate.	
Year	Dundee.	Scotland.	Dundee.	Scotland.
1941, ...	16.3	17.9	7.3	6.6
1942, ...	15.9	18.1	8.1	7.1
1943, ...	16.3	18.9	8.5	7.6
1944, ...	18.0	19.2	9.3	7.9
1945, ...	16.1	16.9	10.0	8.6

Infant Mortality Rate.

It is gratifying to report that the infant mortality rate is falling, again following the general trend for the country, as this rate is a very good index of the health of a community.

TABLE II.

	Infant Mortality Rate.		Neo-Natal Rate.	Rate from 1-12 Months.	Still Birth Rate.		Still Birth Rate + Infant Mortality Rate.	
Year.	Scotland.	Dundee.	Dundee.	Dundee	Scotland.	Dundee.	Scotland.	Dundee.
1941, ...	83	89	46	43	39	43	122	132
1942, ...	69	68	32	36	38	45	107	113
1943, ...	65	69	30	39	36	38	101	107
1944, ...	65	60	29	31	32	44	97	104
1945, ...	56	57	34	23	33	31	89	88

Deaths of infants in the first month of life (neo-natal deaths) may be largely attributed to causes relating to the health of the mother during pregnancy or to the character of the labour, and statistics show that prematurity and deaths ascribed to " congenital debility " are mainly responsible for mortality in the first month. The neo-natal rate has fallen since 1941. The deaths in the later months of infancy on the other hand, are influenced by different factors such as feeding (especially breast-feeding) and infection. The rate in this period (1-12 months) has been almost halved since 1941.

Still Birth-rate.

The still birth-rate is influenced by the same factors as the neo-natal rate, and this rate has also shown a tendency to fall.

Infant Deaths.

The following tables show the adverse effects of illegitimacy and prematurity.

TABLE III (a).

Year.		No. of Registered Births (corrected).	No. Illegitimate.		No. of Infant Deaths.	No. Illegitimate.	
1941,	...	2,850	209	7.3%	252	28	11.1%
1942,	...	2,770	224	8.1%	186	22	11.8%
1943,	...	2,849	241	8.5%	185	30	16.2%
1944,	...	3,174	294	9.3%	181	20	11.04%
1945,	...	2,832	282	10.0%	162	24	14.8%

TABLE III (b).

Year.		Total Number of Births.	No. Notified as Premature.		No. of Infant Deaths.	No. Considered to be Premature.	
1941,	...	3,282	240	7.3%	252	92	36.5%
1942,	...	3,237	155	4.8%	186	51	27.4%
1943,	...	3,382	177	5.2%	185	42	22.8%
1944,	...	3,722	216	5.8%	181	39	21.5%
1945,	...	3,365	198	5.9%	162	49	30.2%

The number of births notified as premature may not be accurate and probably errs on the side of under-estimation. In conformity with the standard in international use an infant whose birth weight is 5½ lbs. or less is regarded as being premature (or immature).

The birth weights of infants born outside of institutions are not always available and therefore the diagnosis of prematurity is made on clinical grounds and not according to the international standard.

Maternal Mortality.

TABLE IV.

Year.		Total Births.	Maternal Deaths associated with pregnancy or childbirth including women whose homes were outwith Dundee but who were confined in the city.	Maternal Mortality Rate. (corrected for transfers).
1941,	...	3,282	33	4.56%
1942,	...	3,237	16	3.61%
1943,	...	3,382	22	3.51%
1944,	...	3,722	21	3.5%
1945,	...	3,365	12	3.5%

The maternal mortality rate, although still high, has also shown a tendency to fall during the period under consideration.

Notification of Special Conditions.

TABLE V.

Year		Puerperal Sepsis.	Puerperal Pyrexia.	Ophthalmia Neonatorum.
1941,	......	19	30	34
1942,	......	15	32	38
1943,	......	19	19	32
1944,	......	17	30	27
1945,	......	8	55	46

Although the number of notified cases of Puerperal Sepsis decreased in 1945, the number of notifications of Puerperal Pyrexia rose sharply. This increase in Puerperal Pyrexia may be more apparent than real and due rather to a stricter interpretation of the definition of Puerperal Pyrexia in the Public Health (Infectious Diseases) Regulations (Scotland), 1932, as regards notification. The rise in Ophthalmia Neonatorum notifications may be due to the same cause.

Maternity Services.

There has been an increasing tendency for confinements to take place in institutions as shown in the following table:—

TABLE VI.

Year.	Total Births.	Percentages Notified.	Institutional Confinements.		Domiciliary Confinements (including D.R.I. Outdoor Cases).	
1941,	3,282	97.3	2,213	(67.4%)	1,069	(32.6%)
1942,	3,237	97.2	2,278	(70.4%)	959	(29.6%)
1943,	3,382	97.2	2,557	(75.6%)	824	(24.4%)
1944,	3,722	97.4	2,793	(75.0%)	929	(25.0%)
1945,	3,365	98.4	2,631	(78.2%)	734	(21.8%)

This may be accounted for to a large extent by the shortage of housing accommodation (many young couples have no homes of their own) and lack of domestic help. In addition, there is probably a greater demand for hospital confinement for its own sake; the mother enjoys a sense of security knowing that she and her baby are in expert hands, and many a mother can only get in hospital the period of complete rest so essential in her own interests and in those of her child. The policy in Maryfield Hospital is to endeavour to persuade the mother to stay for a minimum period of two weeks after a normal confinement. The mothers have been accustomed to shorter periods, and in many cases are anxious to get home as soon as possible. However, some progress has been made in this direction as Dr Davidson points out in his report for

1945. In the case of a first baby the advantages of a longer stay in hospital include the establishment of breast feeding before discharge from hospital and the opportunity for mothercraft teaching, and in the case of later children the opportunity for the mother having a rest before tackling her increased responsibilities.

On the other hand, if the home is good and the pregnancy normal, there are advantages in having the confinement at home. If hospitals are overcrowded or under-staffed the disadvantages are obvious and the danger of infection is greatly increased.

In June, 1944, accommodation for maternity patients in Maryfield Hospital was increased by the opening of the North-East Block which provided 18 additional beds. Recently two rooms in this block have been used for nursing premature babies and, although three maternity beds have had to be sacrificed, this arrangement has been well justified.

Maternity Services (Scotland) Act, 1937.

A scheme prepared after the passing of this Act, and approved by the Department of Health for Scotland, was not brought into operation because the practitioners in the City refused to participate. It was not possible, owing to the war, to operate an alternative scheme, but in November, 1944, when the Department of Health intimated a more generous scale of fees for participating general practitioners the Corporation again consulted the local general medical practitioners. The practitioners attending a meeting called by the Dundee Panel Committee and the Dundee Division of the British Medical Association recommended that practitioners in Dundee should refuse service under the Act.

At the end of 1945, in a report by the Medical Officer of Health on the Maternity Services, Dr Burgess put forward alternative suggestions for dealing with the situation, and it was agreed to communicate with individual practitioners in an attempt to ascertain the number of medical practitioners who would be willing to participate in the scheme. Only a very small number expressed willingness to do so, and the Department of Health was asked to approve the appointment of specialist obstetricians instead of general medical practitioners.

Ante-Natal Clinics.

Until February, 1945, there were three municipal ante-natal centres, namely, at Nelson Street (Central), Lochee (Ancrum Road) and at Maryfield Hospital. One weekly session was held at

Nelson Street and Lochee respectively, and two sessions each week at Maryfield Hospital. Ante-natal clinics at Maryfield Hospital were previously held in adapted premises in the main maternity ward, but in June, 1944, the New North-East Block, with a specially built ante-natal clinic attached, was opened. These excellent premises have since been used and have greatly facilitated the work of the specialist obstetrician and his staff, and also have provided conditions much appreciated by the expectant mother. When Professor Fairlie resigned in February, 1945, it was decided to close the ante-natal centre at Nelson Street and to transfer the work to the Maryfield centre.

Ante-Natal Attendances.

TABLE VII.

	Central (Nelson St.)		Lochee (Ancrum Rd.)		Maryfield Hospital.		Total.	
Year.	New Cases.	Total Attendances.	New Cases.	Total Attendances.	New Cases.	Total Attendances.	New Cases.	Total Attendances.
1941,	230	539	115	357	828	4,193	1,173	5,089
1942,	161	435	141	473	820	4,238	1,122	5,146
1943,	146	374	120	490	821	4,174	1,087	5,038
1944,	188	462	129	578	751	3,979	1,068	5,019
1945,	38	142	175	380	809	4,117	1,022	4,639

Advice Centre for Expectant Mothers.

In 1941 an advice centre for expectant mothers was opened at the Public Health Office, Bell Street. Two sessions are held each week, and women wishing to be confined in Maryfield Hospital book there. Advice on matters relating to the pregnancy, confinement, rearing of the infant, social problems, etc., is given, and women who are not to be confined in Maryfield Hospital are also encouraged to attend. Attendance at this advice centre is followed up by visits by the Health Visitors to the homes.

TABLE VIII.

Year.	Attendance For Booking.	Advice Only.
1941,	816	—
1942,	842	—
1943,	805	—
1944,	783	—
1945,	780	138

In 1943 a survey was carried out of 207 mothers attending corporation ante-natal clinics and the hæmoglobin levels were estimated. The results were regarded as being satisfactory and compared favourably with results from other areas. Since 1943 the routine issue, at the ante-natal clinics, of tablets containing iron may be presumed to have made the position still more satisfactory.

Infant Welfare Clinics.

In January, 1941, there were 6 centres at each of which a weekly clinic was held. In March, 1941, a new centre was opened at the Lodge at Maryfield Hospital, and this was transferred to the North-East Block when this was opened in 1944. This centre was not built as a child welfare clinic, but it is a modern and well-equipped building and, although the waiting and weighing rooms are rather small, it serves the purpose very well.

In 1942 the clinic at Isles' Lane was converted into a War-Time Nursery, and the Infant Welfare Clinic was transferred to Sharp's Mill in Blinshall Street, which was used as a first-aid post during the war.

The other centres at Nelson Street, Caldrum Street, Ferry Road, Ancrum Road and Eastern School, Broughty Ferry, are still in use, but as the whole of the Eastern School is urgently required for educational purposes steps have been taken to acquire other accommodation in Fort Street for occupation in the near future.

Clinic Attendances.

TABLE IX.

	NEW CASES.			ATTENDANCES.			
Year.	Under 1 Year.	Over 1 Year.	Mothers.	Under 1 Year.	Over 1 Year.	Mothers.	Total.
1941,	957	84	18	9,059	3,665	48	12,772
1942,	1,009	98	22	8,953	3,510	214	12,677
1943,	932	61	18	9,754	4,859	278	14,891
1944,	947	61	12	8,969	5,442	333	14,744
1945,	1,028	86	12	10,426	4,566	394	15,386

Special Clinics.

The report of dental treatment of children under 5 years of age is included in the Pre-School Dental Services Report.

Dental Clinic.

TABLE X.

Year.	Attendance of Mothers.
1941, ...	74
1942, ...	69
1943, ...	24
1944, ...	23
1945, ...	28

Ultra-Violet Light Clinic.

TABLE XI.

	BABIES.				CHILDREN.			
		Cases Carried forward from				Cases Carried forward from		
Year.	New Cases.	Previous Year.	Total Cases.	Attendances.	New Cases.	Previous Year.	Total Cases.	Attendances.
1941,	35	3	38	419	100	17	117	2,053
1942,	53	5	58	833	150	33	183	3,159
1943,	90	5	95	1,517	189	36	225	4,719
1944,	60	9	69	1,046	179	48	227	3,888
1945,	33	6	39	539	143	28	171	3,479

Work of the Health Visitors on the District.

There are at present 23 districts, and each Health Visitor acts as visitor for Tuberculosis and the School Medical Services as well as for Maternity and Infant Welfare. Some of the districts are so large that it is impossible to visit all the infants born in the city. This leads to some measure of selection which tends to be rather arbitrary if not invidious.

Pregnancy is not a notifiable condition, and owing to lack of information all expectant mothers are not visited. Visitors, however, visit as many mothers as possible during the ante-natal period.

Health Visitors' Visits.

TABLE XII.

	Mothers A.N.			Mothers P.N.			Babies.		
Year.	1st Visits.	Revisits.	Total	1st Visits.	Revisits.	Total.	1st Visits.	Revisits.	Total.
1941,	891	146	1,037	1,689	152	1,841	4,831	10,863	15,694
1942	738	87	825	1,482	75	1,557	4,328	9,824	14,152
1943,	802	97	899	1,819	91	1,910	4,702	10,829	15,531
1944,	869	165	1,034	2,250	196	2,446	4,811	12,856	17,667
1945,	1,264	2,205	3,469	2,036	249	2,285	4,733	14,541	19,274

Special Visits.

TABLE XII(a).

Year.		Ophthalmia Neonatorum.	Infantile Diarrhœa.	Puerperal Pyrexia.	Puerperal Sepsis.
1941,	...	240	51	1	1
1942,	...	281	26	26	6
1943,	...	198	11	10	1
1944,	...	227	18	17	22
1945,	...	264	32	31	11

Diphtheria Immunization.

An intensive campaign to encourage immunization, especially of young children, was begun in 1942. Facilities for immunization were made available at some of the Child Welfare Clinics, viz., at Ancrum Road and at Blinshall Street, and *ad hoc* immunization clinics were held at Nelson Street and at Maryfield and King's Cross Hospitals. During 1945 the immunization clinic at Maryfield Hospital was incorporated with the Infant Welfare Clinic so that mothers in that area attending the Infant Welfare Clinic need not make a special visit when immunization was due. For the same reason it is now proposed to hold the immunization clinic at Nelson Street on the same day and at the same time as the Infant Welfare Clinic.

Mothers are encouraged to bring their children in the later months of the first year, but if they do not do so a birthday letter is sent as a reminder on the first anniversary of the child's birth.

Table XIII. shows that during 1944 and 1945 about two-thirds of the children had completed a course of immunization on, or soon after reaching the age of one year.

This Table also shows that the number immunized before reaching the age of one year is steadily rising.

TABLE XIII.

Year.	Total No. of Children.	No. of these Immunized at the age of 1 year or soon after.	Percentage.	Number Immunized before 1st Birthday.	Percentage.
1943, ...	2,475	936	37.9	270	10.9
1944, ...	2,476	1,670	67.4	680	27.5
1945, ...	2,787	1,738	62.4	944	33.9

War-Time Nurseries.

In 1942, under a Government Scheme, War-Time Nurseries were established to accommodate the children of mothers engaged in essential employment. The three existing Day Nurseries in Dundee (North George Street, Polepark and Lilybank) were included in the scheme, and the former nursery in Isles' Lane, which had been used as a clinic for some years, was re-opened as a War-Time Nursery in 1942. In the same year an annexe of the Bellfield Nursery School was opened as a War-Time Nursery for babies, and the work of building additional nurseries was begun. The new

nurseries were of the standard " hut " type to accommodate 40 children and the first one was opened at the end of 1942. The Deaf and Dumb School in Rankine Street was opened as a War-Time Nursery in 1943, and the partially completed Nursery School at Cotton Road was taken over and opened as a War-Time Nursery in 1944.

