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CITY OF ABERDEEN.

REPORT

BY THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1935

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PREFACE.

In accordance with the requirements of the Department of Health for Scotland, there is herewith submitted the Annual Report on the Health and Sanitary Conditions in the City of Aberdeen for the year ended 31st December, 1935.

Population.

Under the Aberdeen Corporation Order Confirmation Act, 1934, powers were obtained to have the boundaries of the City extended. With this extension, the Registrar-General has estimated the population of the City of Aberdeen in 1935, as 175,373. This figure includes the inmates of Woodend Hospital and the Parish Hospital now within the City area. The statistical rates throughout the Report are based on this figure.

Death-Rate.

The death-rate in Scotland in 1935 was 13.2 per thousand of population. In Aberdeen, the death-rate was also 13.2, as compared with 12.5 in 1934 and 13.0 in 1933.

Birth-Rate.

The birth-rate was 18.0 in 1935; this was 0.2 higher than that of the previous year. The Scottish birth-rate was 17.8.

Infantile Mortality.

In 1935, the infantile mortality rate throughout Scotland was 77 per thousand births. Amongst the principal towns in Scotland, Aberdeen appeared third on the list, with a rate of 91. Dundee was first with a rate of 68 and Edinburgh second with 70. In 1934, Aberdeen was third on the list, the infantile mortality rate then being 77, which is the lowest yet recorded.

Maternal Mortality and Morbidity.

In view of the Report of the Medical Officers of the Department of Health for Scotland in connection with Maternal Mortality and Morbidity in Scotland, the Department requested Local Authorities to have a survey made of the local maternity services, taking into account the extent and quality of ante-natal, intra-natal and post-natal facilities. The Department further requested that this survey should take cognisance of any difficulties in the existing provisions. A Report on these lines was submitted by the Medical Officer of Health to the Department.

Infectious Diseases.

An epidemic of scarlet fever of mild variety which made its appearance in August of 1933, continued throughout 1934 and 1935. Fortunately, the disease is now distinctly on the decrease. The total number of cases notified in 1934 was 2,122 and in 1935, 1,491; the average number of cases for the decennium 1925-34 was 806. In 1935, the case mortality - that is the number of deaths per 100 cases - was 0.7 which must be accepted as a very low figure; this case mortality - 0.7 - is the same as the average for the preceding decennium.

It frequently happens that diphtheria appears in epidemic form immediately after an acute epidemic of scarlet fever, and in the City, diphtheria became epidemic in the end of 1933 and continued to be epidemic in 1934 and 1935. In 1935, the case-mortality was 4.6 as compared with 3.5 in 1934.

Immunisation Campaign.

It has been decided to carry out an immunisation campaign against diphtheria during the autumn and winter of 1936 and the classes in the community to be tackled will be the pre-school children and the children entering school. Diphtheria is a very dangerous disease - especially so in the case of the pre-school child.

Reference/

Infective Jaundice.

Reference should be made to Chapter I. where details are given as to the work carried out by Professor L.S.P. Davidson and Dr. John Smith on their continued research into the causation and incidence of this disease in the City.

Regional Medical Services.

The combining authorities have decided that the Regional Medical Scheme should continue for a further period of five years as from 15th May, 1935. This amalgamation includes all the medical services, including bacteriological; with reference to veterinary services, only the City and County of Aberdeen are concerned.

Welfare of Blind.

Special attention is directed to the section of the Report dealing with the operation of the Blind Persons Act. During the year under review, arrangements were made by the Town Council for the provision of domiciliary assistance to necessitous blind persons. This Scheme - after receiving the approval of the Department of Health for Scotland - came into operation in 1935 and is working smoothly and successfully.

Mental Health Services.

In this Report, there is included a statement dealing with Mental Health Services as administered at Kingseat Mental Hospital.

School Medical Services.

A Report dealing with the School Medical Services will be issued separately, on account of the fact that the school year ends on 31st July and is not coincident with the year as dealt with in this Report.

Structural Additions and Improvements.

The Town Council have undertaken certain structural commitments. In the first place, they have decided to erect an ante-natal annexe adjacent to the Maternity Hospital on the Forresterhill site. It has also been decided to erect a Staff Home at Woodend Hospital as the present staff accommodation cannot be considered to be satisfactory.

The question of the erection of a cubicle isolation ward which has been brought to the notice of the Council from time to time is again under consideration. The main difficulty in connection with such a building is that the space available at the City Hospital is rather cramped, and the only site where such a ward could be erected seems to be on the site at present occupied by a row of houses adjacent to the hospital grounds; all of these, with one exception, belong to the Town Council. The only other possible site is in front of the new Nurses' Home but the ground available here is inadequate, especially in view of the possibility of a future extension to the Home.

An "Animal House" is in course of erection within the City Hospital grounds and an extension to the City Hospital Laundry is also in course of construction.

HARRY J. RAE.

July, 1936.

Medical Officer of Health.

CITY OF ABERDEEN.

REPORT BY THE MEDICAL OFFICER OF HEALTH
For the Year 1935.

CHAPTER I.

SPECIAL INVESTIGATIONS UNDERTAKEN DURING THE YEAR.

I. WEIL'S DISEASE (Leptospirosis)

In the Annual Report for 1934 there was given a joint clinical and bacteriological study of nineteen cases of Infective Jaundice, occurring chiefly amongst fishworkers. This study was published by Professor L.S.P. Davidson, Dr. John Smith, Dr. R.M. Campbell and the Medical Officer of Health.

There follows a further detailed report of work carried out in 1935 by Professor L.S.P. Davidson and Dr. John Smith, entitled - "Weil's Disease in Fishworkers: A Clinical, Chemical and Bacteriological Study of Forty Cases".

In December, 1934, we reported nineteen cases of Weil's Disease, in fifteen of which the clinical diagnosis was confirmed by bacteriological or serological tests. Thirteen of the fifteen patients were employed in the handling and cleaning of fish. Accordingly, it was suggested that workers among fish must be included in the occupational groups especially liable to Weil's disease. The present report deals with forty-one cases which have been infected during the past eighteen months, forty of which were fishworkers. Cases from other districts in which the bacteriological investigations were carried out in Aberdeen are not included, nor are certain severe and fatal cases of infective jaundice which, on clinical grounds and from post mortem findings, we are satisfied were due to Weil's disease, but which were not confirmed by bacteriological or serological tests owing to certain technical difficulties which were not realised by us prior to 1934.

In our previous report, we reviewed the history, epidemiology and bacteriology of Weil's disease, and explained why we preferred the non-descriptive title of "Weil's Disease" to its synonyms, such as, "Spirochaetosis Ictero-Haemorrhagica", which laid undue stress on haemorrhages, and particularly on jaundice, which may be absent in half the cases.

During the past year, there has been evidence of an increasing interest in various parts of the world in the recognition of Weil's disease. In Australia, further investigations have been made by Morrissey (1934), Drew (1934), Cotter and Sawers (1934), and Cotter (1935) into the outbreak which affected workers on sugar-cane farms in North Queensland. In this country, further reports have been presented by Alston (1935) and Alston and Brown (1934) on the prevalence of the disease in sewer workers in particular, and by Swan and McKeon (1935) on its incidence amongst coal miners in Northumberland and Durham, while sporadic cases have been reported by Watson (1935) in which the source of infection was not determined; by Halstead (1935) and Maxwell (1935) in sewer workers; by Wolstencroft (1935) in a canal worker, and by Neale (1935) in a young man who had bathed in a polluted stream.

In Germany, Sanders (1935) reports a case in a slaughterer who presumably contracted infection from a pig which showed symptoms of leptospiral/

leptospiral infection. In Holland, Dhont (1934) has investigated further cases in which the disease was due to the dog leptospira, L.canicola, while, from America, a fatal case is reported by Jeghers, Haughton and Foley (1935) in a fish cutter. We would refer the reader to this excellent paper for a full review of the occurrence of the disease in the world generally, and in America in particular. So far, only some twelve proved cases have been described in the literature as having contracted the disease in the United States of America.

Clinical Manifestations:

The symptoms and signs of Weil's disease are sufficiently well recognised to render it unnecessary for us to give individual reports on each of the forty cases. The frequency with which the various manifestations occur is, however, of interest. Accordingly, in our description of the course of the disease as it has occurred during 1934-35 in Aberdeen, we have included percentage figures obtained from the hospital case reports. Six of the cases were not sufficiently serious to need hospitalisation and in these cases we have relied for the information on the history given by the patient, or on data supplied by the family practitioner. As pointed out by Jeghers, it is customary to divide the disease into three stages, each with its characteristic features in regard to the spirochaetes in the blood, the antibodies, and the excretion of organisms in the urine, as well as in respect of certain clinical signs and symptoms. A knowledge of these features is essential if the correct appreciation of the various diagnostic procedures is to be carried out.

First or Febrile Stage:

The first stage lasts approximately one week, and during this time a septicaemia occurs; antibodies are not detectable in the serum and spirochaetes are not found in the urine. In our series, the onset of the disease was sudden (100%); it was ushered in by a combination of some or all of the following symptoms:- Headache (73%), particularly in the occipital region; muscular pains (97%), especially in the legs and back; nausea and vomiting (95%). In many cases vomiting was the most troublesome symptom present, the patient being unable to retain any food or drink for a day or two. Abdominal pain, generalised to the abdomen but more frequently localised to the epigastrium or right hypochondrium, was frequently present. It was presumed that this was mainly referable to the underlying toxic gastritis and hepatitis. Prostration was present in all the severe cases except one, and was noted altogether in half of the cases; 40 per cent. of the patients had a cough which was generally not severe and accompanied by few physical signs. Signs of meningeal irritation developed in three cases, one of which was shown to be a true meningitis. Fever was present in 97 per cent. of the cases, the maximum temperature varying from 99° to 104° in different cases. It was absent in the two fatal cases during their period of hospitalisation. The duration of the primary fever was from five to nine days. In 90 per cent. of the cases, the temperature reached normal on the sixth or seventh day. A secondary rise of temperature occurred in 50 per cent. of the cases during the third week of the illness. Conjunctivitis ("pink eye") was noted in 57 per cent. of the cases. Continental writers lay considerable stress on this sign as of especial importance in early diagnosis. During the past year we have paid particular attention to the sign, and in consequence, positive reports have been obtained more frequently in 1935 than in 1934. Where icterus is marked, "pink eyes" are apt to be missed unless careful search is made. We agree that in some cases conjunctivitis is a very striking feature, but in many cases classified as positive in regard to this point, the conjunctivitis may be no more marked than is often seen in any catarrhal condition of the upper air passages. The throat was sore and congested in just over half the cases, but, in many, the degree of congestion was mild and not a striking feature. Herpes labialis was noted in only three cases, in two of which it became haemorrhagic. This is a much lower percentage than is usually reported and we suspect that our figures may be at least partly explained by a failure of the resident/

resident staff to make adequate notes in this respect. Icterus was present in 60 per cent. of cases; it developed between the fourth and seventh days of the disease in all cases except one in which it was first noted on the ninth day. A moderate leucocytosis, ranging from 10,000 to 20,000, was found. Urine analysis revealed signs of a toxic nephritis early in the disease, as evidenced by the presence of albumin, cells and casts; the blood urea was raised.

Second or Toxic Stage:

This stage is characterised by the absence of spirochaetes and the development of antibodies in the blood, and the excretion of organisms in the urine. By the beginning of the second week the temperature fell to normal by lysis, jaundice deepened and the icteric index ranged between 50 and 77 in severe cases. If no jaundice had developed by this time the patient was considered to be a mild case and was already nearly free of symptoms. Schüffner's prognostic dictum - that where there is no jaundice there is no mortality - is to be remembered. Haemorrhages into the skin, either as a purpuric rash or as large ecchymoses, were present in only 18 per cent. of our cases. Large cutaneous and subcutaneous haemorrhages indicate a very severe toxaemia and are bad prognostic signs; they were present in the two patients who died. In more than half the cases loss of blood from some source was present, i.e., epistaxis, haemoptysis or haematemesis; occult blood tests in the faeces were frequently positive. The amount of blood loss from these sources, however, was usually small and insignificant. The urinary features already described attained their maximum deviation from normal during the second week, and in severe cases the blood urea ranged from 50 to 397 milligrams per cent. In the average case with moderate toxicity a steady clinical improvement occurred during the second week. In cases doing badly, however, the heart became weaker, the blood pressure fell, jaundice deepened and signs of renal failure occurred, with a steadily mounting retention of nitrogenous waste products and a reduction of the urinary output. Case 12 died with anuria and Case 39 with a blood urea of 397 milligrams per cent. The liver was definitely enlarged to palpation in 32 per cent. of cases; the spleen was never enlarged; the lymphatic nodes were enlarged in 32 per cent. of cases, but this enlargement was confined to the cervical areas. The enlargement was never marked and it is difficult to assess the significance of this finding, as some degree of lymphadenitis is so frequently present in individuals suffering from no specific disease. It is possible, however, that the sore throat and lymphadenitis indicate the portal of entry of the organism, but this must remain at present purely a matter of speculation. The important point to remember is that lymphatic glandular enlargement, other than in the cervical region, was not present. The triad of signs in a jaundiced patient, namely, hepatic enlargement with absence of splenic enlargement or of generalised adenopathy, is of some diagnostic value.

Third or Convalescent Stage:

This is characterised by the full development of antibodies in the blood and by the excretion of organisms in the urine. By the beginning of the third week of the disease, the distressing subjective symptoms at the onset had subsided. Jaundice was present in severe cases for the full three weeks, while urinary changes had not completely disappeared for six weeks or even longer. In the moderate or severely toxic cases convalescence was prolonged, the patient feeling weak and easily tired for several weeks after discharge from hospital. A second rise in temperature occurred during the third week of the illness in approximately half the cases; the maximum temperature varied from 99° to 102° and lasted from five to fourteen days. The apyrexial period between the primary and secondary fever varied from six to fourteen days. The incidence of this secondary fever in our series is higher than usually reported (25 to 40 per cent. of cases). Unless four-hourly temperature readings are continued throughout the three weeks of the illness, the secondary fever will not be detected in a proportion of cases. With the rise in temperature there occurred in some cases a rise of the blood urea and a definite increase in the output of albumin and cells in the urine. The patient may, however, suffer from no subjective symptoms. The explanation of this "after-fever" is not settled; Inada believed it to be due to disintegrating toxins during/

during the height of serological immunity. We would suggest that it is an allergic phenomenon, as judged by the presence of a latent period and the similarity to the fever of arthritis and nephritis which occurs two to three weeks after haemolytic streptococcal infections of the throat. During convalescence the loss of hair was not infrequently a distressing feature.

Meningitis: In three cases severe headache, combined with stiffness of the neck and a positive Kernig's sign, suggested that meningitis was present. In only one of these (E.D., aged 18 - Case 30) was the diagnosis confirmed. Lumbar puncture was performed on the eighth day of the disease and 30 c.cs. of opalescent fluid were withdrawn under high pressure. Another 30 c.cs. were withdrawn on the next day. Examination of the cerebro-spinal fluid revealed a protein of 0.03 per cent; sugar normal; cells 238 per cubic millimetre; differential count - 67 per cent. polymorphs, 33 per cent. lymphocytes; tubercle bacilli not found; culture sterile. As a result of the two lumbar punctures the headache disappeared, there was much less rigidity of the neck muscles and Kernig's sign became negative. All investigations for foci of local infection in structures adjacent to the brain were negative. The patient eventually made an unimpaired recovery. Spirochaetes were not recovered from the cerebro-spinal fluid. This failure was explained when it was found that the cerebro-spinal fluid contained immune bodies to the leptospirae - a positive sero-reaction at a titre of 1 in 30 being demonstrated.

An interesting type of meningitis occurred in Case 32, six weeks after all signs of spirochaetal infection had passed. The patient was discharged from the Aberdeen City Hospital on 1.8.35, and was admitted to the Aberdeen Royal Infirmary on 9.9.35, suffering from headache and great stiffness of the neck. Kernig's sign was present. The optic discs were swollen (2D) and the edges blurred. No haemorrhages or exudates were seen. Lumbar puncture revealed a turbid fluid, under pressure (265 m.m.) Examination of the cerebro-spinal fluid revealed large numbers of cells, mostly polymorphonuclear leucocytes. Sugar - 0.018 mg. per cent. Chlorides - 657 mg. per cent. Total protein - 50 mg. per cent. No organisms could be seen in the stained films or cultivated from the cerebro-spinal fluid. It was believed that the most likely diagnosis was a mild attack of meningococcal meningitis. Accordingly, the daily removal of cerebro-spinal fluid was made and intrathecal injections of anti-meningococcal serum were given. The temperature remained elevated (100° to 102°) for twenty-three days; papilloedema gradually subsided and the patient was discharged from hospital apparently cured. She was seen by one of the writers two months afterwards, when she was in perfect health, and no signs of central nervous system disease were present. The cause of this aseptic meningitis was never established, nor could any definite conclusions be drawn in regard to its connection with the preceding attack of leptospiral infection.