The Day Nursery at Lochee, a voluntary institution, was included in the Scheme of War-Time Nurseries, but remained under the day-to-day management of its own Committee.

Corporation Nurseries.

	No. of Places.	Date of Inclusion into War-Time Nurseries Scheme.
Polepark,	40	18-5-42
Lilybank,	40	29-6-42
North George Street,	30	16-6-42

War-Time Nurseries.

	No. of Places.	Date of Inclusion into War-Time Nurseries Scheme.
Bellfield Babies',	8	25-5-42
Isles' Lane,	26	28-9-42
Linlathen,	40	19-11-42
Fairbairn Street,	40	4-1-43
Dudhope Street,	40	12-2-43
Harefield Road,	40	13-4-43
Polepark (Annexe),	40	9-3 43
Rankine Street,	55	18-5-43
Ellengowan Drive,	40	1-8-43
Burgess Street,	40	10-1-44
Cotton Road,	65	26-6-44

Polepark, Rankine Street, Linlathen, Fairbairn Street, Lilybank, North George Street, and Harefield Road Nurseries were, for various periods, run on a 24-hour basis to accommodate children of mothers on night work. For a short time Lilybank and Polepark Nurseries opened on Sunday to take in children of shipyard workers.

In December, 1942, the accommodation of Lilybank Nursery was increased to 48 places by converting the existing staff dining-room into a babies' nursery. A new dining-room was obtained on the first floor by re-arranging staff bedrooms.

From the beginning each nursery had a cook and all meals were prepared on the premises.

Nursery students have received training at four of the nurseries, Polepark, Lilybank, Rankine Street and Cotton Road.

In September, 1944, owing to lack of accommodation at Nelson Street, the office of the Superintendent of War-Time Nurseries was removed to the Public Health Institute.

At the end of 1945 a dietary survey of some of the War-Time Nurseries was carried out by Dr R. P. Cook of the Department of Physiology, University College, Dundee, and a report was issued which was divided into three sections:—

(1) Dietary intakes as calculated from data supplied by nurseries;
(2) Comments on the dietaries and on the preparation of food after visiting the nurseries;
(3) Recommendations as to diets served in the nurseries.

Dr Cook's comments on the Nursery dietaries were, on the whole, very favourable.

Nursery Attendances.

TABLE XIV.

	Nursery Attendances.						Lochee Nursery Attendances.	
	Under 2 yr.		Over 2 yr.		Total Attendances.			
Year.	Day.	Night.	Day.	Night.	Day.	Night.	Day.	Night.
1941,	3,031	—	19,933	—	22,964	—	5,859	—
1942,	3,226	—	21,328	—	24,554	—	8,864	—
1943,	26,548	1,038	52,531	1,482	79,079	2,520	8,519	467
1944,	37,714	871	67,898	1,507	105,612	2,378	8,824	101
1945,	42,769	139	67,928	247	110,697	386	6,384	—

Staff Changes.

At the end of 1944 Dr Margaret Scott Dickson, Medical Officer for Maternity and Infant Welfare, retired after 27½ years' service, and Dr Annie Fulton was appointed in her place.

In January, 1941, because of increase in the work of the Department, Dr Helen Rennie was appointed Assistant Medical Officer for Maternity and Infant Welfare. Dr Rennie was granted leave of absence in September, 1944, to join the R.A.M.C., and Dr Lilian Macdonald was appointed temporary Assistant Medical Officer to replace her.

Professor Fairlie, for many years consultant obstetrician in charge of Nelson Street ante-natal clinic, resigned early in 1945 owing to pressure of other duties. As it was impossible to get

another obstetrician to replace her it was decided to discontinue the clinic at Nelson Street and to transfer the work to the clinic at Maryfield Hospital.

In May 1942, Miss C. A. Fleming, Matron of Dyrham Park Nursery, Chippenham, Wilts, was appointed Superintendent of the War-Time Nurseries.

Suggestions for Future Developments in the Maternity and Infant Welfare Services.

(1) Post-natal Clinics.

Owing to the lack of staff it has not been possible to hold Corporation post-natal clinics during the war years. It is hoped that with the appointment of a senior assistant to the obstetrician at Maryfield Hospital it will be possible to start these clinics.

(2) Maternity Beds.

The nominal number of maternity beds available in the Institutions in the city are 123, distributed as follows:—

Dundee Royal Infirmary, ...	30
Maryfield Hospital, ...	33
Clement Park, ...	26
Other Nursing Homes, ...	34 (Approximate)*

*Thirteen of these beds have become available only in 1946.

In both hospitals, when demands for accommodation are heavy, it is the practice to take in more patients than the number of beds would permit and further to increase the available accommodation by discharging patients earlier in the puerperium than is considered desirable. In the report issued by the Department of Health for Scotland on Infant Mortality in Scotland it is recommended that " without extending the stay in hospital or making any allowance for the present increasing tendency to seek hospital confinement at least 45 beds per thousand births would be required." From the total number of births occurring in Dundee (see Table 4) it will be obvious that there is not the necessary number of beds in the city. The average number of births per annum occurring in Dundee for the years 1941-1945 (inclusive) is 3,340 and there is a further rise in the number of births for 1946. On the basis of 45 beds per thousand births, the city would require to have 153 institutional maternity beds for 3,340 births in a year. Meanwhile Dundee is better off in this respect than most other areas.

(3) Convalescent Home for Mothers.

A convalescent home where mothers could have a rest either before or after confinement would serve a very useful purpose and would indirectly increase the accommodation in maternity institutions.

(4) Provision for Premature Babies.

One of the chief causes—if not the chief cause—of neo-natal death is prematurity, and the obvious remedy is to try to reduce the incidence of premature birth. Unfortunately this is very difficult to do, and the second line of attack is to try to save the lives of as many premature babies as possible. The provision of a special unit in Maryfield Hospital for the care and nursing of premature babies, whether born in the hospital or outside, will be a valuable acquisition to the services for reducing the infant mortality.

(5) Residential Nursery.

A clamant need in the city is for a residential nursery for the care of healthy children whose mothers are temporarily unable to look after them by reason of illness, childbirth, etc. Authority has been given, when staff is available, to keep one of the day nurseries open day and night and at week-ends so that this need may be met. There is no doubt that a residential nursery would be a potent factor in influencing mothers to stay for longer periods in hospital following confinement.

(6) Health Visitors.

The Infant Welfare services require a sufficient number of Health Visitors with districts small enough to allow every baby born in the city to be visited at intervals sufficiently frequent to allow of adequate and continuous supervision.

PRE-SCHOOL AND SCHOOL MEDICAL SERVICES

Summary Report on the War-Time School Sessions ending July 31st, 1942, 1943, 1944, and 1945, by

Dr JAMES A. CUTHBERT

Short reports on the work of these services were published for the sessions to July 31, 1940 and 1941, and while similar reports were prepared for the succeeding years they were not published. The following report on the prescribed lines is intended to complete the war-time record in summary form.

1. Staff.

(a) **Whole-time School Medical Officers.**—From 1st March, 1942, one additional assistant medical officer was employed full time for the remainder of that session, and in October, 1942, as the work of supervision of War-time Nurseries was increasing, an Assistant Medical Officer (Woman) was appointed, and all four assistants shared in the Nursery work. Release of one of the permanent women assistants for service with the forces was approved in May, 1942, on her replacement by an efficient substitute. From that time there was no further change in Medical Staff. The team spirit was developed to an admirable degree, and the staff were able to meet fairly adequately the heavy demands made upon them. There is no doubt that in this respect we can regard ourselves as having been extremely fortunate during a difficult time.

School Dental Officers.—The Report for the year 1940-41 recorded the re-organisation of the Dental Scheme on more adequate lines and the appointment of two male Assistant Dental Officers to take up duty in August, 1941. Both of these were soon called to the Forces and they were immediately replaced by temporary women assistants.

Dr Cassaday, the original Senior Dental Officer, retired at the age of 65 years in March, 1944, and his place was filled in the same way. Amongst these Women Assistant Dental Officers there were three changes during the remainder of the war period, but it was possible to replace the resigned officer without delay or interruption of the service.

School Nurses.—At no time during the war was the establishment of Nurses in our combined scheme seriously depleted. Vacan-

cies on the permanent staff were filled temporarily if necessary by nurses who did not hold the Health Visitor's Certificate of the Royal Sanitary Association. A number of such nurses have remained on the staff for long periods and have given admirable service. Only one Health Visitor went off to duty abroad as an Army Nursing Sister.

The establishment of the Combined Staff was increased by one Health Visitor for Female V.D., and in May, 1944, by five Health Visitors as one of the immediate steps aimed at the reduction of the infant mortality rate.

A further important change was the appointment from 16th September, 1944, of one of the number of Health Visitors, Miss Grace Smith, to be Superintendent Health Visitor.

We developed to some extent the practice of employing a number of half-time nurses who served in Clinics and so relieved Health Visitor Staffs for more district duties.

The four nurses from the Civil Nursing Reserve seconded by the Department of Health for Scotland as noted in a previous report continued in our service and were eventually taken over to our own staff—two as from 16th May, 1943, and the other two as from July, 1944—because their services were still required for the treatment of scabies.

Clerical Staff.—This presented probably the greatest war-time difficulty. The staff of three clerkesses suffered frequent changes—the senior clerkess to the Forces and a number of juniors going off under direction by the Ministry of Labour to work regarded as of greater national importance, all the while the burden of clerical and recording work was increasing.

Other Staff.—One dental attendant was appointed for each of the four Dental Officers, two of these posts having been filled until now by Health Visitors unfit for full health visitor duties.

In March, 1942, a telephone girl was added when an additional line was installed.

The Clinic Attendant retired on account of ill health and was replaced by a temporary man in May, 1943.

(b) Part-time.

Specialist Medical Officers.—The post of Consultant for Skin Diseases was vacant throughout the war period while Dr John Kinnear was mobilised with the R.A.M.C.

Mr W. V. Anderson, F.R.C.S., Edinburgh, was appointed Orthopædic Specialist from April, 1944, visiting one whole day per month for a few months and then for two days per month.

From May, 1944, Dr James Thomson, F.R.C.P., has been engaged for one session per fortninght as Consultant to the Infant Welfare Department, and at each session it has been possible to bring forward a few cases of pre-school and school age for his opinion and advice.

Dr D. G. McIntosh and Dr Mary Proudfoot, Assistant Medical Officers of Health (General) have carried out on our behalf the examination of the pupils of the Trades' School which opened in February, 1943.

2. Schools.

Five primary schools were given over to the A.R.P. organisation at the outbreak of war, and they were equipped as First-Aid Posts with Gas Cleansing facilities. While the fuller use of school premises for educational purposes was gradually re-established during the session 1940-41 as shelter accommodation was provided there was possible only limited use of the schools housing first-aid posts. We found one of them, Hawkhill North School, admirably situated and suitable for a Scabies treatment centre, and it was used for this purpose from the beginning of the session 1942-43. The First-Aid Post in Eastern School, Broughty Ferry, continued in use as the Child Welfare and School Clinic for Broughty Ferry area throughout the period under review.

A new school to provide a Pre-apprenticeship Course for the Building Trade was opened in February, 1943, in the Technical College, and 45 boys of 14 to 16 years comprised the first group. The headquarters of the school at which there was a communal dining centre for staff and students was established in premises formerly occupied by St Cuthbert's Church, and after a short period in the Technical College, classroom and workshop accommodation was obtained in Balfour Street School and also in temporary premises in Lochee. By a resolution of the Education Committee the pupils of this school have been eligible for the full facilities of School Medical Services.

Number of Children on the Registers.—The average number of children on the Registers in the session ending 31st July, 1939, was 26,868.2, and the figure dropped sharply in the first war-time session to 20,314.21. In the succeeding sessions it has risen until in the session ended 31st July, 1945, it was 25,645.87.

3. Sanitary Condition of the Schools.

In many instances the sanitary conditions of schools has left much to be desired. Lighting suffered most seriously from the

addition of anti-splinter netting and varnish to windows and also black-out curtains and pelmets where the premises were earmarked for Evening Continuation Classes or for use as Rest Centres or Shadow Hospitals or First-Aid Posts. Ventilation also suffered in some premises but to a lesser degree. Playground space and shed accommodation was seriously curtailed in nearly all cases by the construction of air-raid shelters.

In the interests of fuel economy heating has been rather severely restricted, but there has been little real difficulty of more than a temporary nature.

4. A. System and Extent of Medical Inspection.

The full programme of systematic medical inspections prescribed by the annual circulars of the Department of Health for Scotland have been completed during the sessions under review.

A system of " classroom inspections " started in the session 1940-41 has been applied since then to the entrants to the Primary Departments (7 years old) and such inspections are in our opinion a most useful procedure.

Diphtheria Immunisation.—Since the immunisation campaign, which took place as already reported in the session 1940-41, all parents or guardians of children in the Entrants' Group have been circularised with their Medical Inspection Notice and asked to give their consent to a full course of injections if the child has not already been protected. If the child has already been immunised but not within recent months the circular asks the parent or guardian to consent to the administration of a "maintenance dose." The response to these circular letters, often with the help of a conversation with the Medical Officer when the parent attends the medical inspection, is very gratifying as the figures recorded show. We regard it as important that the treatment to which the parent consents is in nearly all cases arranged and carried out at a convenient centre under the auspices of the Schools Staff whose co-operation in this matter we appreciate.

Treatment.—As previously reported Clinic treatment facilities were fully restored within a week or two of the outbreak of war and, indeed, extended by the opening of an additional clinic in the Infant School Hut at Mid Craigie Housing Scheme in December, 1939. This was transferred to the First-Aid Post at the Lodge entrance to Maryfield Hospital in February, 1940, and it has continued to serve fairly conveniently the North-Eastern Area since then.

The West End Clinic premises at Isles Lane were given over for War-time Nursery purposes in the session 1941-42, and the clinic moved to Blinshall Street First-Aid Post in the same area.

A striking increase in the incidence of scabies in 1940-41 led to the opening in October, 1941, of a second treatment centre in King's Cross West Hospital, and in January, 1942, a third centre in Hawkhill North School First-Aid Post, so that all areas of the City were fairly adequately served. At the same time 40 beds were made available in King's Cross Hospital for the treatment of septic cases and this continued for some months until conditions improved. Adult and adolescent cases also received out-patient treatment there by appointment, an arrangement which continued throughout the war period.

Speech Therapy.—Miss Deborah Braithwaite, A.S.S.T., appointed by the Education Committee commenced duty in August, 1941, and proceeded to survey the school population for cases requiring treatment. Of 417 names submitted by Head Teachers, 378 were examined and 118 boys and 28 girls found to be suffering from stammer, 148 boys and 84 girls from other defects requiring attention.

Giving treatment to stammerers for 40 minutes once weekly and to other cases for 20-30 minutes using 18 schools as treatment centres, Miss Braithwaite gave treatment for stammer to 72 boys and 11 girls and for other defects to 26 boys and 20 girls. Ill-health marred the record of work in two following sessions, and at the end of June, 1944, the Therapist resigned and was succeeded by Miss Winifred Laidlaw, A.S.S.T., who took up duty in February, 1945. Since then a fresh survey of cases of speech defect has been made, but until 31st July, 1945, treatment has been confined to bi-weekly sessions for 109 cases of stammer. Miss Laidlaw estimates that between 400 and 500 cases of speech defect in our schools would benefit considerably from therapy, and stresses the need for adequate assistance with such a task.

Orthopædic Treatment.—Orthopædic treatment had never received any special attention except for the comparatively small number of such cases in the Special School for Physically Handicapped Children, and small group classes which were given remedial exercises by members of the Staff of the Superintendent of Physical Education. The need for a more satisfactory scheme was obvious and urgent, and the prospect of development of a complete regional scheme seemed so remote that we obtained the services of an orthopædic consultant from Edinburgh, first for one whole day per

month starting in April, 1944, and after a few months for two whole days per month.

From 15 to 20 new cases have been seen at each visit, and about 60 return cases reporting under supervision. Physiotherapy has been obtained whenever necessary under an arrangement with the Dundee Orthopædic and Rheumatic Clinic, Kemback Street. Hospital treatment has been arranged for a few cases in Princess Margaret Rose Hospital, Failmilehead, Edinburgh, and, for most cases requiring it, through the Department of Health for Scotland at Stracathro E.M.S. Hospital, Brechin. We feel that even this partial scheme is highly successful and giving gratifying results.

B.—System of Dental Inspection and Treatment.

On 25th August, 1941, the Dental Scheme was completely reorganised and the work was allocated on a regional basis among the four Dental Officers. In consultation with the Officers of the Department of Health for Scotland new printed forms and Dental Record Cards were adopted.

Two surgeries continued in use at the Central Clinic premises and surgeries were established in Lochee and in Ferry Road Clinics.

The age range covered by systematic inspection and treatment was extended to all between 5 and 12 years, and a year later to 5 to 14 years. It was found to be possible in each session to complete all the systematic inspections and also the treatment arising out of them in so far as our offer of treatment was accepted. One striking effect of the improved service is the drop in the number of emergency cases coming for treatment from the pre-war figure of 2,112 in the year to 780 in 1944-45.

C.—School Nursing and Arrangements for Following-up.

There was no change in these arrangements during the war period, but great difficulty was experienced in gaining effective personal contact with a responsible parent or guardian because in so many cases both parents were engaged in war work or service.

D.—Evacuation.

Belmont Evacuation Camp.—Following the freeze-up in February, 1941, already reported, which put the camp out of action for three months, the camp re-opened in May, 1941, to cater for boys 8-12 years of age and provide a curriculum with an agricultural flavour. Our teaching staff and the domestic staff of the Scottish Special Housing Association spared no effort to make the life attractive for the boys, and the small number who remained in residence for a long period showed marked improvement in health and well-being. The number on the register gradually dropped from 132 in

July, 1941, to 81 in July, 1944, and the scheme was wound up in March, 1945, by which time only a handful of boys remained. The Authorities agreed to the allocation of a number of beds for suitable convalescent cases from June, 1943, but in practice it was found that the longer term residents in the camp were somewhat too robust for the convalescents and the scheme was not popular.

Belmont Castle School for the Deaf.—Throughout the period under review the facilities for residential care of the deaf have been fully taxed by the Dundee Institution for the Education of the Deaf, and at the time of writing 23 children (16 girls and 7 boys) are still in residence.

At the beginning of the session 1943-44 all the catering and supply of cooked meals was undertaken by the nearby Camp under a special arrangement with the Authorities. This has proved to be of great benefit to the health and contentment of both children and staff.

The Laws, Kingennie, Hostel for Invalid and Cripple Children.—No part of the Evacuation Scheme gave so little trouble or so much real satisfaction to all concerned as did this Hostel, of which the accommodation was taxed to the limit almost continuously until the winding up of the Scheme caused a dispersal of the children in July, 1945. Asthmatic and chronic chest cases and children suffering from marked general debility showed the most striking improvement. A number of such cases from bad housing conditions were so built up as to enable them to resume their place alongside their normal schoolfellows. The need for such an institution in ordinary times was fully demonstrated, and the Education Committee has approved the establishment of a similar hostel in a more accessible place where the problem of staffing would be likely to present fewer difficulties.

5.—The Findings of Medical Inspection.

Footgear.—The records of systematic inspections give no indication of the difficulty experienced throughout the period of clothes rationing in keeping the children properly shod. Unsatisfactory footwear or lack of it due not entirely to parental carelessness or neglect was responsible for a great deal of absenteeism and possibly also, during inclement weather, for considerable numbers of cases of coughs and colds which thronged the consultation clinics. The main trouble appeared to be lack of coupons in association with footwear and repair material of shoddy quality.

Cleanliness.—Our experience in keeping large numbers of children under close supervision by weekly inspection in preparation for a second mass evacuation in 1940 showed what could be done

to attain and maintain a really high standard of cleanliness of head and body in the children registered for evacuation. For a time it was successful at the cost of a great deal of work and time of the responsible Health Visitors, and the difficulty of following up due to war conditions has been mentioned elsewhere. When the sustained effort became irksome to the parents the immediate reaction was the withdrawal of the child's name from the register of intended evacuees.

It is gratfying to note that since the peak incidence of 15.36% of unsatisfactory conditions of heads of both sexes at systematic inspections of all groups in the session 1940-41 there has been a steady decline to 7.47% in 1944-45. These figures compare with 3.85% for the session 1938-39 and illustrate the relaxation of parental care of the children under war conditions.

The corresponding figures for unsatisfactory condition of the body are:—

0.4% unsatisfactory in 1938-39;
0.98% peak in 1941-42; and a decline to
0.54% in 1944-45.

Ringworm — Scalp. — The results of systematic examinations gave no indication of an increase in the incidence of this condition, but it became quite evident in School Clinics early in the session 1944-45 that a sharp increase had indeed taken place. The diagnostic facilities at the Department for Diseases of the Skin at the Royal Infirmary had to be utilised and the specialist there directed the treatment. Thallium Acetate was administered for total epilation in suitable cases up to a maximum dosage of 250 mgms., and a few cases in which the infection was localised received an epilation dose of X-ray therapy. Seventy cases came to our notice in the session and a number of them were successfully treated by those methods. In the whole area, however, there were no proper facilities available for radical treatment by epilation doses of X-ray and the work was seriously handicapped. We aimed at obtaining a diagnostic lamp as soon as possible and establishing our own clinic for diagnosis and conservative treatment which would enable us to regulate the school attendances of cases and keep contacts under supervision. The question of the provision of special educational facilities for ringworm cases was put forward to the Education Committee for consideration.

Scabies.—The increased incidence of scabies and the arrangements for dealing with it have already been mentioned. The figures for cases found at systematic inspections reaching a peak of 1.81% of those examined at all ages in 1942-43 has declined steadily to

1.12% in 1944-45, but that compares with 0.2% in 1938-39. The cases found now are comparatively mild, however, and many of them are slight recurrences which yield to prompt and thorough treatment.

Nutritional State and General Wellbeing.—During the four sessions under review systematic inspections gave the following figures for both sexes at all ages:—

		Slightly Defective %	Bad %
1941-42,	....	2.44	0.07
1942-43,	....	2.32	0.03
1943-44,	....	2.66	0.04
1944-45,	....	2.47	0.01
For 1938-39,	....	1.4	—

These figures indicate that in conscientious assessment of the general nutritional state the Medical Officers found more of the children below par during these war years than in the session immediately prior to the war, and examination of the more detailed figures suggests that the Entrants Group showed the most marked deterioration.

That the mass of children stood up so well to the stress and anxiety of war conditions was frequently a subject for comment, but in the clinic work there was a general impression amongst the Medical Officers that many more weary and white-faced children were coming forward latterly complaining of trivial ailments—lassitude, coughs and colds, and digestive upsets.

In December, 1944, and January, 1945, we participated in a Nutrition Survey sponsored in the large cities and a number of counties by the Scientific Advisory Council's Sub-Committee on Nutrition. 160 children in each of three social grades representing a fair sample of both 5-year-old entrants and 13-year-old leavers were submitted to a prescribed standard type of examination. The two Medical Officers engaged in this work felt that the general standard of nutrition and well-being was remarkably good.

The average number of individual children taking school dinners daily increased from 3,452 in 1941-42 to 6,511 in 1944-45.

On the instruction of the Education Committee an analysis of the meals supplied by each of the four cooking depots over the four weeks period from 11th December, 1944, was made by this Department. The analysis was based on the caloric value of the raw ingredients and showed that there was a considerable difference in the nutrition value of the meals produced by the four depots. The average caloric values per meal were 873, 840, 1150, 1223.

This scheme has been developing steadily, and every effort is made by the Superintendent and her staff to ensure the supply of a highly nutritious and appetising dinner.

The average number of children taking milk daily in school increased from 14,980 in 1941-42 to 17,659 in 1943-44 and 17,228 in 1944-45. It is found that a considerable number of children who appear to the teaching and medical staff to be specially in need of milk, refuse it on one pretext or another.

Mouth and Teeth Unhealthy.—The percentage of cases found at Systematic Medical Inspection to be suffering from this defect in the four sessions under report has declined quite strikingly as the figures show:—

1941-42,	....	8.01%
1942-43,	....	4.10%
1943-44,	....	2.80%
1944-45,	....	2.20%

Priority in the supply of certain articles of diet to children, an increased consumption of milk in schools, the wartime darker loaf and fewer sweets are all factors which may have contributed something to these results, but some share of the credit must go also to the improved Dental Service which was developed from August, 1941.

Visual Acuity.—The percentage of cases of Vision defect of fair degree (acuity up to 6/12 with the better eye) has risen steadily from 11.4% in 1941-42 to 16.09% in 1944-45, while the corresponding figures for defect of bad degree (6/18 and over with the better eye) are 3.08% declining to 1.91%. More cases are now being referred to the Oculist for refraction, and it is hoped at the time of writing to improve considerably our ophthalmic service in order to ensure so far as possible not only refraction for all pupils who require it but also re-examination by the oculist at the prescribed intervals.

Defective Hearing.—The children submitted to Systematic Medical Inspection have had hearing tests as a routine and have been graded if defective by the prescribed methods although the results in the first two of these sessions were recorded as slight (Grade I.) or marked (Grade II.) defects. The tests are a most useful guide, in practice, to the proper educational disposal of the child, but they would lead under more normal conditions to a more thorough testing and grading of the child by audiometric methods and to the possibility of some remedial treatment at the hands of the Aural Consultant. Gramophone Audiometric testing was planned

at the outbreak of hostilities, but the necessary apparatus was unobtainable then. Not until the summer term of the session 1944-45 was it possible to have two freshly qualified teachers of the deaf trained in audiometric testing and to obtain on loan two gramophone audiometers. Head teachers had been asked to submit the names of all the children of 9 years of age and over in one or more of the following categories:—(a) Suspected of being deaf; (b) Giving a history of recent ear trouble; (c) Backward. 2,379 names were submitted and the examinations were started in June, 1945. It is hoped that an audiometer may soon be available to purchase and that the 9.10 year-olds will be examined annually as a routine along with any other cases submitted specially.

Diphtheria Immunisation.—From the information obtained from the parents or guardians of the Entrants' Group of children at Systematic Medical Inspection the following figures are presented. They are of considerable interest, and it is thought they may have an important bearing on the fact that there has been no death from Diphtheria in the City since early in 1944.

	Not Yet Immunised.				
	Consents for Full Course.	Refusals.	Previously Immunised.	Consents for M.D.	Examined.
1943-44—					
Number,	290	166	2,205	1,238	2,710
Percentage,	10.7	6.13	81.37	56.1 (of P.I.)	
1944-45—					
Number,	233	125	1,967	1,249	2,359
Percentage,	9.87	5.3	83.4	63.5 (of P.I.)	

The difference between the number examined and the total for Consents, Refusals and Previously Immunised is explained by the failure of a few parents to supply the necessary information.

It must be noted that a number of children "previously immunised" had already received a maintenance dose or had been immunised so recently that a maintenance dose was unnecessary so that the consent rate for maintenance dose is more satisfactory than would appear.

Under the new scheme of Systematic Medical Inspections prescribed by Circular N.N. & C. 60/1938 and the Classification of children according to the remediability of their defect it is possible now to compare the condition of certain of the age groups at two successive inspections. The results are shown on the attached table.

JAMES A. CUTHBERT,
Depute Medical Officer of Health.
(Pre-School and School Medical Services).

SYSTEMATIC MEDICAL INSPECTION OF THE SAME AGE GROUPS.

	Born 1934.				Born 1929.				Born 1925.				Born 1927.				Born 1928.			
	Entrants 38-39		2nd Group 43-44		2nd Group 38-39		3rd Group 42-43		3rd Group 38-39		Secondary 41-42		3rd Group 40-41		Secondary 43-44		3rd Group 41-42		Secondary 44.45	
Classification.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
I.—Children free from defects,	1,727	63.4	1,260	50.179	1,436	58.5	1,281	52.586	2,185	61.4	73	64.6	429	60.06	139	64.351	1,268	54.30	156	58.65
II.—Children (otherwise free from defects) who suffer from:—(a) Defective vision not worse than 6/12 in the better eye with or without glasses; or	—	—	405	16.129	327	13.3	405	16.625	561	15.76	22	19.47	112	15.73	36	16.666	292	12.50	59	22.18
(b) Conditions of the mouth and teeth requiring treatment, ...	118	4.3	28	1,115	78	3.2	93	3.817	84	2.37	5	4.42	46	6.43	5	2.314	103	4.4	1	0.38
(c) Both (a) and (b), ...	—	—	9	0.358	29	1,2	22	0.903	31	0.87	3	2.65	8	1.15	1	0.462	24	1.03	—	—
Total, ...	118	4.3	442	17.602	434	17.7	520	21.346	676	19.0	30	26.55	116	23.31	42	19.444	419	17.94	60	22.56
III.—Children suffering from ailments (other than those mentioned in II.) from which complete recovery is anticipated within a few weeks, ...	707	26	584	23.257	466	18.8	441	18.103	501	14	6	5.31	75	10.5	26	12.037	441	18.89	38	14.28
IV.—Children suffering from (or suspected to be suffering from) defect less remediable than defects specified in II. or III., distinguishing cases: (a) Where complete cure or restoration of function (in the case of eye defect, full correction) is considered possible, ...	146	5.3	210	8.363	100	4.0	162	6.65	132	3.7	3	2.65	26	3.64	8	3.703	155	6.64	10	3.76
(b) Where improvement only is considered possible, e.g., without complete restoration of function, ...	26	1.0	15	0.59	24	1.0	32	1.313	66	1.9	1	0.88	18	2.51	1	0.462	52	2.23	2	0.75
Total, ...	172	6.3	225	8.96	121	5.0	194	7.963	198	5.6	4	3.54	44	6.15	9	4.166	207	8.87	12	4.51
Total Number of children examined, ...	2,724	100	2,511	99.99	2,455	100	2,436	99.99	3,560	100	113	100	714	100	216	99.99	2,335	100	266	100

DENTAL SERVICES

Summary Report — 1941-1945

By Mr D. A. FINLAYSON, Senior Dental Officer.

Previous to August, 1941, the Dental Service consisted of two Dental Officers and two Nurses, and the two surgeries were situated in the Central Clinic at 1 Nelson Street. This was quite inadequate, and two additional Dental Officers and two Dental Attendants were appointed, and a dental surgery was opened at 99 Ferry Road and another at Ancrum Road.