Outcome: Only two out of forty cases succumbed, giving a mortality of 5 per cent. We believe that this figure may be an underestimate of the average mortality of the disease over a period of years in this country. It will be remembered that four fatal cases, diagnosed from their clinical manifestations and from post-mortem findings, which were reported in our previous communication, are not included in this series. The mortality rate in this country probably approximates to that usually found on the Continent of Europe, namely, about 10 per cent., but it is very much lower than that found in Japan, where it may be as high as 50 per cent. in cases not treated with serum.

Diagnosis: In our previous paper, we dealt in detail with the difficulties which beset the diagnosis of Weil's Disease. This is particularly true of the early and pre-icteric stage of the disease, and in mild cases in which jaundice never develops. The presenting features are not specific for any individual infectious disease; many of our cases subsequently proved to be Weil's Disease were diagnosed by the family doctors as influenza, streptococcal sore throat, or pneumonia. The development of jaundice in a patient who/

who, a week previously, had become suddenly and severely ill with fever, headache, vomiting and muscular pains, should, however, warrant the careful consideration of such a diagnosis. In simple catarrhal jaundice, or in epidemic infectious jaundice, which occurs principally in children, the onset is neither so abrupt nor so severe. We wish again to draw particular attention to the urinary changes which occur in many cases of Weil's Disease. Albuminuria was present in practically every case, and, in all patients who were moderately or severely ill, evidence of serious kidney damage was indicated by the presence of epithelial cells, leucocytes, erythrocytes and casts. Such urinary changes, in conjunction with the estimation of the blood urea, we believe to be both of diagnostic and prognostic importance. The final proof of the correctness of the diagnosis must depend, in every case, on bacteriological and serological tests; it is equally important in Weil's Disease as in enteric fever to know at which period of the disease to send blood, serum or urine to the bacteriologist for examination - hence the value of dividing the clinical manifestations into the three periods indicated above.

Bacteriological and Serological Findings.

Instead of using direct cultural methods to recover the leptospirae, each specimen of blood and urine for examination was inoculated intraperitoneally into two guinea pigs. Blood specimens were received in a clotted condition, and, after the serum was removed, the clot was prepared for inoculation by cutting it into fragments with a pair of sterile scissors. If the urine was a clear specimen, 30 c.cs. were centrifuged and the deposit inoculated, but if it contained much precipitate, then 5 c.cs. of the supernatant fluid were injected into each animal.

From 22 cases in this series, 9 showed leptospirae in the blood as follows:-

Day of Disease	4	5	6	7	8	9	10+
No. positive	2	1	5	0	1	0	0
No. negative	0	0	4	3	5	0	1

The findings agree with those of other workers in that, to demonstrate the leptospirae in the blood, the specimens should be obtained as early as possible after the onset of the illness. The presence of leptospirae in the blood is not compatible with the presence of antibodies. The blood specimens from which the leptospirae were obtained failed to show the presence of lysins, as judged by the negative sero-reactions, except in one instance (Case 37), and in this one the serum reacted to a titre of 1/10 only. In 6 cases it was not worth while inoculating blood samples as convalescence had been established.

Urine: Experience has shown that it is a much more difficult matter to obtain living leptospirae from the urine than from the blood. From 23 cases, 63 samples were inoculated at various dates after the onset of the illness, and only 5 specimens from 4 cases gave positive results. The specimens were inoculated into guinea pigs within one hour after being passed, and yet the results were not satisfactory. Positive results were obtained on the 19th, 17th and 19th, 14th, and 13th days after the onset of the illness. The difficulty of obtaining viable leptospirae seems to depend on several factors which will be discussed later.

Guinea Pig Inoculation: All guinea pigs which became infected as a result of blood or urine inoculation died with the typical signs of a leptospiral infection, and no difficulty occurred in demonstrating the leptospirae in the liver of the dead animals. With aseptic precautions the liver tissues were removed, emulsified in saline, and cultured in Schüffner's medium, 9 strains from human blood specimens and 5 from urine being thus obtained. In three instances, however, only one of the two animals died of a typical infection. After waiting for a further two weeks, the survivors were killed/

killed, their sera were tested for immune bodies, the kidneys were examined microscopically for leptospirae, and finally emulsions of the tissues were reinoculated into two further animals. All methods failed to show any evidence of infection, no immune bodies being demonstrated, and no evidence of a carrier condition being obtained. It seems possible, therefore, that in these three instances the materials inoculated must have contained very few leptospirae, insufficient in number to infect both guinea pigs.

Blood Sero-reaction: Schüffner's sero-reaction was carried out according to the method already described. The test can be applied with ease and rapidity, and with the proper microscopical equipment, no difficulty arises in the interpretation of results. The sero-reaction done on 47 specimens of blood obtained from 27 cases was as follows:-

Day of Disease	4	5	6	7	8	10+
No. positive	0	0	4	5	1	26
No. negative	2	1	5	0	3	2 (later positive)

The findings indicate, therefore, that the sero-reaction is rarely positive before the 6th day, but from that date onward, an increasing number of positive reactions will be obtained. In Case No. 15, however, the sero-reaction was negative on the 8th and 15th days; a third test was not done until the 151st day, when it was found to be positive. In Case No. 26 it was negative on the 10th and 14th days after the illness, but markedly positive on the 21st day. These two cases were particularly mild in character, and it may be that this feature accounted for the slow production of immune bodies.

Urine Sero-reaction: During the course of an investigation into the explanation of the relative difficulty with which leptospirae were recovered from the urine, it was found that lysins were excreted, and this has since also been reported by van der Hoeden (1935). The titre of the lysins can be estimated by the same methods as are used for the serum titration, but instead of commencing with a 1/10 dilution two lower were prepared - 1/2 and 1/6. The findings indicate that these immune bodies do appear in the urine, but at a later date than in the blood. Furthermore, the titre of the lysins in the urine is very much lower than in the serum, as would be expected. Nevertheless, examination of the urine by means of Schüffner's sero-reaction can be useful from the tenth day onwards, and can give corroborative evidence as to the cause of the infection. With a view to controlling the urine sero-reaction, fifty specimens of normal urine were thoroughly cooled in the refrigerator to cause complete precipitation of urates and phosphates. They were then clarified by high-speed centrifugation and the supernatant fluid was used for the test. None of these specimens gave a positive reaction.

We have already drawn attention to the difficulty of obtaining viable leptospirae from the urines of cases of Weil's Disease. There seem to us to be at least three possible explanations of this difficulty. The most obvious would appear to be the presence of lysins in the urine. The relationship between the presence of lysins and living leptospirae can be examined in Cases 16, 25, 28 and 29. Five specimens from these four cases showed, by guinea pig inoculation, living leptospira. Yet in two cases (16 and 29) the urine gave a positive lytic reaction to titres of 1/6 and 1/10. It is obvious, therefore, that the presence of immune bodies does not fully explain the difficulty. Two other factors which require consideration are the chemical composition of the urine and the period during which the leptospirae are in contact with the urine. Accordingly, certain experiments were carried out to elucidate these problems.

Action of urine containing immune bodies on Leptospirae: In order to demonstrate the action of lysins, a series of ten normal urines, as sent to the laboratory for examination, were filtered through sterile L5 Chamberland candles to render them bacteria-free. The various samples were then stored in/

in sterile containers. For the first part of the experiment 3 c.cs. of each were placed in a sterile tube, 5 drops of a virulent culture of *L.icterohaemorrhagiae* were added, and the tubes were then kept at room temperature. At intervals, drops of the mixture were examined, by dark-ground illumination methods, for motile leptospirae. Actively motile leptospirae were seen in all specimens after one hour, in four after two hours, and in only three after six hours. To further samples of the three specimens in which the leptospirae remained motile for six hours, sufficient immune rabbit leptospiral serum (titre 1/30,000) was added to give a lytic titre of 1/30. These, together with three control specimens, were inoculated with 5 drops of living virulent cultures of leptospirae, and the various tubes were then again maintained at room temperature. From these, 5 drops were removed at intervals and added to tubes containing Schuffner's medium, which were incubated for four days at 30°C., then examined by dark-ground illumination methods, replaced in the incubator, and finally examined after a further period of 4 days. The results showed that leptospirae may survive for a period of 8 hours, but not for 24 hours in certain samples of normal urine. When, however, sufficient lysins were added to give a titre of 1/30, after an incubation period of 4 days the cultures made showed no growth. Further, after an incubation period of 8 days, the tubes inoculated with the material from the A1, B1 and C1 series showed scanty growth up to the 2-hour exposure period, and in the case of the B1 series to the 4-hour period, but thereafter, no growth was obtained, whereas in the tubes inoculated from the control series, profuse growths were obtained even after 8 hours' exposure. It is evident, therefore, that lysins in urine exert an inhibitory and lethal action on virulent leptospirae.