At the same time the Dental Service was re-organised and the City was divided into four areas. A new system of inspection and treatment was introduced and a Record Card was made out for each child between the ages of 5-12 years inclusive.

During 1942-43 we raised the inspection age to 14 years, and were therefore able to inspect all school children between the ages of 5-14 years inclusive.

Each year has shown a decrease in the number of children requiring dental treatment, viz.:—

1941-42, ...	70%	1943-44, ...	53%
1942-43, ...	56%	1944-45, ...	50%

During these years the number of Emergency cases has also shown a steady decrease, viz.:—

1941-42, ...	2,112	1943-44, ...	976
1942-43, ...	1,461	1944-45, ...	780

These decreases are largely due to the regular routine inspection and treatment which have been carried out over these years.

In association with these figures it should be noted that in the first year (1941-42) the parents who were interested and willing to accept treatment did so, and the " consent rate " was 50.5%—i.e., the percentages of acceptances of treatment of the total number requiring treatment. At the succeeding inspections it was found that the majority of those who had previously accepted treatment did not again require it for some little time, but we still had the large number who persistently decline our offer. It is difficult to reduce this figure as may be seen from the fact that the " consent rate " for 1944-45 in elementary schools is 34%. In an effort to

do so the dental attendants now visit those parents to point out the importance of regular dental attention. The most common explanation is that the parents do not regard dental attention as necessary unless toothache is present.

In the year ending July, 1945, we were able to reduce the interval between inspections from 12 months to 7 months—a course which we shall endeavour to maintain.

With regard to the actual work done, it is interesting to note that in 1941-42 the number of extractions of permanent teeth was 1794, and the number of fillings inserted in permanent teeth was 3,269, a ratio of 1:1.82. In 1944-45 the figures show extractions of permanent teeth as 1,547 and fillings in permanent teeth as 3,319, a ratio of 1:2.14. These figures show our endeavour to conserve rather than remove the permanent teeth.

In March, 1945, we took over the dental treatment at Maryfield Hospital to which one session weekly has been devoted. Plans are now prepared which will allow us to devote five sessions weekly at Maryfield Hospital and two sessions weekly at Ashludie Sanatorium.

In addition we shall be giving an orthodontic service for school children. For this service to be successful it is necessary to have the co-operation of the parents, and to achieve this the parents will be interviewed before any orthodontic treatment is undertaken.

These developments will take place as soon as the staff is increased to 5 Dental Officers and 5 Dental Attendants.

During the year 1941 the 2 Assistant Dental Officers joined the Services and were replaced by two Temporary Dental Officers.

Several changes took place in the temporary staff during the years 1943-45, and in each case the filling of vacancies caused a little delay—the surgery at Ferry Road being closed for a period each year. The vacancy caused by Dr Cassaday's resignation in March, 1944, lasted for a considerable time as, unfortunately, he was on sick leave from December, 1943, and the vacancy was not filled until September, 1944.

In 1942 one nurse was replaced by a dental attendant, and in 1944 another attendant was appointed to replace the remaining nurse, giving a total of 4 Dental Officers and 4 Dental Attendants.

D. A. FINLAYSON,
Senior Dental Officer.

SANITARY SERVICES

Report by Mr W. M. SMITH, Chief Sanitary Inspector.

SANITARY DEPARTMENT,
17 WEST BELL STREET,
DUNDEE.

To the Honourable,

The Department of Health for Scotland; and
The Lord Provost, Magistrates, and Councillors—
the Local Authority of the City of Dundee.

MESDAMES AND GENTLEMEN,

I have the honour to submit this summary Report of the Sanitary Department for the period 1939 to 1945. Many of the Tables have been condensed, but every effort has been made to record in concise form the Department's activities for the years under review. The Report has been prepared in accordance with the Department of Health Circular No. 27/1946 of date 1st March, 1946, but opportunity has been taken to incorporate, with a view to continuity of record, the principal tables relating to Housing, etc.

Staff.—In all, nine members served with H.M. Forces, and those remaining carried on the usual work of the Department in addition to A.R.P. duties for which certain of the Staff were on occasions seconded. Under this heading it might be opportune to mention that Mr A. A. Russell, Chief Sanitary Inspector from 1936, retired in May, 1945, after a lifetime spent in the service of the Local Authority.

Food Inspection.—This part of our duties assumed a much more important role than that of peace time. Then, our main concern was to secure for the public a safe food supply. In times of war, however, it is necessary to combine this function with that of conserving the national larder, and we worked in conjunction with the Ministry of Food towards this end. Embodied in the Report is a Table showing the foodstuffs inspected and found unfit for human

consumption. Also detailed is the quantity of food which was transferred to the Salvage Division of the Ministry of Food for animal feeding or other useful purposes.

All calls for advice or inspection by the Food Ministry were answered and appeals from shopkeepers and warehousemen promptly dealt with, whereby timely examination saved large quantities of foodstuffs from waste.

Rats.—It has always been our policy to wage incessant destruction against these vermin and this was never allowed to flag.

In 1943, in response to the Secretary of State's request, a survey was made of the City, and the results, showing the degree and location of infestation, forwarded to the Department of Agriculture for Scotland. The Staff of the Department of Agriculture for Scotland re-surveyed the town in 1945 as a preliminary to an intensified campaign of destruction, which is now in operation. It was gratifying to learn that the Department of Agriculture did not classify Dundee as being a heavily infested area, and perhaps this was due to our belief in continuous war against rodents.

Milk.—The local producers of this very necessary item of our diet maintained a fairly satisfactory supply although they were hampered with black-out conditions, difficulty of securing feeding stuffs and labour, etc.

During the latter portion of the war period, however, complaints were frequent from consumers and dairymen regarding the non-keeping quality of milk received from outwith our district, and this reached a climax in 1945, much prominence being afforded to the matter in the press. The fundamental cause was attributed to the erratic state of road, etc., transport, distant milk being too long in transit and arriving here too late for treatment or distribution to consumers the same day. Frequently unclean churns contributed to a deterioration in the keeping quality of the milk, but this aspect of the question was taken up immediately with the appropriate officials of the area in which the milk was produced.

A local Creamery at the outbreak of war was well advanced with plans for an ambitious scheme of reconstruction and re-equipment of their premises. The fulfilment of their proposals

naturally was delayed and difficulties in securing the necessary licences and building materials, etc., held up progress, but towards the end of 1945 the work was sufficiently far advanced to warrant the granting of a pasteuriser's licence.

Also it might be noted the issuing of three licences to local producers during the war years for the production of standard milk.

Smoke Nuisance.—In 1940, for security purposes, the Smoke Production Division of the Ministry of Home Security issued a call for the production of extra smoke from mill, etc., chimneys when required, so as to render industrial targets less readily definable from the air and which of necessity caused a stoppage in our efforts to reduce to a minimum smoke pollution.

General — Complaints and Nuisances.—These differed but little from normal times, and there is nothing outstanding to report.

Certainly it took longer owing to labour and material shortage to secure the execution of repairs, but this state of affairs was well known to be of a national rather than a localised condition.

War Duties.—As can be understood the war and war conditions laid additional responsibilities on our doorstep and included, *inter alia*:—

1139 Inspections of military, etc., billets and reports thereanent;

463 Visits of inspection to Rest Centres and preparation of reports thereon;

2332 Visits in connection with Billets for Refugees;

226 Visits in response to the Ministry of Supply enquiry for scrap metal;

The examination and furnishing of reports relating to Nurses' Billets, Emergency Cooking Depots, Feeding Centres and British Restaurants.

The compilation of a Register of Billeting Accommodation for use in the event of air raids was, for a time, a responsibility of the Department under the direct charge of the Assistant Chief Inspector,

and much valuable work was accomplished in securing and tabulating the grades of accommodation available before this duty passed into the province of another Department.

Air Raid Shelters for the Public.—The supervision of the health and comfort conditions therein was assigned to this Office, and, for this purpose two temporary officers were employed from October, 1941, to May, 1945, previous to which the inspectorate carried out such duties. Reports of their inspections and conditions found to obtain in the 2837 shelters of various types throughout the City were returned regularly to the Department of Health for Scotland. In all 31,778 inspections were made.

Food Treatment (Decontamination) Services were under the charge of the Sanitary Department, and a comprehensive and approved scheme was in being—all personnel recruited receiving practical and theoretical training.

By the kindness of the Dundee Football Club Ltd., suitable and commodious premises at Dens Park were put at the disposal of the Local Authority.

All shops and premises where food was sold, stored or prepared were furnished with anti-gas instructions.

Happily, there was no call for these services to function, Dundee being practically spared the ordeal of air warfare.

Death-Rate: Density of Population and Acreage.

	Death-rate per estimated 1,000 of Population.	Population as estimated by Registrar-General.	Acreage of City, 9,002 (excluding foreshore) persons per acre.
1939, ...	13.5	178,013	19.77
1940, ...	15.9	165,074	18.34
1941, ...	15.3	163,000	18.10
1942, ...	14.7	158,500	17.61
1943, ...	15.0	154,703	17.18
1944, ...	14.6	154,845	17.20
1945, ...	13.6	156,999	17.44

Rainfall.

The total rainfall in Dundee, as recorded at the Official Station, Mayfield Hostel, for the period 1939—1945 inclusive, was as undernoted:—

Month.	Year 1939 Inches.	Year 1940 Inches.	Year 1941 Inches.	Year 1942 Inches.	Year 1943 Inches.	Year 1944 Inches.	Year 1945 Inches.
January, ...	4.00	1.95	2.74	4.04	3.17	1.35	3.64
February, ...	2.05	1.18	4.37	1.33	1.20	0.54	2.11
March, ...	2.31	2.85	1.98	1.32	0.60	0.41	0.84
April, ...	1.06	1.16	1.90	1.63	1.45	2.33	1.40
May, ...	1.50	1.59	2.49	3.64	3.66	1.93	3.85
June, ...	1.33	0.46	1.13	1.22	3.04	2.70	2.58
July, ...	4.30	5.81	2.97	2.68	3.11	2.12	3.35
August, ...	2.42	1.11	2.83	2.14	5.00	1.62	3.25
September, ...	1.81	2.12	1.43	2.71	2.28	2.50	3.46
October, ...	3.49	4.53	4.59	2.03	3.22	3.53	5.21
November, ...	4.70	4.98	3.55	0.46	1.00	4.25	1.19
December, ...	1.29	1.13	0.84	1.78	1.01	2.37	5.62
Total, ...	30.26	28.87	30.82	24.98	28.74	25.65	36.50
Monthly Aver.,	2.52	2.40	2.57	2.08	2.39	2.14	3.04

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 R. H. Cuthbertson, B.Sc., A.M.Inst.C.E., who reports thereon as follows:—

Sources and System of Supply.

" The Water Supply of the City of Dundee and of the area supplied from the Dundee Corporation Water Undertaking outwith the City is wholly by gravitation. The principal source of supply is Lintrathen Loch, situated approximately 18 miles north-west of the city at an elevation of 680 feet above sea level. The other supplies of the Undertaking are derived from the Works of the old Dundee Water Company at Monikie and Crombie, situated approximately 8 miles and 10 miles north-east of the city at elevations of 476 feet and 522 feet above sea level respectively.

The relative importance of the foregoing works from a water supply point of view is apparent from the following particulars of their reservoir capacities and catchment areas.

	Capacity, Gallons.	Surface Area at Top Water Level.	Extent of Catchment Area.
Lintrathen Loch ...	2,141,429,000	440 acres	18,500 acres
Monikie and Crombie (4 Reservoirs)	654,763,000	181½ ,,	3,500 ,,

Under normal conditions 90% of the daily supply of the city and district is drawn from Lintrathen, 8% from Monikie, and 2% from Crombie for the supply of the Burgh of Carnoustie.

Area and Population Supplied.

The statutory area of supply of the Undertaking, excluding the areas supplied from the aqueducts and conduits between the various storage reservoirs and the city, extends to 54¼ square miles, of which 15½ square miles are situated in the compulsory area, and 38¾ square miles in the permissive area of supply.

Outside of the City of Dundee the principal burghs and villages supplied are:—On the north side of the Tay Estuary, the burghs of Carnoustie and Monifieth, and the villages of Barry, Wellbank, Newbigging, Kellas, Muirhead, Birkhill, Invergowrie, Longforgan and Meigle; and, on the south side of the Estuary, the burghs of Newport (including Wormit) and Tayport.

The area varies in altitude from sea level to an elevation of 457 o.d., which is the highest point supplied, while the average population supplied is approximately 204,000.

Consumption.

The average daily consumption of water for all purposes for the year ending 15th May, 1945, was 11,454,000 gallons. This represents a consumption per head of the population supplied of 56.2 gallons, of which 36.7 is for domestic and non-metered supplies and 19.5 for trade and general industrial purposes supplied through meter. The minimum daily consumption for the same period was 8,140,000 gallons and the maximum 15,120,000 gallons.

Chemical Analyses of Waters.

The following are the average Chemical Analyses of the Lintrathen, Monikie and Crombie Waters as supplied during 1945:—

	Lintrathen	Monikie	Crombie
P.h. Value,	6.9	6.9	7.2
Colour (Hazen Scale),	23 m.m.	6 m.m.	10 m.m.
Hardness in Clarke's Degrees—			
Temporary,	0.25	0.75	1.00
Permanent,	1.25	3.50	4.25
Combined Alkalinity (as Ca CO3),	15 p.p.m.	39 p.p.m.	48 p.p.m.
Combined Chlorine,	9 p.p.m.	15 p.p.m.	19 p.p.m.
Nitrates,	0.15 p.p.m.	1.38 p.p.m.	4.25 p.p.m.
Nitrites,	None	None	None
Free Ammonia,	.104 p.p.m.	.008 p.p.m.	.005 p.p.m.
Albuminoid Ammonia,	.121 p.p.m.	.071 p.p.m.	.080 p.p.m.
Lead or other Poisonous Metal,	None	None	None

Bacteriological Analyses of Waters.

Weekly bacteriological analyses taken throughout 1945 of the filtered and unfiltered waters put into supply give the following results:—

	First Class Samples B.Coli absent in 100 c.c.	Poor Samples B.Coli present in 10 c.c. or less.
Filtered Water—		
Monikie,	98%	None
Crombie,	96.1%	None
Unfiltered Water—		
Lintrathen (taken at Clatto),	82.4%	5.8%

New Works.

With the termination of the war, the Water Department is now in course of executing preliminary survey work to meet the ever-increasing demand for water. These works include a new Trunk Main from Lintrathen; new service reservoirs, and, in addition, plans are being prepared for the fliltration of Lintrathen water.

Owing to shortage of staff all these works are at present in abeyance, but it is hoped to begin with them in the course of the next twelve months or so."

Water Supplies Other than Corporation Main.

All such supplies, whether for domestic or industrial purposes were regularly sampled and the supplies kept under observation.

Domestic Water Supplies—Sinks, Etc.

The following table shows that there are 546 houses within the city lacking an internal supply of water. Of these, 148 have already been dealt with under the Housing Acts by way of Closing or Demolition Orders, etc., or are included within Clearance Areas.

Ward.	No. of Houses.	ROOMS 1	2	3	4 &over.	WATER SUPPLY. On Stairs, Landings, &c.	In Courts, Areas, &c.
1	30	29	1	—	—	30	—
2	86	63	21	2	—	82	4
3	79	66	12	—	1	66	13
4	57	21	12	16	8	26	31
5	34	17	11	4	2	13	21
6	98	80	15	3	—	95	3
7	17	1	10	4	2	2	15
8	29	22	7	—	—	27	2
9	49	35	14	—	—	48	1
10	13	2	3	8	—	2	11
11	28	2	9	17	—	—	28
12	26	23	2	—	1	23	3
Totals,	546	361	117	54	14	414	132

During the years 1939 to 1945 23 houses and 72 other premises were each provided with a sink and internal supply of water direct from the public main; 343 houses had their supply improved by means of larger service piping, and in 128 instances old iron sinks were replaced with modern enamelled earthenware fittings.

Public Sewerage.

The construction and maintenance of the sewers within the City are under the charge of Mr David B. McLay, B.Sc., M.Inst.C.E., who reports as follows:—

New Sewers Laid.

" From 15th May, 1938, until the outbreak of war on 3rd September, 1939, when all work on sewer construction was suspended, approximately 6.15 miles of new sewers were laid, making the total length of sewers within the Burgh 170.70 miles. The cost of maintenance and repairs of sewers during this period was £3,657.

During the war years, until May, 1945, no sewer construction was undertaken except for short lengths laid in Downie Park Road

and for the drainage of Trottick Village. The length of new sewers laid for these schemes was .35 miles approximately.

Dighty Valley Sewer.

The western portion of this sewer, extending from Magdalene's Kirkton Housing Scheme to the Pumping Station at Pitkerro Road, a length of approximately 2½ miles, together with the Pumping Station, were completed in September, 1939. The completion of this scheme provides for the full development of the Linlathen and Magdalene's Kirkton and West Kirkton Housing Schemes, in addition to the land within the Burgh lying to the north of the Dighty Water.

War Damage to Sewers.

Dundee was singularly fortunate as regards immunity from serious air attack and in the freedom from any extensive damage during the raids which were experienced. In two attacks, on 25th September, 1940, and 5th November, 1940, respectively, the sewers in Dalkeith Road and Forest Park Place were damaged by H.E. bombs. In both cases small diameter sewers only were involved, and, since the majority of sewers in the City are interconnected, it was found possible in both cases to divert the flow in the sewers above the point of damage, thus ensuring a minimum of inconvenience to householders and, in addition, allowing speedy repairs to be undertaken.

Flooding.

During the period under review, no serious cases of flooding were reported although a very large number of minor complaints were received. In most of these cases the flooding was of a very minor character and occurred in basement premises mostly derelict in peacetime but converted for use as air raid shelters during the war."

Scavenging and Refuse Disposal.

The scavenging collection and disposal of refuse is a duty falling upon the Cleansing Department, which is now under the charge of Mr J. D. Henry, M.Inst.,P.C. Despite difficulties arising from war conditions—not the least of which was the black-out and class

of labour available to take the place of regular scavengers recruited to National Service—a high standard in the cleansing operations continued to be maintained throughout the war years, and no serious complaint arose thereanent.

The shortage of additional labour did, however, manifest itself during winter months, when the removal of snow was more prolonged than is customary in normal times.

Mr Henry summarises the work of the Department for the years 1939-45 as follows:—

" Owing to the call-up of Staff early in the war, Statistical Records had to be in a great measure abandoned, therefore much valuable information to the controlling staff is lacking for this period.

The Salvage side of the department very quickly came into the limelight and many " drives " for Paper, Metals, Rags, etc., were conducted, all with great success.

Difficulties were experienced in obtaining new vehicles and spares for old ones, but by good planning and ready co-operation of the employees scarcely a miss was made in regular collection of Refuse from dwelling-houses.

The low grades of coal which have been on sale have added further burden to our collection and disposal sections. This when added to the poor class of labour sent as substitutes for men called up gave the Staff many worries.

Mechanisation of the transport is being gradually carried out, and only four horses are left in the Department. Much thought has been given to dustless loading, and our latest motor vehicle is of this particular design.

Equipment for dealing with Snow has been added to by the purchase of 6 Snow Ploughs for fitting to Department motors.

The return of Salvage for the six years of war is as follows:—

Waste Paper, ...	4,905 Tons	Value	£30,087
Scrap Metal, ...	6,919 ,,	,,	14,877
Non-ferrous Metals, ...	72½ ,,	,,	2,379
Textiles, ...	178½ ,,	,,	1,827
Bones, ...	127 ,,	,,	296
Kitchen Waste, ...	2,417 ,,	,,	4,288
Cinders, ...	9,646 ,,	,,	3,036
Dust, ...	60,240 ,,	,,	1,534
Bottles, ...	90 ,,	,,	955
Cullet, ...	744 ,,	,,	447
Manure, ...	13,669 ,,	,,	2,863
Waste Fish, ...	392 ,,	,,	491
Miscellaneous, ...	16,810 ,,	,,	2,406
	116,120 ,,	,,	£65,486 "

Ashbins.

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Replacements for bins no longer fit for service,	672	703	333	500	99	113	560
Augmenting existing storage accommodation or providing facilities where none previously provided, ...	376	308	1	2	1	—	3

Complaints.

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Complaints Received,	4,758	4,266	4,031	3,718	3,662	3,249	3,819
Found to be groundless,	170	135	191	128	119	100	116

Statutory Intimations or Notices.

To obtain compliance with the requests of this Department in terms of the Public Health (Scotland) Acts, etc., Notices or Intimations, written or oral, were transmitted to property owners or agents or authors of nuisances, as undernoted, all of which have received or are in the course of receiving attention.

1939.	1940.	1941.	1942.	1943.	1944.	1945.
12,470	10,944	14,175	13,762	10,974	10,152	10,480

General Nuisances.

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Visits for the detection of nuisances,	44,686	37,312	31,778	31,593	26,406	26,136	25,987
Nuisances discovered (additional to those recorded as complaints), ...	3,721	3.507	4,090	3,514	2,554	2,957	2,496

Immediate steps were taken in each instance to secure abatement of nuisances.

Verminous Houses.

During the period 1939 to 1945 in response to requests for assistance the personnel of this Department treated 1350 rooms in 959 houses; included in the foregoing were 259 rooms in 171 dwellings owned by the Corporation. Liquid insecticide and sulphur were employed in the disinfestation measures.

The Milk and Dairies (Scotland) Acts.

The undernoted table shows the position at the end of each of the years under review.

	1939	1940	1941	1942	1943	1944	1945
Dairymen or Cowkeepers,* ...	22	19	16	16	16	15	15
Retail Purveyors of Milk (including Producer-Retailers) made up as under, ...	812	773	733	691	666	654	651
Purveyors from shops, milk-houses, etc., ...	730	698	664	631	615	603	601
Purveyors from vans, ...	23	22	18	16	13	12	11
Purveyors resident outwith the City but registered to purvey milk within it from vans on streets, ...	33	30	27	22	18	18	18
Purveyors from shops or milk-houses together with vans on streets, ...	26	23	24	22	20	21	21

*Includes 1 dry dairy but registration as Producer maintained.

In all 1693 visits were paid to Cowsheds wherein were housed an average of 332 cows. Premises from which milk was retailed were inspected on 5572 occasions.

Milk (Special Designations) Orders (Scotland) 1936/44.

At 31st December, 1945, the following Producer's, etc., licences were in force:—

5 Producer Dealers in Standard Milk.

2 Producer Dealers in Certified Milk.

1 Supplementary Licence for dealing in Certified Milk.

I Supplementary licence for dealing in T. T. Milk.

1 Producer of Pasteurised Milk.

In addition there are registered 61 dealers in Certified and T.T. Milks, and 449 retail sellers of Pasteurised Milk, while one firm is engaged in the production of Sterilised Milk.

Stables and Piggeries.

Stables.—The number of stables within the Burgh have decreased from 172 in 1939 to 153 in 1945. In all 1,666 visits were paid to these premises.

Piggeries.—1945 ended with 70 piggeries within the Burgh in which were housed some 1,402 pigs.

Offensive Trades.

Old Air Station, Stannergate Road — 1 Tallow Melter.

Public Slaughter-Houses, East Dock Street—

Gut Cleaner (Private) (1).		
Hide Factors (Private) (2).		
Slaughterer of Cattle	(Corporation)	1.
Tripe Cleaner	,,	1.
Tallow Melter	,,	1.
Blood Boiler	,,	1.

A total of 8 at the end of 1939, which figure remained unaltered till 1943, when the Tallow Melter at Old Air Station vacated his premises on the naval authorities taking over the site, leaving 7 firms engaged in Offensive Trades.

No cause for complaint in the conduct of the businesses.

Interments.

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

The undernoted table shows the requests received by the Department during the period under review and the manner in which they were dealt with.

	Applications Received.	Granted.	Refused or Otherwise Arranged.	Cost to Department.	Sums Recovered.
1939	31	27	4	£42 18 0	£7 11 0
1940	18	15	3	26 14 0	3 13 1
1941	35	31	4	48 6 0	4 1 0
1942	11	7	4	13 15 0	7 11 6
1943	8	6	2	12 8 0	4 9 5
1944	12	10	2	22 2 0	15 9 1
1945	8	7	1	11 12 0	Nil

Burial Grounds.

The following interments were made at the undernoted Burial Grounds within the Burgh:—

	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Eastern Necropolis, ...	1,279	1,441	1,231	1,219	1,206	1,149	1,080
Western Necropolis, ...	910	1,014	957	868	817	828	694
Western Cemetary (Perth Road), ...	152	156	148	163	147	143	131
Barnhill Cemetery, ...	187	190	207	184	187	173	173
Parish Church Burying Ground (Broughty Ferry), ...	8	7	9	5	4	2	1
Constitution Road Burying Ground, ...	0	0	0	0	0	0	0
St Luke's Episcopal Church, Downfield,	0	0	1	0	0	0	1
New Mains Cemetery,	10	12	8	12	13	12	6
TOTAL, ...	2,546	2,820	2,561	2,451	2,374	2,307	2,086
Cremations at Dundee Crematorium, ...	190	278	344	422	437	576	519

(Information available through the courtesy of the Secretaries.)

HOUSING.

Of all activities undertaken for bettering the living conditions of the population there can be no doubt that HOUSING has, to a major degree, been most seriously affected by the exigency of war, demanding as it did, enlistment of labour and material to such an extent as to leave only a bare minimum for the most urgent of maintenance work and to continue, whenever possible, the erection of houses for the working classes.

The picture of the year 1939 was a promising one, depicting some 846 houses completed by the Corporation and 194 by private enterprise—a total of 1,040 dwellings, and, while the year 1940 showed a return of 320 houses erected by the Corporation, the majority of these can be looked upon as a spreadover from the previous year, the initial operation of construction having commenced then. During the following five years to the end of 1945 only 179 permanent houses were completed at the instance of the Local Authority. In addition, however, some 77 temporary houses had been provided during the year 1945. These have been erected in accordance with the Housing (Temporary Accommodation) Act, 1944, and are a first instalment of a total of 1,550 dwellings of this kind, the final allocation of which is:—Arcon, 791; Tarran, 120; Aluminium, 546; and Phœnix, 93.

In terms of the Defence (General) Regulations a number of houses, formerly dealt with under the Housing (Scotland) Acts, have been permitted to be re-opened for occupation in terms of licences granted from year to year, but this can only be looked upon as a temporary expedient relieving to a very small degree the housing shortage. Some 187 dwellings have been dealt with in this manner.

During 1945, 130 houses which had been closed as unfit for human habitation were taken possession of and re-occupied by squatters. These cases occurred mainly in partly vacated buildings, and the indications are that this form of illegal occupation will tend to increase in the coming year. A number of the squatters have made some effort towards improving the conditions of the dwellings occupied, but the major defects remain, leaving the dwellings in the unfit category.

TABLE I.

Shows the number of houses which have been erected by the Corporation and Private Enterprise during the years 1939-1945:—

CORPORATION.

Year	Rooms. 1.	2.	3.	4 etc.	Total.
1939, ...	—	—	255	591	846
1940, ...	—	—	170	150	320
1941, ...	—	—	38	45	83
1942, ...	—	—	—	18	18
1943, ...	—	—	—	—	—
1944, ...	—	—	38	2	40
1945, ...	—	—	8	30	38
Total, ...	—	—	509	836	1,345

GOVERNMENT-ERECTED TEMPORARY DWELLINGS.

Year	Rooms. 1.	2.	3.	4 etc.	Total.
1939, ...	—	—	—	—	—
1940, ...	—	—	—	—	—
1941, ...	—	—	—	—	—
1942, ...	—	—	—	—	—
1943, ...	—	—	—	—	—
1944, ...	—	—	—	—	—
1945, ...	—	—	77	—	77
Total, ...	—	—	77	—	77

PRIVATE ENTERPRISE.

Year	Rooms. 1.	2.	3.	4 etc.	Total.
1939, ...	—	2	115	77	194
1940, ...	—	—	11	12	23
1941, ...	—	—	8	3	11
1942, ...	—	—	9	5	14
1943, ...	—	—	2	10	12
1944, ...	—	—	6	—	6
1945, ...	—	—	—	2	2
Total, ...	—	2	151	109	262

TABLE II.

The locus of the Corporation Housing Schemes—the number of houses completed; in course of construction; proposed; and the Act under which erected, or to be erected (from data supplied by the Director of Housing).