Effect of Normal Urine on Leptospira.

A series of urines, thirteen in number, were filtered through L5 Chamberland candles, and stored aseptically. They were tested for pH, albumin and bile. To 3 c.cs. of each 5 drops of virulent culture were added and maintained at room temperature. At intervals, 5 drops were then transferred to culture tubes of Schüffner's medium, and incubated for 6 days at 30° C. The results showed that in one specimen the leptospirae survived only for one hour, in five for two hours, in one for four hours, in one for six hours, in three for eight hours and in two for twenty-four hours. It was found to be impossible to correlate the chemical findings with the period of survival, but it is obvious that certain urines contain substances which are highly inimical to leptospirae.

Time Factor: The findings indicated that the time during which the leptospirae are in contact with urine was of great importance, both in the case of urines containing immune bodies and in normal urines containing as yet unclassified inhibitory factors.

In conclusion, therefore, it can be assumed (1) that the urine sero-reaction is a specific test, and (2) that the difficulty of recovering viable leptospirae from the urine probably depends on three factors at least, firstly, the presence of lysins which act on the leptospirae and kill them with considerable rapidity, secondly, the chemical constitution of the specimen, and thirdly, the time during which the organisms are exposed to these inhibitory factors.

Distribution of Cases.

The distribution of cases of Weil's Disease in the City of Aberdeen, as regards its incidence in a special group of workers, and its occurrence in those working in a particular area, clearly indicate its relationship to the fishing industry. Forty patients contracted Weil's Disease while working in 22 premises in this area. Two fish-curing establishments each produced 6 cases, 1 produced 3, 6 produced 2, and in the remaining 13, 1 case occurred in each. Again, the premises in one street accounted for 13 cases, those in another street for 8, those in two streets for 3, those in four streets for 2, and the remaining 5, 1 in each street. As regards the premises in each of which 6 workers were infected, the seasonal distribution was as follows:-

in sterile containers. For the first part of the experiment 5 c.cs. of each were placed in a sterile tube, 5 drops of a virulent culture of L. icterohaemorrhagiae were added, and the tubes were then kept at room temperature. At intervals, drops of the mixture were examined, by dark-ground illumination methods, for motile leptospirae. Actively motile leptospirae were seen in all specimens after one hour, in four after two hours, and in only three after six hours. To further samples of the three specimens in which the leptospirae remained motile for six hours, sufficient immune rabbit leptospiral serum (titre 1/30,000) was added to give a lytic titre of 1/30. These, together with three control specimens, were inoculated with 5 drops of living virulent cultures of leptospirae, and the various tubes were then again maintained at room temperature. From these, 5 drops were removed at intervals and added to tubes containing Schuffner's medium, which were incubated for four days at 30°C., then examined by dark-ground illumination methods, replaced in the incubator, and finally examined after a further period of 4 days. The results showed that leptospirae may survive for a period of 8 hours, but not for 24 hours in certain samples of normal urine. When, however, sufficient lysins were added to give a titre of 1/30, after an incubation period of 4 days the cultures made showed no growth. Further, after an incubation period of 8 days, the tubes inoculated with the material from the A1, B1 and C1 series showed scanty growth up to the 2-hour exposure period, and in the case of the B1 series to the 4-hour period, but thereafter, no growth was obtained, whereas in the tubes inoculated from the control series, profuse growths were obtained even after 8 hours' exposure. It is evident, therefore, that lysins in urine exert an inhibitory and lethal action on virulent leptospirae.

Effect of Normal Urine on Leptospira.

A series of urines, thirteen in number, were filtered through L5 Chamberland candles, and stored aseptically. They were tested for pH, albumin and bile. To 5 c.cs. of each 5 drops of virulent culture were added and maintained at room temperature. At intervals, 5 drops were then transferred to culture tubes of Schuffner's medium, and incubated for 6 days at 30° C. The results showed that in one specimen the leptospirae survived only for one hour, in five for two hours, in one for four hours, in one for six hours, in three for eight hours and in two for twenty-four hours. It was found to be impossible to correlate the chemical findings with the period of survival, but it is obvious that certain urines contain substances which are highly inimical to leptospirae.

Time Factor: The findings indicated that the time during which the leptospirae are in contact with urine was of great importance, both in the case of urines containing immune bodies and in normal urines containing as yet unclassified inhibitory factors.

In conclusion, therefore, it may be stated (1) that the urine sero-reaction is a specific test, but (2) that the difficulty of recovering viable leptospirae from the urine depends upon these factors at least, firstly, the presence of lysins which act on the leptospirae and kill them with considerable rapidity, secondly, the chemical constitution of the specimen, and thirdly, the time during which the leptospirae are exposed to these inhibitory factors.

Distribution of Cases.

The distribution of cases of Weil's Disease in the City of Aberdeen, as regards its incidence in a special group of workers, and its occurrence in those working in a particular area, clearly indicate its relationship to the fishing industry. Forty patients contracted Weil's Disease while working in 28 premises in this area. Of the fish-curing establishments each produced 6 cases, 1 produced 3, 6 produced 2, and in the remaining 13, 1 case occurred in each. Again, the premises in one street accounted for 13 cases, those in another street for 8, those in two streets for 3, those in four streets for 2, and the remaining 5, 1 in each street. As regards the premises in each of which 6 workers were infected, the seasonal distribution was as follows:-

follows:-

FISH WORKERS A.			FISH WORKERS B.		
1st Case	No. 6	27.6.34	1st Case	No. 14	4.10.34
2nd "	No. 16	12.11.34	2nd "	No. 15	13.10.34
3rd "	No. 17	17.11.34	3rd "	No. 27	14.1.35
4th "	No. 19	28.11.34	4th "	No. 28	28.1.35
5th "	No. 21	5.12.34	5th "	No. 30	14.5.35
6th "	No. 29	14.5.35	6th "	No. 31	18.5.35

There has not been any particular prevalence in relation to the seasons, but from time to time, several cases have occurred in the same premises at about the same time, for example:-

CASES.	DATE OF OCCURRENCE.		
9, 11	28.9.34	8.10.34	
14, 15	4.10.34	13.10.34	
16, 17	12.11.34	17.11.34	
27, 28	14.1.35	25.1.35	
30, 31	14.5.35	18.5.35	
36, 37, 40	17.10.35	29.10.35	16.11.35.

The occurrence of several cases in the same premises within a few days of each other can probably be accounted for by an increased infestation by rats, attracted by food supplies when carelessness has been displayed in disposing of refuse and offal; or perhaps, in some measure by migration from other premises in which eradication methods have been adopted.

The industry which has grown up around the preparation of fish for human consumption cannot be said to be conducted entirely on up-to-date hygienic principles. The patients in the present series have been employed, for the most part, in the handling of white fish. In this City, some 250 different establishments, each employing perhaps 5 to 6 girls and 2 to 3 men, are constantly at work. These small businesses account for about 60 per cent. of the total, the remaining 40 per cent. being in the hands of larger firms, employing 40 to 100 or more workers.

At the outset it may be said that for economic reasons the smaller businesses are less able to employ hygienic methods than the larger concerns, though this does not always follow. A visit to many of these establishments shows that the premises and equipment are often unsatisfactory. The fish are taken from the market in boxes; they are dumped in a corrugated-iron shed in which at a wooden table 5 or 6 girls proceed to fillet and prepare the fish for sale to the retailer. The water for washing is obtained from the municipal supply, which is entirely satisfactory, but often, instead of being withdrawn from the tap, it is drawn from a tub placed underneath the tap. The latter source, the table and the floor all rapidly become covered with slime and offal. In the evening the bulk of the dirt and offal is collected into barrels, which are not removed until the following morning. As the premises are often rudely constructed there is little protection against rats, which infest the whole area in which the business is conducted. In conclusion, it would appear to us that, since there can be no Weil's Disease without infected rats, all the occupiers of premises in this area should be encouraged, and if necessary, compelled, to adopt rat extermination methods, preferably under the municipal scheme, so that constant supervision might be exercised.

The Killing Effect of Hyopchlorite Disinfectants on L. Icterohaemorrhagiae.

In the fishing industry serious loss occurs in preserving fish until this foodstuff reaches the consumer. Certain chemical firms have, therefore, carried out research to try to find a suitable disinfectant, which, to be effective for this purpose, must have a rapid action, be non-poisonous and leave no odour or taste. Sodium hypochlorite solution has already been found to be satisfactory, and it seemed advisable, therefore, to test its killing effect on L. icterohaemorrhagiae. For this experiment the material prepared by Imperial Chemical Industries and marketed under the name of "Chloros" was used. On analysis the sample utilised was found to contain 12.57 per cent. available chlorine, or 125,700 parts chlorine per million of the solution.

The method employed in carrying out the test was as follows:- Into sterile tubes 8 c.cs. of Schüffner's culture medium (without serum) were placed; 2 c.cs. of the hypochlorite solution were added to the first tube, and after thorough mixing 2 c.cs. were transferred to the second, and so on, until dilutions ranging from 1/5 to 1/50,000 were prepared. Then to a fresh series of tubes 2 c.cs. of the same medium (again without serum) were added, and 0.5 c.c. of a living, fully virulent culture of a strain of L. icterohaemorrhagiae. From the tubes containing the diluted hypochlorite solution, 2.5 c.cs. of each were transferred to the tubes containing the living culture. In this way final dilutions of sodium hypochlorite, ranging from 1/10 to 1/100,000 were obtained to act on the living leptospira. A short killing period of five and ten minutes was purposely allowed, and in order that the action of the hypochlorite might be stopped immediately, 1 c.c. of each dilution was inoculated into a guinea-pig intraperitoneally. Animal inoculation appeared preferable to cultural methods, for which sodium hyposulphite would have had to be added to eliminate the action of the chlorine.

In the first series of inoculations, the guinea-pigs receiving 1 c.c. of a 1/10 hypochlorite solution died within twenty-four hours (evidently this concentration was much too toxic for them) while those inoculated with the higher dilutions showed no evidence of any such action. After an interval of seven to eight days, the animals inoculated with the material from the tubes containing 1/10,000 and 1/100,000 dilutions of the hypochlorite died of a typical leptospiral infection, while those inoculated with the mixture containing 1/100 and 1/1,000 dilutions survived until they were killed eighteen days after commencement of the experiment. This result was obtained when leptospira were exposed to the action of the disinfectant for both five and ten minutes. Four control animals inoculated with the same amount of living culture as was employed in the tubes containing hypochlorite but diluted with culture medium only, died of a typical leptospiral infection.

In order to obtain a more approximate estimate of the lethal action of the disinfectant, a further series of tests was carried out with dilutions ranging from 1/1000 to 1/10,000. The guinea-pig inoculations were made in the same manner as in the previous test. The findings here showed that the hypochlorite could be diluted to 1/4000 and still be effective, but when the leptospira were treated with dilutions ranging from 1/6000 to 1/10,000 for 5 minutes, then all the guinea-pigs died of a typical leptospiral infection.

Another series of dilutions were prepared, but, instead of 0.5 c.c. of the living culture being added, the same amount of the culture medium was substituted. Titration of the residual chlorine then showed that in the 1/4000 dilution, which killed the leptospira, there were 17.2 parts per million of residual chlorine, whereas in the 1/6000 dilution, in which the leptospira survived for 5 minutes, there were 8 parts chlorine per million.

It is evident, therefore, that hypochlorite disinfectant can be used effectively in treating benches, utensils and floors likely to be contaminated with living leptospirae from rats. The manufacturers indicate that 2 fluid ounces of "Chloros" should be added to each gallon of water, giving 1250 parts per million of available chlorine. This great excess of chlorine provides for effective action, even in the presence of large amounts of protein material, a point of importance when dealing with an industrial disinfectant.

Incidence of Leptospira in Rats.

In 1934, 100 rats were trapped and examined for leptospira by microscopic methods and animal inoculation. In all, 24 rats showed the presence of typical leptospira. During the past year, 63 rats have been examined, but so far, only 9 (14 per cent.) positive results have been obtained. In this later series the emulsion prepared from the kidneys of each rat was inoculated into two guinea-pigs. In 8 instances, both guinea-pigs died of typical leptospiral infections, but in one instance one animal survived while the other died. The blood-serum of the surviving animal failed to show any lysins, and further guinea-pig inoculation failed to demonstrate the presence of leptospira in the tissues of the surviving animal.

Cases Occurring Outside Aberdeen.

Sera from suspected cases of Weil's disease are frequently sent to us for examination, and in our previous paper two cases occurring in Edinburgh were described. One of the patients was a gardener, and the other a keeper at a zoo. Since then, 5 more cases have been investigated. Two of these were miners working in pits near Thornton in Fifeshire; the third case was that of an unemployed labourer in Portobello; the fourth case was a fish-worker at Ramsey in the Isle of Man; and the fifth was foreman in a rag factory at Stonehaven. The source of infection in the the miners was presumably infected water, but there was no definite indication of how the third man contracted the disease, the fourth patient presumably contracted his disease in the same way as other fish-workers, and the fifth man from infected water, although no proof could be obtained that the water was infected. Blood samples from these five individuals reacted to titres of 1/3000, 1/30,000, 1/10,000, 1/10,000 and 1/10,000 respectively.

Incidence of Weil's Disease in General Population.

With a view to obtaining some idea of the prevalence of leptospiral infections in the population generally, sera as sent for the Wassermann reaction and for various agglutination tests were utilised. The specimens were tested by the Schüffner technique in dilutions ranging from 1/10 to 1/300 against both L. icterohaemorrhagiae and L. canicola. The sera submitted for the Wassermann reaction from 265 individuals gave entirely negative results. In a similar manner, the sera from 138 individuals suffering from various febrile disturbances - typhoid and paratyphoid fevers, undulant fever, septicaemia and pyrexias of unknown origin - also gave entirely negative findings. It may be concluded, therefore, that Weil's disease has a very special distribution amongst the population, and, furthermore, that the Schüffner sero-reaction is an entirely specific one, the agglutinins and lysins being formed as a result of leptospiral infection only.

During the past year various outbreaks of epidemic catarrhal jaundice have occurred amongst children. The symptoms were similar and typical of the condition. There was usually an initial period of nausea and vomiting, followed by mild pyrexia with jaundice about the third or fourth day after the onset. The jaundice deepened for a few days, then began to disappear, and convalescence was rapidly established. The patients were not as a rule seriously ill, and the cases occurred in groups mainly amongst children.

From the cases 23 specimens of serum obtained after convalescence had been established were tested against L. icterohaemorrhagiae and L. canicola in dilutions ranging from 1/10 to 1/1000. No evidence whatsoever was obtained that these infections were leptospiral in origin, all sera giving entirely negative results.

Incidence of Weil's Disease in Fish-Workers in Aberdeen.

Forty cases of proved Weil's disease have occurred in Aberdeen during the past eighteen months. It is certain that some mild cases without jaundice have not been recognised. No data are as yet available for the incidence of the disease among fish-workers. Accordingly, we have obtained permission from the Fish Trade Association to approach the employers with a view to carrying out the sero-reaction on the serum of several hundred persons.

Weil's Disease - An Occupational Disease.

The important part played by occupation in the etiology of Weil's disease is well-recognised the world over. In this country, prior to our communication in 1934, the only trades recognised to be of etiological importance were mining and working among sewage. A sudden illness followed by jaundice in workers belonging to these categories, immediately brought the possibility of Weil's disease to mind. The evidence presented in this and in our previous communication definitely associates the disease with workers among fish. Today, in Aberdeen, the clinical manifestations enumerated above, when occurring in a fish-worker, suggest leptospiral infection, whereas, in the rest of the population, such symptoms merely indicate an acute infection, since it is only in one industry in this city that Weil's disease has occurred. Workers in the fish trade now recognise the disease themselves, and on several occasions have correctly made the diagnosis, much to the surprise of the family doctor, who has been informed by the patient that he has contracted "fish-workers'" disease. Since deaths from Weil's disease have occurred among fish-workers, and since, in those who recover, periods of weeks or months of disability from work may result, it is evident that Weil's disease is an industrial hazard. In our experience, there is no evidence that the disease can be contracted, except from association with infected water which is so frequently present in the premises used by workers among fish. In our previous communication we described the successful recovery of pathogenic leptospirae from water obtained from floor washings and tubs in such premises. Appleman's (1934) technique was employed. We believe that we have produced conclusive evidence that the fish trade must be added to the occupations peculiarly liable to Weil's disease.