Act under which erected.	Scheme or Site.	Type.	No. of Houses Completed Apartments.						In Course of Construction. Apartments						Proposed to be Erected. Apartments					
			1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1919 Act	Logie	Flatted	...	88	162	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Logie	Tenement	...	8	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hospital Park	Flatted	...	52	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Stirling Park	Do.	...	...	116	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Taybank	Do.	...	...	160	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Craigiebank	Cottage	...	...	...	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dudhope	Flatted	...	...	88	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Broughty Ferry	Do.	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1923 Act	Johnston Ave.	Cottage	...	...	...	52	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dudhope	Tenement	...	46	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1924 Act	Broughty Ferry	Flatted	...	68	128	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Craigiebank	Do.	...	...	201	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alpin Road	Do.	...	52	164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lawton	Do.	...	...	264	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Stirling Park	Do.	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Steel Houses (Lawton Rd. and Alpin Rd.)	Do.	...	...	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Steel House (Alpin Road)	Bungalow	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Strathmore Ave.	Tenement	...	...	54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lawton (Boot's Pat.)	Flatted	...	...	264	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Graham Street (Boot's Patent)	Do.	...	...	236	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arklay Street	Tenement	...	216	180	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Corso Street	Do.	...	66	210	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lawton Farm	Flatted	...	12	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Harefield Road	Do.	...	12	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Law Crescent	Do	...	64	196	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hepburn Street	Tenement	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ann Street	Do.	...	4	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1925 Act	(Not State Aided)—																			
	Glenprosen Terrace	Flatted	...	24	68	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Graham Street	Do.	...	72	140	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Taybank	Do.	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1923/25 Acts	—Slum Clearance and Closing Orders—																			
	Dudhope	Tenement	...	24	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Byron Street	Do.	...	36	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arklay Street	Do.	...	36	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Wester Clepington I.	Do.	...	90	138	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Do. Do. II.	Do.	...	96	150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tullideph Road	Do.	...	18	66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Do. Do	Flatted	...	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	West Port	Tenement	...	6	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1930 Act	—Slum Clearance—																			
	Sandeman Street	Tenement	...	...	112	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Queen Street, B.F.	Do.	...	6	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Clepington Road	Do.	...	36	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Caird Avenue	Do.	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Wedderburn Street	Do.	...	20	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lawton Road	Flatted	...	...	92	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Moncur Crescent	Tenement	...	18	66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lorne Street	Do.	...	...	36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arbroath Road	Do.	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Carnegie Street	Do.	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Constitution St.	Do.	...	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Cotton Road	Do.	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ann Street	Do.	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Canning Street	Do.	...	...	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kinghorne Road	Do.	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Harcourt Street	Do.	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Paterson Street	Do.	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ogilvie's Road	Do.	...	...	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hilltown I.	Do.	...	3	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bonnybank Road	Do.	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Forebank Road	Do.	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hawkhill	Do.	...	8	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Cross Row	Do.	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill Street	Do.	...	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	King Street, B.F.	Do.	...	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Marshall Street	Do.	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Fairbairn Street	Do.	...	56	24	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hospital Street	Do.	...	12	36	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dens Road	Do	...	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Maitland Street	Do.	...	6	36	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Benvie Road	Do.	...	...	18	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Balgay Street	Do.	...	...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Wolseley Street	Do.	32	...	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mid Craigie, 1st De.	Do.	32	120	300	154	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mid Craigie, 2nd De.	Do. & Cot.	...	...	256	80	60	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hilltown (II.) Nos. 59/69	Tenement	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Queen Street, B.F., 2nd Dev.	Do.	...	...	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gardner Street	Do.	...	...	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Morgan Street	Do.	...	...	18	54	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Beechwood, 1st De.	Do.	32	...	92	36	8	...	...	...	...	...	...	...	...	...	...	...	...	...
	Beechwood, 2nd De.	Do. & Cot.	...	...	42	90	24	...	...	...	...	...	...	...	...	...	...	...	...	...
	Beechwood, 3rd De.	Tenement	...	...	...	138	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Polepark	Do.	...	...	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1935/38 Acts—																				
	Linlathen	Flatted	...	...	178	280	98													
	Beechwood, 4th De.	Tenement	...	...	...	90	3	...	...	...	...	...	...	...	...	...	...	...	...	...
	Wellgrove	Flat. & Cot.	...	...	...	12	25	10	...	...	...	...	...	...	...	...	...	...	...	...
	Polepark	Tenement	...	...	...	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Magdalene's Kirkton 1st Dev.	Flat. & Cot.	...	...	28	14	...	...	...	...	132	74	28	...	...	...	...	...	...	...
	2nd Dev.	Cottage	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	3rd Dev.	Flat. & Cot.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	219	70	24
	W. Kirkton, 1st De.	Cottage	...	...	...	...	...	...	...	...	...	50	...	...	...	...	...	297	60	18
	Hilltown	Tenement	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	280	88	32
	Long Lane, B.F.	Do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	...	...
	Clement Park	Cottage	...	...	...	...	...	...	...	...	18	...	...	...	...	...	...	...	...	...
	Dryburgh, 1st Dev.	Do.	...	...	...	...	...	...	...	...	110	62	...	...	...	...	...	111	43	12
	Temporary Houses	Cottage	...	...	77	...	...	...	...	...	593	...	...	...	...	...	414	...	...	...
			96	1,473	5,235	1,328	218	10	...	...	853	186	28	...	...	...	414	937	201	96

The Corporation of Dundee as Fleming Trustees—

		Rooms 1	Rooms 2	Rooms 3																
Fleming Trust Deed—																				
Easter Clepington	Flatted	192	158	146	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scott Street	Do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	172	56	...	...

TABLE III.

Gives the number of houses provided since 1919, by the Town Council and by the Government (Temporary Dwellings).

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919-38, ...	96	1,545	4,653	720	7,014*
1939, ...	...	...	255	591	846
1940, ...	...	...	170	150	320
1941, ...	...	...	38	45	83
1942, ...	...	...	...	18	18
1943, ...	...	...	...	...	...
1944, ...	...	...	38	2	40
1945, ...	...	...	85	30	115
Total, ...	96	1,545	5,239	1,556	8,436

*Includes 76 Timber Huts.

The above Table shows 8,436 houses have been so provided, or an average of 312 per annum for the past 27 years. During that period, however, a large number of houses has gone out of use as such, as is detailed in:—

TABLE IV.

Houses Voluntarily Closed, Closed by Order, Demolished or turned into Business Premises:—

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919-38, ...	1,966	2,058	378	415	4,817
1939, ...	823	857	83	28	1,791*
1940, ...	201	155	30	62	398
1941, ...	90	51	11	3	155
1942, ...	53	44	2	2	101
1943, ...	52	40	2	4	98
1944, ...	58	58	7	9	132
1945, ...	39	47	5	8	99
Total, ...	3,282	3,310	518	481	7,591

*Includes 1,186 vacated houses in properties Closed by Order, etc., in which one or more houses remain in occupation, and not previously recorded in Table IV.

The total of 7,591 is equal to an average annual figure of 281 houses closed, against an annual provision of 312, or a net increase of 31 per annum in the City during the period under review.

To arrive at the grand total of houses provided there are other sources of supply which must be taken into consideration, such as

closed houses made fit for occupation and re-opened, business premises converted into houses and large houses sub-divided—(Table V.) houses provided by the beneficence of the Fleming and Gray Trusts — (Table VI.), and Private Enterprise — (Table VII.).

TABLE V.

Shops, etc., converted into dwelling-houses; houses reconstructed and re-opened, and large houses sub-divided.

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919-38, ...	189	443	129	211	972
1939, ...	3	32	8	13	56
1940, ...	...	26	6	3	35
1941, ...	1	11	5	2	19
1942, ...	1	10	2	...	13
1943, ...	...	2	2	4	8
1944, ...	1	11	2	11	25
1945, ...	...	6	4	13	23
Total, ...	195	541	158	257	1,151

TABLE VI.

Houses provided by the (a) Fleming, and (b) Peter Gray, Trusts:—

	1 Room	2 Rooms	3 Rooms	4 Rooms & over	Total
(a) By Fleming Trust (Gift of the late Robert Fleming, Esq., LL.D.)	192	158	146	...	496
(b) By the Peter Gray Housing Trust	24	...	...	...	24
				Total, ...	520

TABLE VII.

Houses provided by Private Enterprise.

	1 Room	2 Rooms	3 Rooms	4 Rooms and over	Total
1919-38, ...	14	62	1,025	1,761	2,862
1939, ...	...	2	115	77	194
1940, ...	...	...	11	12	23
1941, ...	...	...	8	3	11
1942, ...	...	...	9	5	14
1943, ...	...	...	2	10	12
1944, ...	...	...	6	...	6
1945, ...	...	...	...	2	2
Total, ...	14	64	1,176	1,870	3,124

These Tables, together, give the sum of 4,795, which figure, added to the Corporation's quota, makes a grand total of 13,231 houses provided during the past 27 years, being an average of 490 houses per annum over that period. From that total, however, we must deduct 7,591, the number of dwellings which have gone out of use as such during the same period, thus giving a net increase of 5,640 houses in the City, or an average annual contribution of 209.

HOUSING (SCOTLAND) ACT, 1925

The Dundee (Blue Mountains, etc.) Improvement Scheme, 1925; Confirmation Order, 1925, made by the Department of Health for Scotland under the Housing (Scotland) Act, 1925.

This Scheme was completed in 1932, and comprised:—

1 Room.	2 Rooms.	3 Rooms.	4 Rooms and over.	Total.
59	45	4	1	109

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.

This Scheme was completed in 1935 and comprised:—

1 Room.	2 Rooms.	3 Rooms.	4 Rooms and over.	Total.
139	147	26	3	315

The following table shows the dwelling-houses within the City which have been dealt with by Clearance Resolutions, and in addition the details of the properties adjoining these areas included by the Local Authority under Section 3 of the Housing (Scotland) Act, 1930, to make the schemes effective.

HOUSING (SCOTLAND) ACTS, 1930/35. CLEARANCE AREAS.

Area Number	Date of Resolution	Included in Terms of Section 1: Houses	Section 1: Other Premises	Section 3: Houses	Section 3: Other Premises	Totals: Houses	Totals: Other Premises	No. of Houses Still Occupied at Dec. 31, 1945	Remarks
1 to 18	17.11.30	304	73	23	19	327	92	...	All buildings demolished except 1 Hall.
19 to 32	1.12.32	259	31	6	34	265	65	...	Scheme completed in 1933.
Queen St., B.F.	5. 3.31	15	...	1	3	16	3	...	Scheme completed in 1933.
33 to 34	17.6 32	50	...	2	...	52	...	...	One building yet to be demolished.
35 to 91	2.11.33	840	101	113	74	953	175	113	Amended 1935 and 1936.
92 to 100	14. 2.35	109	17	47	17	156	34	44	
101	1. 8.35	43	5	3	17	46	22	1	
102	6. 6.35	56	9	...	...	56	9	23	
103	1. 8.35		Resolution rescinded, 2.4.36.					...	Houses dealt with under Sec. 16 of Housing (Scotland) Act, 1930.
104	3.10.35		Resolution rescinded, 6.2.36.					...	Houses dealt with under Sec. 16 of Housing (Scotland) Act, 1930.
105 to 106	2. 7.36	8	...	7	13	15	13	4	
107 to 109	....		Representations Cancelled.					...	Houses dealt with under Sec. 16 of Housing (Scotland) Act, 1930
110	1.10.36	24	...	...	8	24	8	...	All the houses were demolished during 1938.
111	1.10.36	26	1	...	1	26	2	12	
112	1.10.36	6	...	...	...	6	...	...	Scheme Completed, 1939.
113 to 115	1.10.36	52	5	1	4	53	9	13	
116 to 117	1.10.36	21	5	...	3	21	8	12	Amended Resolution, 1939.
118	9.11.36	23	...	...	...	23	...	10	Amended Resolution, 1938.
119	3.12.36	25	...	3	...	28	...	...	Scheme Completed, 1939.
120	4. 3.37	22	...	...	...	22	...	6	
121	2. 9.37	13	3	...	...	13	3	13	
122	2. 9.37	11	5	27	...	38	5	38	
123	2. 9.37	67	6	...	1	67	7	59	
124	2. 9.37	15	6	...	2	15	8	15	
125	2. 9.37	18	3	4	1	22	4	20	
126 to 126a	2. 9.37	65	1	16	2	81	3	62	Amended Resolution, 1938.
127	2. 9.37	242	6	18	39	260	45	255	
128	7.10.37	71	11	...	...	71	11	41	

129	8.11.37	59	3	7	3	66	6	65	
130	8.11.37	110	9	8	1	118	10	118	
131 to 131b	8.11.37	73	11	51	21	124	32	106	Amended Resolution, 1938.
132	10. 2.38	75	...	...	...	75	...	58	
133	10. 2.38	99	5	...	...	99	5	72	
134	10. 2.38	16	6	...	...	16	6	16	
135	10. 2.38	55	2	17	39	72	41	72	
136	3. 3.38	35	2	...	...	35	2	35	
137	3. 3.38	48	1	...	9	48	10	38	
138	3. 3.38	16	...	...	...	16	...	16	
139	3. 3.38	313	41	...	3	313	44	202	
140	3. 3.38	257	12	37	35	294	47	187	
141	2. 3.38	125	5	...	...	125	5	39	
142	7. 4.38	37	6	...	...	37	6	18	
143	7. 4.38	33	...	...	...	33	...	30	
144	7. 7.38	4	2	...	1	4	3	1	
145	7. 7.38	45	5	...	1	45	6	38	
146	7. 7.38	16	6	...	5	16	11	6	
147	7. 7.38	19	3	12	1	31	4	31	
148	7. 7.38	11	2	...	2	11	4	11	
149	7. 7.38	24	8	11	12	35	20	34	
150	7. 7.38	18	4	...	...	18	4	10	
151	7. 7.38	10	...	15	3	25	3	21	
152	7. 7.38	25	1	16	2	41	3	32	
153	7. 7.38	77	15	...	3	77	18	71	
154	7. 7.38	166	10	13	4	179	14	173	
155	7. 7.38	62	3	...	9	62	12	25	
156	7. 7.38	51	18	4	5	55	23	51	
157	7. 7.38	112	4	20	11	132	15	104	
158	1.12.38	7	...	...	...	7	...	...	Scheme Completed, 1939.
159	1.12.38	30	1	1	3	31	4	27	
160	2. 2.39	45	5	15	20	60	25	51	
161	6. 4.39	30	2	43	10	73	12	55	
162	6. 7.39	23	7	...	7	23	14	14	
		4.511	487	541	448	5,052	935	2,545	and 8 other premises occupied as houses.

Table showing Number of Houses Closed under the Housing (Scotland) Acts, 1925-1935 and still Occupied at 31st December, 1945.

	(a) Number of Rooms. 1	2	3	4	5	6 and over.	Pop.	(b) Sizes of Houses Required to Accommodate families in (a). Number of Rooms. 1	2	3	4	5	6
Individual Houses, ...	322	425	51	7	1	1	2,454	368	220	193	30	2	...
Clearance Areas, ...	800	1,437	241	36	18	13	8,683	1,079	624	622	224	37	4
Total, ...	1,122	1,862	292	43	19	14	11,137	1,447	844	815	254	39	4
	$\underbrace{\qquad\qquad}_{3,352}$							$\underbrace{\qquad\qquad}_{3,403*}$					

*Includes accommodation required for 51 families occupying sub-let rooms or premises other than houses.

Summary in regard to Housing conditions and alterations during the years 1939--1945.

I.—Particulars of Houses (458) Improved:—

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
(a) At properties that had been "Closed by Order" for a period	34	38	1	6
(b) At instance of Sanitary Inspector, but not "reported" to Committee	3	9	12	10
(c) After Plans had been submitted to and approved of by the Works Committee	10	150	58	47
(d) Two or more houses made into one	50	14	...	...
(e) Houses divided and improved	...	1	4	11

II.—Other premises converted into dwelling-houses:—

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
2 Offices	...	...	1	1
17 Shops	2	14	1	...
2 Factories (Parts),	...	1	1	...
1 Store	...	...	...	1
1 Clubrooms	...	1	...	...

III.—New Houses completed and ready for occupation during this period:—

(a) Under the Corporation Housing Schemes.

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
Ward 1—Taybank,	...	...	8	...
Ward 3—Wellgrove	...	...	...	47
Beechwood — 3rd Dev.,	...	...	...	138
Beechwood — 4th Dev.	...	...	...	93
Gardner Street	...	...	12	...
Ward 4—Mid Craigie — 2nd Dev.	...	...	208	109
Morgan Street	...	...	9	33
Ward 5—Linlathen	...	...	178	378
Ward 7—Magdalene's Kirkton	...	...	28	14
Ward 8—Polepark	...	...	48	24
Ward 10—Queen Street, B.F.	...	...	18	...
Temporary Non-Traditional Type Houses	...	...	77	...
	...	...	586	836

Total Houses — 1,422.