II. INVESTIGATION into OUTBREAK of PARATYPHOID FEVER (September 1935).

During the month of September, there occurred an outbreak of paratyphoid fever involving 15 persons - 7 males and 8 females.

Epidemiology: The first case sickened on or about 12th September, and the later cases did not become ill until 25th September. It appeared probable, therefore, that the patients must have had a common source of infection and that all had received their infection about the beginning of September. The age and sex distribution were as follows:-

Age.	1-10	11-20	21-30	31-40	41-50
Male	1	1	4	1 (1 died)	-
Female.	1	3	1	1	2 (1 died)
Totals.	2	4	5	2	2

Source /

Source of Infection: The limited number of cases suggested that the infected food was also restricted in amount, and yet the distribution of the cases in the City indicated that the food was widely apportioned. Enquiry confirmed this assumption and showed that the milk supply, cream or ice-cream could not be involved. The milk supply of the patients was mainly from one source, but, if that had been infected, then the outbreak would have been very much greater; not only so, but this milk supply is pasteurised effectively. Cream as a source of infection could be ruled out, as many of the patients never used any apart from milk. As for ice-cream, the history of eating this substance was vague and indefinite. The only other possible source appeared, therefore, to be cream as supplied by bakeries in cream buns and cakes. Here enquiry was more fruitful. All the patients, with two exceptions, admitted eating cream cakes as supplied by one bakery. In the two exceptions, the aunt of one patient said she had bought bread from this particular source but did not think that she had had cream cakes. In the other instance, the young man acknowledged that he had had food in various private houses and cafés, and that he was extremely partial to cream buns.

Enquiry at the bakery showed that all cream cakes were prepared by three girls, who gave no history of illness. Further blood samples from each were taken, and the results were entirely negative. The cream for confectionery purposes was obtained from three sources:-

No. 1 source, Aberdeen, supplied 8 gallons per week.

No. 2 source, Aberdeen, supplied 2 gallons per week.

No. 3 source, London, supplied 16 gallons per week.

Investigation at the Aberdeen sources of supply showed that the cream was obtained from mixed milk, and no further evidence localising the source of the infection could be obtained. The third supply was sent to Aberdeen from London daily. The findings, therefore, seemed to incriminate an infected cream, but the actual source of the infection was not determined.

Clinical History: Initial symptoms in order of frequency were as follows:-

Nausea or vomiting	13 cases
Headache	10 "
Diarrhoea	10 "
Lassitude	6 "
Shivering	5 "
Abdominal pain	3 "
Constipation	2 "
Epistaxis	1 case
Sweating	1 "

Usually two or more of these symptoms were present in each case.

Stage of Illness when Admitted to the City Hospital:

Cases were admitted to the City (Fever) Hospital as follows:-

2 cases were admitted in 1st week of illness.
8 " " " " 2nd " " "
5 " " " " 3rd " " "

One patient was originally sent to the Royal Infirmary with a diagnosis of appendicitis, a second to the same institution as a case of pneumonia, and a third to the Royal Hospital for Sick Children for observation.

Clinical Course: The epidemic was characterised, as a whole, by its mildness/

mildness and the slight incidence of complications. Nevertheless, and paradoxical though it may sound, there were two deaths in the series, giving a case mortality of 13.2 per cent. The first of these was a man of 35 years of age (referred to above) who was transferred to the City Hospital from the Royal Infirmary where he had been sent as a case of pneumonia. On the day following his admission to the City Hospital he had a perforation (through his appendix) preceded by a large haemorrhage, and although he was operated on within a few hours of its occurrence, he died two days later. The second death was that of a female, aged 45 years, who died in the tenth week of illness. She had several intestinal haemorrhages, a double thrombo-phlebitis of the lower extremities, and a severe myocarditis; she died of toxaemia and exhaustion. Three other patients were moderately ill for a time, but never gave rise to anxiety and remained free from complications. The remaining ten patients were all mild cases, some of them indeed being scarcely clinically recognisable at all.

The average duration of stay in hospital was 35 days.

Bacteriological Findings: So far as is possible, all samples of blood received from practitioners are collected in Behring venules. This method of collection practically ensures that the sample will be obtained without contamination, and, as a result, it enables the bacteriologist to carry out not only the Widal reaction with the serum but also to culture the blood clot in sterilised ox bile. Even in early cases in which the Widal reaction may be negative, a positive diagnosis will be obtained as a result of blood culture. The primary diagnosis of the 15 cases was based on the blood tests as follows:-

No. with positive blood cultures and negative Widal reactions ...	0
No. with positive blood cultures and positive Widal reactions ...	4
No. with negative blood cultures and positive Widal reactions ...	11

As regards faeces and urine, specimens were obtained as the cases were admitted to hospital, thereafter at intervals during their convalescence. The following tables give an analysis of these findings:-

No. of cases with positive urines ...	1
No. of cases with positive faeces ...	14

Urines:	Total No. of specimens examined	57
	No. positive on McConkey's medium	1
	No. positive on Wilson Blair's medium.. ...	1
Faeces:	Total No. of specimens examined	96
	No. positive on McConkey's medium	17
	No. positive on Wilson Blair's medium.. ...	49

It is obvious from these findings that the use of the Wilson Blair's bismuth sulphite medium for the isolation of B.paratyphosus B from the urine, and particularly from the faeces, is of very great advantage. Many more positive results are obtained by plating on this medium than on McConkey's medium.

Finally, all surviving patients were discharged from hospital free from any carrier condition.

III./

III. THE WOODSIDE TYPHOID FEVER EPIDEMIC (November and December 1935).

During the months of November and December 1935, an outbreak of typhoid fever, involving 35 individuals, occurred in the Woodside area of the City.

Epidemiology: The first case sickened on or about 14th November, and the last on 14th December. The first case was recognised as typhoid fever on 25th November, and was removed to hospital on that date; the last case was removed to hospital on 18th December. Twenty-eight of the cases could be regarded as primary, and 7 as secondary.

The age and sex distribution of the cases were as follows:-

Age.	1-10	11-20	21-30	31-40	41-50	51-60	61-70
Male	2	3	9 (1 died)	5	0	2(2 died)	0
Female	2	0	5 (1 died)	2 (1 died)	0	3	2(1 died)
Totals	4	3	14	7	0	5	2

It will thus be seen that only 4 of the cases were children, 3 were adolescents and the remainder were adults. The majority of the adult cases occurred in the age-groups 21-30 years and 31-40 years. Six cases - 3 males and 3 females - died, giving a mortality rate of 17.1 per cent. In all, the members of 18 households were affected, as follows:-

No. of Households.	Total No. of Members: Children. 1-14	Adults. 14+	Primary Cases: Children. 1-14	Adults. 14+	Secondary Cases: Children. 1-14	Adults. 14+
18	13	49	3	25	3	4
18	62		28		7	

If all the members of the various households had partaken of the infected food, then 28 out of 62, or 45 per cent., became infected primarily. The infection rate must, however, have been higher, since the type of food which conveyed the disease would not usually have been distributed to children.

As regards both primary and secondary cases, 4 cases occurred in 2 households, 3 in 4, 2 in 3, and 1 case in each of 9 households. It should also be noted that all cases occurred in a very limited area in the City, and all were within a few hundred yards of the source of infection.

Source of Infection: Early in the course of the epidemic, it became evident that milk could not have been the infected food substance as the various households had no common source. Eventually, it was found that no less than seven different supplies were being utilised by those suffering from the disease. Similarly, the water supply could not be incriminated. Ice-cream was not being consumed, and such articles as cream-buns were being used by only a few families, and here again the sources of supply were numerous. All the households, however, in which the first cases occurred, gave a history of having purchased cooked food - mostly in the form of tripe and potted head - from one particular shop. This shop was visited on 29th November, and here it was found that the mother had been ill for several weeks, and that her illness had not been of such severity as to confine her to bed entirely. Several of the patients actually remembered being served by this woman who complained to them that she had not been feeling well. She was removed to hospital on 30th November, and all cooked foods in the shop were confiscated forthwith. The preparation of further supplies was prohibited from that date, and the shop was finally closed on 2nd December. The other members of this household were the father, the mother's brother and an adult daughter. On 30th November all maintained that they were perfectly well. Two days later, however,/

however, the daughter sickened. Bacteriological examination of specimens of faeces and urine from the members of this household showed B. typhosus in the faeces of the uncle. This man gave a history of gastric trouble during the previous seven years. He was removed to hospital for observation and treatment.