(b) Private Enterprise.

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
Ward 1	...	...	5	12
Ward 2	...	...	...	...
Ward 3	...	2	49	5
Ward 4	...	...	16	5
Ward 5	...	...	9	11
Ward 7	...	...	30	18
Ward 8	...	...	13	13
Ward 9	...	...	1	17
Ward 10	...	...	19	7
Ward 11	...	...	9	21
Ward 12	...	...	...	...

Total — 262 houses.

Giving a grand total of 1,684 new houses erected throughout the period.

IV.—Particulars of dwelling-houses closed (2,774) for human habitation during the period 1939-1945 in whole or in part and vacated:—

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
(a) Voluntarily — houses generally in very bad repair, very damp, and not reasonably fit for human habitation	3	1	3	3
(b) Converted into business premises, offices, shops or workshops, etc.	2	28	17	14
(c) By absorption into other houses ...	56	18	11	28
(d) Closed by Order, Demotition Order, or Undertaking	775	669	56	11
(e) Clearance Areas	480	536	53	10
Total	1,316	1,252	140	66

V.—Dwelling-houses Demolished (464) during the period 1939-1945:—

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
(a) Dwelling-houses that had been Closed by Order or Demolition Order	44	80	14	4
(b) Dwelling-houses that had been Closed Voluntarily	...	...	...	1
(c) Clearance Areas	108	149	22	8
(d) Dwelling-houses that had been Closed by Undertaking	11	6	...	...
(e) Site for Business Premises, etc. ...	...	6	7	4
Total	163	241	43	17

In addition to the above, 67 other premises were demonlished, viz.:—

6 Workships, 5 Garages, 19 Stores, 5 Stables, 21 Shops, 2 Offices, 1 Factory, 4 Cellars, 1 Warehouse, 1 Milkhouse, 1 Clubroom, 1 Dilapidated Building.

VI.—Net Result for Period 1939-45:—

The net result for the period is that there are 911 less houses available for human habitation than at 31st December, 1938, i.e., houses of:—

1 Room	2 Rooms	3 Rooms	4 Rooms and over
1,310 less	1,152 less	626 more	925 more

VII.—The total number of Dwelling-houses (Private and Corporation) in course of erection (1,067) — all stages — at 31st December, 1945, is as follows:—

	1 Room	2 Rooms	3 Rooms	4 Rooms &over
Ward 3	...	...	110	62
Ward 7	...	...	132	152
Ward 11	...	...	18	...
Temporary Houses under construction	...	...	593	...
Total	...	...	853	214

VIII.—Estimated Number of Inhabited Houses (excluding Institutions and other large establishments) within the Burgh of Dundee, as arrived at from the Quinquennial Survey undertaken during the year 1938 and corrected to 31st December, 1945:—

1 Room	2 Rooms	3 Rooms	4 & over Rooms	Total
4,973	21,781	13,866	9,828	50,448
or	or	or	or	
9.85%	43.17%	27.48%	19.48%	

of which approximately 4,711 are owner occupied. Included in the above figures are 15 x 1 roomed, 64 x 2 roomed, 73 x 3 roomed and 48 x 4 etc., roomed houses, a total of 200, which were added to the Burgh by extension of the boundaries during 1939.

OVERCROWDING.

This is a subject about which much has been written in the past, and, for all we know, bearing in mind the year 1938 when there was a decided rift in the clouds, had it not been for the years of war which followed, we might have been in a much happier position.

This, unfortunately, is not the case, and the situation which confronts us far exceeds anything experienced hitherto, and its solution is the concern of Official and citizen alike. Down through the ages it has been manifest that war always leaves a country worse than it found it, and it was never truer than of the cataclysm just concluded.

As Government Departments, Officials and laymen in general are keenly aware of the desperate position, it is felt that any lengthy comment would be superfluous.

Suffice it to say that with a debt carried forward from the unfinished task of an inter-war period, further aggravated by the almost total lack of house building during the war; many couples married during that time now possessed of families and homeless, the situation eclipses practically every other item on our programme of raising the standard of living.

What are the results of this appalling shortage? To cite a few—married couples instead of being able to set up house on their own are obliged to parents or relatives for accommodation, or endure a life in furnished rooms; single persons unable to find lodgings.

What is the outcome of the foregoing? Keen shortage has driven many to take the law into their own hands and out of all this emerges a further problem—that of the squatter.

These people have unlawfully taken possession of houses which were closed under the Housing Acts, and while it may be said that they have a roof over their heads and a door of their own to close against the outside world it has no connection with a solution to overcrowding. Rather has it raised other complications as many of the houses appropriated are totally without the barest necessities for even a moderate degree of suitability—being without artificial light, internal water supply, sinks or adequate sanitation.

This then is the plight—the cure—the provision of houses and still more houses until such time as the demand has been satisfied.

The Rent and Mortgage Interest Restrictions Acts, 1920 to 1939.

Hereunder are shown the applications received from tenants craving Certificates testifying to the disrepair of their houses, also requests from Factors for Reports certifying that repairs had been carried out to dwelling-houses so that the Certificate granted to the tenant might be annulled.

	BY TENANTS.			BY FACTORS OR OWNERS.		
	No. of Applications.	Granted	Refused, etc.	No. of Applications.	Granted.	Refused.
1939	28	20	8	5	5	...
1940	8	5	3	...	...	...
1941	6	2	4	1	1	...
1942	1	...	1	...	...	...
1943	2	1	1	...	...	...
1944	...	...	...	9	9	...
1945	26	9	17	...	...	...
Totals,	71	37	34	15	15	...

Common Lodging Houses.

From 1939 onwards the Register showed 3 such establishments. They are capable of accommodating 427 Male Lodgers, as under:—

55 Commercial Street	236
3/5 Craig Street	137
25 North Lindsay Street	54

These premises were visited regularly — 1,045 inspections being made throughout the period — and were found with minor exceptions to be conducted and maintained in a proper manner. On occasions, however, action was taken to obtain the cleansing of members of the itinerant fraternity who frequented this class of accommodation.

Houses Let in Lodgings.

The number of houses so listed at the end of 1945 was 78; in 1939 the figure was 105. These houses were kept under observation, 2,661 visits being paid thereto. They were found to be maintained in a reasonably cleanly condition with the exception of two houses, the proprietors of which were finally dealt with in court. In another instance, for permitting the common kitchen to be used for sleeping purposes, if was found necessary to institute proceedings against the offender.

The Seamen's Boarding House (Dundee Sailors' Home and Hostel) and the **Salvation Army Home and Metropole for Women** were kept up to their usual standard—the former being greatly taken advantage of by naval personnel.

Tents and Vans.

To this type of dwelling 249 inspections were paid. They were found to be maintained on the whole satisfactorily with the exception of a small colony of vans and huts which were neither suitable nor was the site all that could be desired. The vans were all cleared from the locus which is not to be so used again.

Mechanical and Non-Mechanical Factories.

Such premises were inspected on 2,944 occasions. Undernoted is a detail of complaints received from H.M. Inspector of Factories which numbered 69 and were attended to. There were also 11 complaints from other sources which were remedied.

Synopsis of H.M. Inspector of Factories Complaints.

Nature of Defects	1939	1940	1941	1942	1943	1944	1945
Lack of cleanliness, ...	4	12	1	2	...	...	5
Insufficient Water Closet Accommodation, ...	...	1	...	...	1	2	1
Unsuitable Water Closet Accommodation, ...	6	6	...	2	2	12	6
No separate accommodation for sexes, ...	1	1	...	...	...	1	2
No Sanitary Accommodation,	1	...	...	...	...	...	...
Total, ...	12	20	1	4	3	15	14
				69			

Bakehouses.

	1939	1940	1941	1942	1943	1944	1945
Occupied Mechanical Factory Bakehouses, ...	54	55	55	55	55	59	56
Underground Bakehouses included in above number,	6	6	6	6	6	6	6
Occupied non-Mechanical Factory Bakehouses, ...	33	29	28	28	29	28	26
Underground Bakehouses included in above number,	3	3	3	3	3	2	2
Empty Bakehouses, ...	7	7	8	7	7	4	8

The above table shows the bakehouses within the City, and it will be seen that there has been very slight variation in the numbers

throughout the period. Visits totalling 7,464 were paid to these premises, and the attention of the owners directed to any defects found for which remedial measures were applied.

Bakers throughout the City were informed by circular issued by this Department of the danger to stocks of flour, etc., by weevils and other pests. Outlined in the notice were all the necessary precautions to be adopted against the risk of infestation.

It was emphasised that while in ordinary times it was important to counteract this menace it was doubly so in time of war to conserve the vital food supply of the nation.

FOOD INSPECTION.

Shops, Stalls, Barrows, etc.

ARTICLES OF FOOD SEIZED.

Foodstuffs destroyed as being unfit for human consumption. Examined in shops, wholesale warehouses and Ministry of Food Stores, etc.

8,496 visits of inspection to shops, etc., where foodstuffs were sold, distributed or manufactured.

Articles.	Where Seized.	Reason for Seizure.	Tons.	Cwts.	Qrs.	Lbs.
Tinned Food	Shops or Stalls or Barrows on Streets, or food or wholesale stores, or railway stations.	Decomposition, etc., or contamination in transit.	35	2	...	23
Bacon and Ham			...	16	1	7
Beef, Mutton, Pork, etc.			3	5	...	12
Fish			5	7	1	18
Coffee, Tea and Cocoa			...	2	0	21
Cereals			3	16	3	25
Sugar			...	4	3	22
Butter, Margarine and Cooking Fat			...	13	1	27
Vegetables, ...			34	6	3	11
Fruit, ...			3	15	1	12
Dried Fruit, ...			2	1	3	7
Sauces, Pickles, etc. ...			...	6	3	7
Jam, Preserves, etc. ...			...	14	...	21
Miscellaneous			5	4	1	26
		Total	95	18	...	15

The following foodstuffs were transferred to the Divisional Salvage Officer, Ministry of Food, and are included in the above table.

	Tons.	Cwts.	Qrs.	Lbs.
Tinned Food,	...	11	...	14
Bacon and Ham,	...	4	2	3
Butter, Margarine, Cooking Fat,	...	10	3	10
Sugar,	...	3	1	11
Fish,	...	1	2	0
Cereals,	2	16	2	23
Miscellaneous,	4	5	3	20
Total,	8	13	3	25

The Public Health (Meat) Regulations (Scotland) 1932 —Art. 15.

Four certificates granted in terms of the above Regulations approving storage accommodation for meat, etc., sold from off vans were in force till 1940, when the number was reduced to three.

FOODSTUFFS ARRIVING AT THE PORT OF DUNDEE, EITHER DIRECTLY FROM ABROAD OR BY COASTWISE TRAFFIC.

The undernoted tables show the quantity of foods which arrived by waterway at the Port between 1939 and 1945.

	Coastwise.			Foreign.		
1939	Tons 14,730	19	3	Tons 38,727	12	1
1940	3,861	10	1	36,709	8	3
1941	3,723	13	3	76,375	9	1
1942	3,034	2	1	14,856	0	0
1943	5,761	19	2	18,146	14	2
1944	3,540	5	1	55,882	19	2
1945	7,476	14	2	27,970	0	3

Fish Inspection at Fish Market, Carolina Port.

It was unnecessary for this Department to intervene during the period in relation to fish landed from trawlers at the Fish Dock, and the premises themselves called for no adverse criticism. On a number of occasions, however, it was necessary to inspect fish arriving by rail for sale at this market, the calls being made by fish salesmen who expressed doubt as to the suitability of the fish for human consumption, much of which had deteriorated in the course of transit.

Public Slaughter House, Meat and Cattle Market.

The undernoted information prepared from figures kindly supplied by the Superintendent of Slaughter Houses gives the number of animals slaughtered and particulars of the meat found to be unfit for human consumption throughout the years 1939 to 1945.

Class of Animal.	Slaughtered.	No. of Animals Wholly Condemned.	Partially Condemned.	Weight (in lbs.) of Condemned Meat.
Cattle, ...	91,230	1,337	31,026	1,212,019
Sheep, ...	363,499	474	28,630	36,818
Pigs, ...	12,313	136	1,989	36,860

The Slaughter Houses, Meat Market and other premises incidental to the business were maintained satisfactorily and kept in a cleanly state.

There are no Private Slaughter Houses within the City.

The Public Health (Preservatives, etc., in Food) Regulations (Scotland), 1925/27.

Mince.—73 Samples (70 Official and 3 Test) were purchased throughout the period for the purpose of analysis. Of these 20 Official and 2 Test were reported by the Analyst to contain sulphur dioxide in a greater proportion than allowed by the Regulations or to contain preservative during the prohibited period.

The sellers of eighteen of the Official samples returned as adulterated were successfully prosecuted and the remaining two received warnings.

Regarding the test samples, these were followed up by Official Samples, one of which was pronounced " genuine " and the other was adulterated, and is included amongst those fined.

Sausages.—122 Samples (107 Official and 15 Test) were forwarded to the Analyst, and the returns revealed 8 (5 Official and 3 Test) to contain an excess of preservative. In the case of the Official samples, fines were imposed on the merchants responsible. Regarding the test samples—two were followed up by official samples—one of which was genuine and the other adulterated, and in this instance the seller was reported for prosecution.

Food and Drugs (Adulteration) Act, 1928.

Undernoted I give a statement of the number of samples purchased under these Acts during the last seven years:—

	Purchased.	Genuine.	Adulterated.
1939, ...	661	633	28
1940, ...	636	608	28
1941, ...	605	598	7
1942, ...	608	595	13
1943, ...	614	593	21
1944, ...	602	583	19
1945, ...	623	611	12

Summary of Samples Purchased or Taken During the Years 1939 to 1945.

Table I. — Official Samples.

	Purchased.	Certified to be Genuine.	Certified to be Adulterated.
Milk, ...	1,387	1,318	69
Margarine, ...	80	80	...
Butter, ...	85	84	1
Coffee, ...	44	44	...
Sausages and Sausage Meat,	107	100	7*
Mince, ...	70	50	20
Whisky, ...	4	1	3
Spirits of Turpentine, ...	1	0	1
Ground Cinnamon, ...	4	3	1
Spices, ...	130	130	...
Cereals, ...	70	70	...
Miscellaneous, ...	96	96	...
Total,	2,078	1,976	102

Table II.—The following Samples were taken in terms of Section 8 of the 1928 Act:—

	Purchased.	Certified to be Genuine.	Certified to be Adulterated.
Butter, ...	27	27	...

Table III. — Test Samples.