All the primary cases, diagnosed subsequent to the closure of the shop, also admitted having purchased food at this establishment. According to the clinical histories, the onset of the illness of the last 2 primary cases occurred on 1st December, and this practically coincided with the occurrence of the illness in the daughter of the shop-keeper on 2nd December.

Clinical Condition of Patients: The initial symptoms in order of frequency were as follows:-

Headache	23
Nausea or vomiting	18
Abdominal pain	15
Diarrhoea	13
Lassitude	12
Shivering	11
Backache	7
Constipation	3
Epistaxis	3
Deafness	2
Melaena	2
Haematemosis	1

Two patients had been sent to Woodend Hospital as cases of pneumonia, and one of these at any rate had a definite pneumonia. Two had been sent to the Royal Hospital for Sick Children with a diagnosis of appendicitis, one of whom was operated on. One patient had been sent to the Royal Infirmary as a case of splenic disease on account of initial haematemsis and melaena. The correct diagnosis was subsequently made.

Stage of Illness when Admitted to the City Hospital:

The cases were admitted to the City Hospital at the following stages of illness:-

15 cases in 1st week of illness.
14 cases in 2nd week of illness.
6 cases in 3rd week of illness, or later. (Of this last group, one was an ambulant and another a relapse case).

Clinical Features: The epidemic, as a whole, was characterised by its severity, by its high incidence of complications and still more of relapses, and by its relatively high mortality. The type of disease conformed in most particulars to the text-book descriptions of the old "classical typhoid"; the hectic malar flush, the dull, listless expression, the dry, brown cracked tongue, the rose spots, and the enlarged spleen were the rule rather than the exception. One patient was practically covered with rose spots, only the head, feet and hands remaining free.

Of the 6 fatal cases, 5 exhibited the typical "typhoid state" with muttering delirium, incontinence, carphology and prostrated attitude. Among this group, one was an old hemiplegic woman of 69 years of age, who had a well-marked pneumonia from the outset and a feeble circulation; another had a severe relapse accompanied by repeated intestinal haemorrhages and a pleuro-pneumonia; a third was unfortunately incubating measles on admission/

admission to hospital, and the outbreak of this second disease in the third week of his typhoid no doubt turned the scales against him; a fourth had a severe haemorrhage, but died more of toxaemia and a failing heart, than from haemorrhage. A fifth - a man aged 55 years - came to hospital incubating the disease; he had a typical "step-ladder" temperature, high-continued fever and intense prostration, and eventually ran almost the whole gamut of the complications with the exception of perforation. Thus, he had several haemorrhages, a severe thrombo-phlebitis of both lower limbs, a cholecystitis, a pneumonia, and a (typhoid) pleural effusion. He died in a state of pitiable exhaustion and emaciation.

Some other interesting features of the epidemic were as follows:- marked querulousness and childishness on the part of several patients, especially during convalescence - two grown men wept bitterly for days on end without reason; intense mental depression in two cases; "tender-toes" in four cases; and a peripheral median nerve palsy in one case. Incontinence was noted in ten cases and retention of urine in one case. The incidence of relapses was remarkably high - eleven, or nearly one-third of the total. In one or two of those patients the relapse was more severe than the original disease, indeed, it was accompanied, as already noted, by fatal complications in one case. In one case the symptoms were almost entirely those of bronchitis and asthma. Three of the patients had repeated rigors in the later stages, for which no particular cause could be found. One patient was a girl of 16 years, who had previously had her spleen removed on account of splenic anaemia; she did well, although she had a good deal of melaena at times. No case of meningitis occurred in the series. While constipation was more common than otherwise, typical "pea-soup" stools were noted in nine cases, while in other seven they were loose and offensive without being actually "pea-soup" in character. One case was complicated by a mixed B.coli and B.typhosus urinary infection, which is still persisting. It was noted that the children suffered less from the disease than the adults, and there was no mortality in the first two decades of life. On the other hand, three out of six patients over 50 years of age died.

<u>Treatment</u>: A serum recently elaborated by Felix, against virulent antigenic components of the Bacillus Typhosus, was used on several patients under control conditions. Whilst there appeared in several cases to be a transient effect in the form of a temporary fall of temperature, the final results strongly indicated that the serum was without marked curative effect. Otherwise, the treatment, apart from abundant fluids and a liberal diet and fresh air, was mainly symptomatic. Saline and blood transfusions were given where indicated, but these also seemed only to have a temporary effect. The nursing was naturally heavy, and it was extremely well carried out.

<u>Bacteriological Findings</u>: The primary diagnosis in the cases was made on the basis of blood culture or Widal as follows:-

Number of cases with positive blood culture and negative Widal	8
Number of cases with positive blood culture and positive Widal	21
Number of cases with negative blood culture and positive Widal	6

These findings emphasise the fact that the attention of the Health Department was drawn by the medical practitioners to cases in the early stages of the illness, and that no delay occurred in the diagnosis and removal to hospital.

As regards the Widal reaction, the serum was tested against both H and O antigens of B.typhosus (when first collected), with the following results:-

Agglutination with H antigen but not with O	8
Agglutination with O antigen but not with H	2
Agglutination with both H and O antigens	17
Negative with both antigens but with blood clot positive on culture	8

Again/

Again, specimens of faeces and urine were plated, in the first instance, on both McConkey's medium and Wilson Blair's medium. The value of the Wilson Blair's bismuth-sulphite agar medium is amply demonstrated by the following tables:-

Urines:

Total number of specimens examined	171
Number positive on McConkey's medium.. ...	11
Number positive on Wilson Blair's medium ...	19

Faeces:

Total number of specimens examined	260
Number positive on McConkey's medium.. ...	25
Number positive on Wilson Blair's medium ...	125

Carrier Conditions: All surviving patients have been discharged from hospital, with three exceptions. One man and one woman are faecal carriers while one aged woman has remained both a faecal and urinary carrier. The man consented to operation, and his gall bladder has been removed. The woman faecal carrier has also consented to this operation.

(March, 1936) ---------------------------

CHAPTER II.

INFECTIOUS DISEASES.

Table I. on page 23 gives the death-rate from each of the principal infectious diseases since the commencement of registration. In Table II. the number of cases of and deaths from each disease is stated for the successive months of the year. Table III. gives the morbidity and mortality from infectious diseases distributed according to ages and where treated and in Table IV. the cases and deaths are supplied for each of the years 1925 to 1935.

DISEASES WITH A SPECIFIC PROPHYLAXIS.

Small-pox.

Aberdeen has remained free from Small-pox since 1930. No case of Small-pox occurred in Scotland in 1935.

Vaccinia.

The passing of the Vaccination (Scotland) Act, 1907, permitted exemption from vaccination of those children whose parents declared formally that they had conscientious objection to vaccination. Table V. shows the percentage of the total surviving children - at the end of the calendar year following the year of birth - who have remained unvaccinated in each year from 1907 to 1934. In 1934, the proportion of children thus escaping vaccination was 13.4 per cent., as against 11.7 in 1933. The percentage of unvaccinated children in Aberdeen is considerably lower than the figure pertaining to the whole of Scotland.

Scarlet Fever.

In 1935, 1,491 cases were notified, as compared with 2,122 cases in 1934, and an average of 806 in the 1925-1934 decennium. The case-mortality in 1935 was 0.7 per cent., being the same as the average rate in the preceding decennium. In 1934, it was 0.8.

The number of cases removed to hospital in 1935 was 1,213 or 81 per cent. of the cases, as compared with 67 per cent. in 1934 and 69 per cent. in 1933. There were 10 deaths in hospital, giving a case-mortality of 0.8 per cent.

This disease appeared in epidemic form in the end of August, 1933. Apart from the months July and August of 1934 and of 1935 - when there was a slight decrease in the number of cases - the epidemic has continued throughout both years, and the total of 2,122 cases in 1934 is the highest recorded since 1882.