	Purchased.	Certified to be Genuine.	Adulterated.
Milk, ...	202	200	2
Margarine, ...	41	41	...
Butter, ...	41	41	...
Coffee, etc., ...	79	79	...
Cream of Tartar, ...	76	75	1
Milk (Tinned), ...	5	4	1
Sausages, ...	15	12	3
Mince, ...	3	1	2
Sago, ...	7	5	2
Dried Peas, Beans & Lentils,	15	13	2
Ground Cinnamon, ...	13	11	2
Spirits of Turpentine, ...	2	0	2
Ammonia, ...	1	...	1
Lemonade, ...	1	...	1
Orange Squash, ...	3	2	1
Prem (Tinned), ...	1	0	1
Baking Powder, ...	9	8	1
Ice Cream, ...	87	83	4*
Spices, etc., ...	374	374	...
Sauces, Flavouring, etc., ...	118	118	...
Cereals, ...	487	487	...
Miscellaneous, ...	664	664	...
Total,	2,244	2,218	26
Add Table I.	2,078	1,976	102
Add Table II.	27	27	...
Grand Total,	4,349	4,221	128

*Two of the sausages were deficient in meat content only.

*4 Ice Cream Samples — contraventions of the Use of Milk (Restriction) Order, 1941, all of which were reported to the Ministry of Food.

The average milk fat of the official samples taken each year was as follows:—

Year	No. of Samples Purchased.	Average Fat. %	Lowest Fat. %	Highest Fat. %	No. of. Samples below 3% Fat.	No. of Samples 4% (and Over) Fat.
1939	... 219	3.49	2,32	4.62	10	21
1940	... 200	3.56	2.03	5.41	15	25
1941	... 189	3.80	2.65	5.39	2	48
1942	... 193	3.61	2.58	5.15	4	30
1943	... 199	3.62	2.84	5.89	4	34
1944	... 192	3.83	2.70	8.38	1	62
1945	... 195	3.81	2.48	6.71	4	49

The results of test samples of milk as supplied to King's Cross Hospital were as undernoted:—

Year	No. of Samples Taken	Average Fat.	Highest Fat.	Lowest Fat.
1939	24	3.60%	4.28%	3.02%
1940	23	3.93%	4.38%	3.70%
1941	24	3.95%	4.98%	3.55%
1942	24	3.67%	4.35%	3.08%
1943	24	3.83%	4.51%	3.32%
1944	23	4.09%	4.61%	3.65%
1945	24	4.47%	7.04%	2.79%

Mr Andrew Dargie, B.Sc., F.R.I.C., Public Analyst, kindly supplies the following interesting information in connection with the milk supply for the year 1945:—

" The quality of the Milk Supply for the year is good, the average composition being:—

Water, ...		87.30
Total Solids, ...		12.70
Fat, ...	3.89	
Non-Fatty Solids, ...	8.81	
		100.00

The frequency distribution of the Butter-Fat and the Non-Fatty Solids in the 223 samples are given in the following table:—

Butter Fat Per Cent.	Frequencies.	Non-Fatty Solids Per Cent.	Frequencies.
Below 3.00	5	Below 8.50	4
3.00—3.19	8	8.50—8.59	24
3.20—3.39	16	8.60—8.69	25
3.40—3.59	35	8.70—8.79	67
3.60—3.79	54	8.80—8.89	42
3.80—3.99	31	8.90—8.99	27
4.00—4.19	21	9.00—9.09	13
4.20—4.39	20	9.10—9.19	12
4.40—4.59	12	9.20—9.29	8
4.60—4.79	9	9.30—9.39	1
4.80—4.99	3		223
5.00 and over	9		
	223		

Eight samples of Milk did not conform to the minimum limits set forth in the Sale of Milk Regulations, 1901. The details of these samples are as under:—

Butter Fat per cent. Official.	Non-Fatty Solids per cent. Official.	Freezing Point.
3.75	8.37	—.492°C. = 7.2% added water.
3.69	7.99	—.470°C. = 11.3% ,, ,,
3.25	8.12	—.490°C. = 7.5% ,, ,,
2.83	7.42	—.462°C. = 12.8% ,, ,,
2.78	8.52	= 0.22% deficient in Milk Fat.
2.48	8.73	= 0.52% ,, ,, ,,
2.62	8.58	= 0.38% ,, ,, ,,
Test	Test	
2.79	8.97	= 0.21% ,, ,, ,,

Keeping Quality of Milk.—There were a number of complaints about the keeping quality of some of the milks delivered to customers particularly in June, July and August. Twenty-six samples were submitted specially for acidity tests and other 15 samples were also tested. The normal acidity of milk may vary from 15 to 20 degrees. On the morning of receipt the acidities varied from 15 to 22.5 degrees, and in the majority of cases the generation of sourness was not pronounced after the lapse of 24 hours, but 8 samples were definitely sour in the same period and gave ample grounds for the complaints.

Fishy Taste in Milk.—The bitter taste and fishy odour in one producer's milk was traced to the feeding of the Cows with Sugar Beet Tops. It is advisable to restrict the quantity of Beet Tops as a feed for Dairy Cows, and to feed them after milking when taints are not so liable to develop."

Margarine, etc.—694 inspections were made to the various shops or premises in the City where Margarine, etc., are offered for sale.

Wholesale Dealers.—The number of premises registered where the business of a Wholesale Dealer in Margarine, etc., is carried on was in 1939, 32. This number was increased by 1 the following year and has remained at this figure ever since.

Re-Worked Butter.—From 1941 onwards 4 factories—all duly registered—where by way of trade butter is blended or reworked were found to be suitable and satisfactory. Prior to that year there were 6 such premises. Between 1939 and 1945 27 official samples of re-worked butter were procured, all of which were returned by the Analyst as genuine.

Milk for Bacteriological Examination.

Samples were purchased or taken for bacteriological examination as follows:—

Year	Sweet.	Certified.	T.T.	Sterilised.	Pasteurised.	Standard.	Total.
1939 ...	261	44	22	4	53	20	404
1940 ...	231	44	3	3	51	20	352
1941 ...	166	28	...	3	9	27	233
1942 ...	309	40	...	4	5	30	388
1943 ...	306	33	...	7	...	20	366
1944 ...	293	33	2	3	...	23	354
1945 ...	272	34	2	9	...	55	372
Total,	1,838	256	29	33	118	195	2,469

all of which were submitted to Prof. W. J. Tulloch at the University College, the duly appointed Bacteriologist.

Rag Flock Acts, 1911 and 1928.

An excess of 30 parts Chlorine per 100,000 parts flock is a contravention of the above Acts, and to test if the requirements of legislation were complied with 36 samples were procured between 1939 and 1945. 28 samples satisfied the demands of the Acts, and 8 had a chlorine content in excess of the permitted quantity. Five of the offenders received warnings. In one instance the Medical Officer of Health for the town in which the maker of the flock was located, was communicated with, and the sample taken from the manufacturer's premises was also found unsatisfactory. A prosecution resulted. Regarding the other two defective samples prosecutions were instituted and the makers and holders of the flock were fined.

Shops Acts, 1912/1938.

The following table summarises the Department's activities throughout the period 1939 to 1945:—

	Inspections.	Contraventions.	Prosecutions.	Warnings.	Hours of Street Patrol.
1939 ...	2,017	493	29	464	396
1940 ...	2,048	423	9	414	455½
1941 ...	1,077	81	2	79	585½
1942 ...	1,022	21	1	20	677½
1943 ...	383	7	...	7	599
1944 ...	499	1	1	...	493½
1945 ...	455	5	...	5	479
	7,501	1,031	42	989	3,686

Of the 42 cases reported for prosecution 38 were successful as will be seen from the tabular statement dealing with prosecutions in general, the remaining 4 were not proceeded with by the Procurator Fiscal. The other contraventions, of a trivial nature, were dealt with by way of warning.

Regarding the earlier closing of shops during the war years, especially in the months when " black-out " commenced early, it was found that both shopkeepers and public alike responded very well to the altered conditions.

During the year under review the following trades or businesses made application for Closing Orders:—

In 1940 the Hairdressers in the City craved the application of an Order applicable to their trade, which, on account of there being the required majority in favour, was duly sanctioned by the Secretary of State for Scotland, as was, in 1941, an Order applicable to those engaged in the business of chemist or pharmacists when such was petitioned for by this class of trade.

In 1944 occupiers of premises wherein was carried on the trade or business of Fried Fish and/or Fried Chipped Potatoes approached the Local Authority on the subject of a Half-Holiday Order. On investigation it was found that every shop concerned carried on a subsidiary business and, in view of that, the Scottish Home Department advised an Order could only be made on the

conditions applicable to businesses engaged in the sale of refreshments. This, in view of the diversity of types of refreshment rooms varying from working-men's dining rooms to high-class hotels and restaurants made it inadvisable and unpractical to fix a Half-Holiday Order for places of public refreshment.

In 1939 the local branch of the Scottish Tobacco Trade Federation asked for the revocation of the Dundee Tobacconists' (Central Area) Weekly Half-Holiday Order. This was granted in 1940 by the Secretary of State as there was a clear majority in favour.

Theatres, Cinemas and Dance Halls.

Before such places are licensed by the Local Authority this Department inspects same to ensure that the sanitary accommodation, ventilation and cleanliness are up to the requisite standard. Throughout the seven years 1,422 inspections were made.

PORT INSPECTION

The volume of shipping arriving at this Port varied to some considerable extent as the undernoted table illustrates.

Volume of Shipping Entering the Port.

	NUMBER.			TONNAGE.		
	Foreign.	Coastwise.	Total	Foreign.	Coastwise.	Total.
1939,	324	704	1,028	607,546	241,299	848,845
1940,	82	345	427	191,030	140,923	331,953
1941,	33	349	382	93,854	118,917	212,771
1942,	13	480	493	39,875	174,462	214,337
1943,	27	454	481	73,720	177,864	251,584
1944,	43	412	455	150,370	202,976	353,346
1945,	75	444	519	172,126	188,905	361,031
Total,	597	3,188	3,785	1,328,521	1,245,346	2,573,867

Table of Inspections, etc.	1939.	1940.	1941.	1942.	1943.	1944.	1945.	Total.
Total number of verbal intimations,	302	109	33	13	28	43	75	603
Total number of rat notices issued,	22	...	...	...	...	...	...	22
Number of visits to ships,	978	334	161	101	155	288	240	2,197
Number of ships from infected Ports (direct),	16	23	16	8	21	21	22	127
Number of ships from infected Ports (indirect),	99	17	1	...	...	11	5	133
Number of ships from free Ports (direct),	111	...	16	4	6	10	36	183
Number of ships from free Ports (indirect),	98	...	...	1	...	1	2	102
Nuisances and defects attended to,	171	53	35	17	22	29	35	362
Miscellaneous work carried out while vessels were in Port,	...	41	38	24	42	64	45	254
A								
Number of vessels subjected to measures of rat destruction,	29	7	4	13	13	21	3	90
On Ships — Number of dead rats recovered,	42	28	209	105	97	81	42	604
On Ships — Number of dead rats examined bacteriologically,	...	...	...	...	...	...	...	...
Number of rats infected with Plague,	...	...	...	...	...	...	...	...
Number of rats infected with Trichinæ,	...	...	...	...	...	...	...	...
On Shore—Number of rats destroyed (other than ships),	257	267	370	304	432	438	240	2,308
Number of rats examined bacteriologically,	...	6	12	...	...	...	...	18
Number of rats found infected with Plague,	...	...	...	...	...	...	...	...
Number of rats found infected with Trichinæ,	...	...	...	...	...	...	...	...
B								
Number of vessels fumigated by SO2,	...	...	...	...	...	...	...	...
Number of vessels fumigated by HCN,	...	...	2	...	1	...	2	5
Number of dead rats recovered,	...	...	194	...	50	...	36	280
Number of vessels in which poisoning, etc., was employed,	29	7	2	13	12	21	1	85
Number of dead rats recovered,	42	28	15	105	47	81	6	324
Deratisation Certificates Issued,	...	...	2	...	...	...	2	4
Deratisation Exemption Certificates Issued,	27	16	14	10	13	13	13	106

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 during the period 1939-1945, viz.:—

Lineal feet of new rain water conducting channel rhones or gutter pipes used in the renewing or repairing of the same, ...	19,774
Lineal feet of new rain water conducting or downfall pipes used in the same way at different properties, ...	14,478

The prosecutions for the period 1939 to 1945 are summarised as follows:—

Food and Drugs (Adulteration Act — Milk.

1 Fined 15s 3 Fined 20s
1 ,, 25s 1 ,, 30s
1 ,, 53s 6d 2 ,, 60s
4 ,, £5 1 ,, £6
1 ,, £7 7s 1 ,, £10
1 ,, £15
3 Not Guilty.
2 Guilty — Admonished.
1 Not Proven.

Food and Drugs (Adulteration) Act, and Milk and Dairies Act. Milk.

1 Fined 80s
1 ,, £17
1 ,, £5
1 ,, £35 or 3 months. (Includes £5 for refusal to sell.)

Preservatives in Food.

Sausages.

2 Fined 20s.
1 ,, 30s.
1 ,, 60s.
1 ,, £6.

Mince.

3 Fined 20s. 4 Fined 25s.
1 ,, 30s. 3 ,, 40s.
3 ,, 60s. 2 ,, £5
1 ,, £6 3s 6d.
1 Fine limited to 23s 6d expenses.

Shop Acts, 1912/1938.

21 Fined 15s. 8 Fined 20s.
1 ,, 23s 6d. 3 ,, 25s.
2 ,, 30s. 1 ,, 60s.

Shops Act, 1934.

1 Fined £3.
1 Fined £5.

Bye-Laws Regulating Houses Let in Lodgings.

1 Fined 15s. 2 Fined 20s

Sec. 75 of Dundee Corporation Order, 1907, as amended by Sec. 22 of Order of 1935.

1 admonished.

Sec. 7 Milk and Dairies (Scotland) Act, 1914, etc.

1 Fined 15s

Housing (Scotland) Acts, 1930/35.

5 Fined £20s. 1 Fined 60s.
1 Fined £5.

Public Health (Scotland) Act, 1897.

1 Fined 5s.
1 ,, 20s. (1 case, 2 persons fined 10s each.)

Sec. 115 Burgh Police (Scotland) Act, 1892.

1 Found unfit to plead.
1 Fined 5s.

Rag Flock Acts, 1911 and 1928.	**Food and Drugs (Adulteration) Act — Whisky.**
1 Fined £5 for 2 charges.	2 Fined £5. 1 Fined £10.
2 ,, 23s 6d.	

In addition to the above prosecutions the undernoted cases were withdrawn or not proceeded with by the Procurator Fiscal:—

Merchandise Marks Act, 1887, ...	1 case
Shops Act, 1912/38, ...	4 cases
Shops Act, 1934, ...	1 case
Food and Drugs (Adulteration) Act—Milk, ...	4 cases.

I am, Mesdames and Gentlemen,

Your obedient servant,

W. M. SMITH,

Chief Sanitary Inspector.

[illegible] Food Acts, 1913 and 1928.	Food and Drugs (Adulteration) Act — Whisky.
1 Fined £5 for 2 charges.	
2 „ 22s. 6d.	3 Fined 25s. 1 Fined £10.

In addition to the above prosecutions the undernoted cases were withdrawn or not proceeded with by the Procurator Fiscal:—

Merchandise Marks Act, 1887 .... 1 case.
Shops Act, 1912/36 .... 4 cases.
Shops Act, 1934 .... [illegible]
Food and Drugs (Adulteration) Acts, 1928 .... [illegible] cases.

I am, Mesdames and Gentlemen,

Your obedient servant,

W. M. SMITH,

Chief Sanitary Inspector.