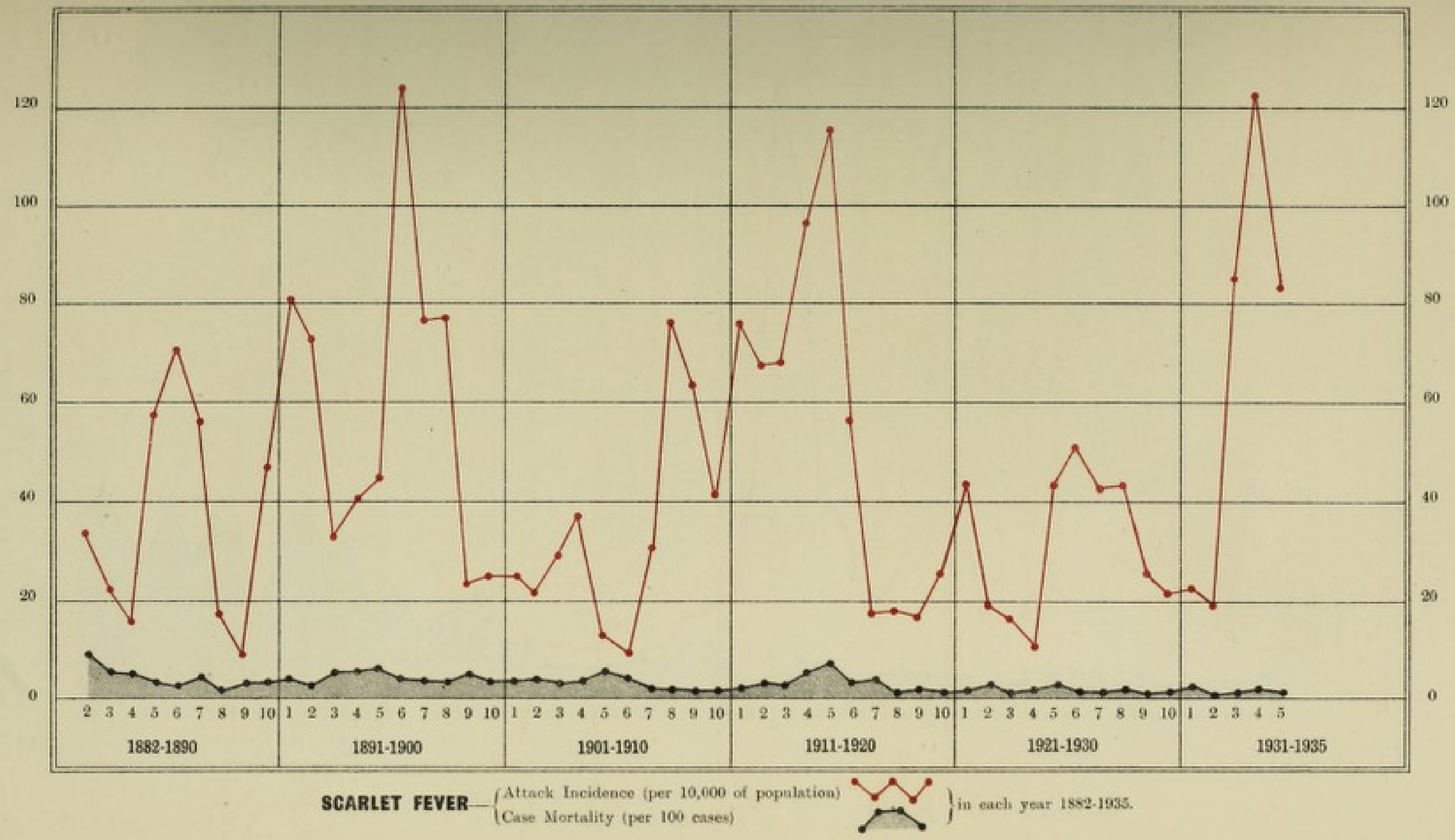
From 1908 to 1916, scarlet fever was continuously epidemic in Aberdeen, interrupted only by a small recession in 1910. In 1915, there were 1,873 cases and 142 deaths recorded, giving a case-mortality of 7.6 per cent. The present epidemic is, therefore, mild as compared with previous epidemics.

The accompanying chart shows the attack incidence and case-mortality of scarlet fever since 1882. The outstanding peaks of incidence occurred in 1896, 1915 and 1934, the attack rate in 1934 being practically the same as that occurring in 1896.

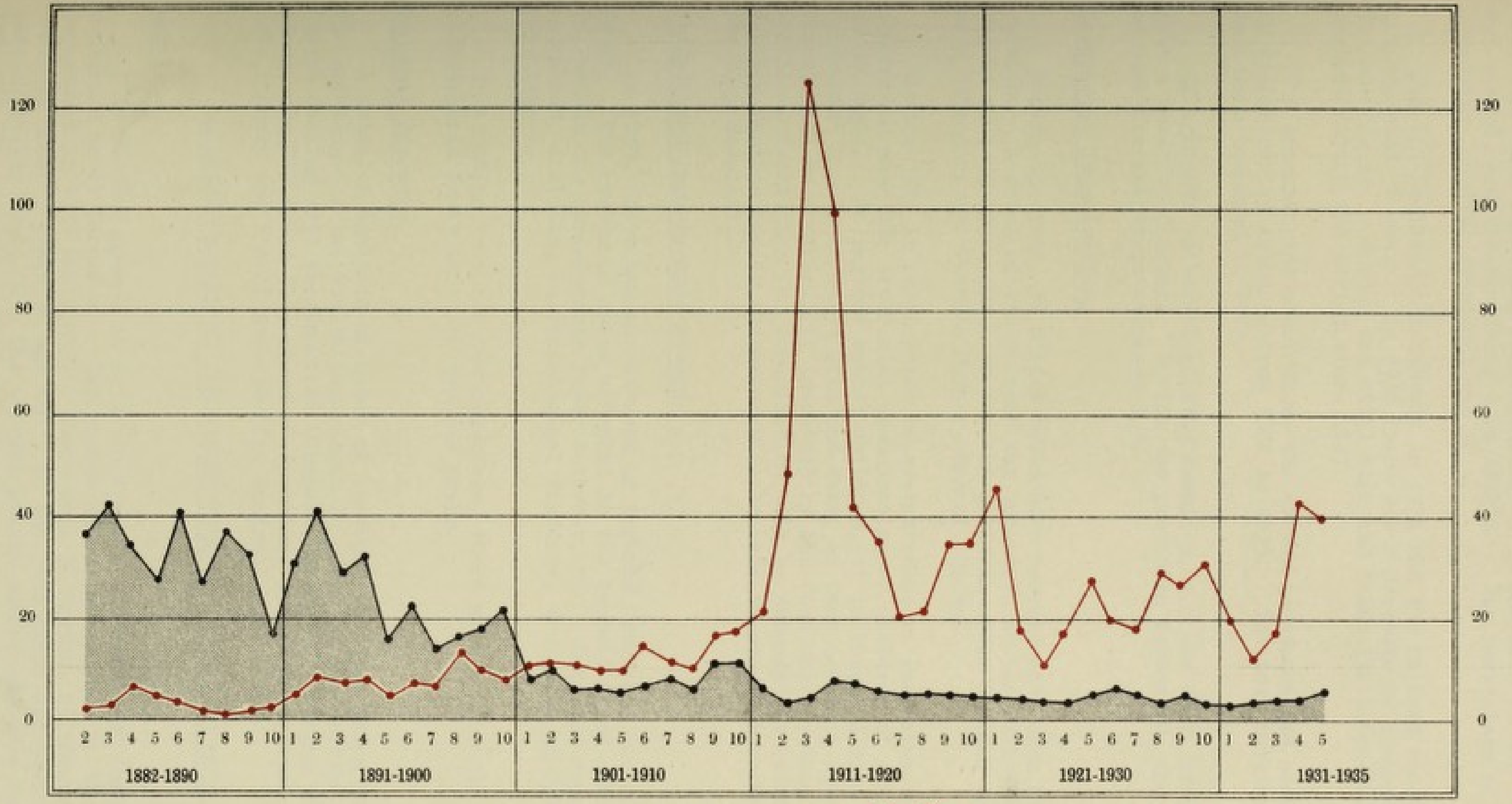
Diphtheria.

During the last two years, this disease has also shown epidemic prevalence. The number of cases notified in 1935 was 698, as compared with 719 cases in 1934, and an average of 398 in the 1925-1934 decennium. The case-mortality for 1935 was higher than usual, being 4.6 per cent., as against 3.5 per cent. in 1934 and 3.8 per cent. in the preceding decennium. Of the 32 deaths in 1935, 19 occurred in children under 5 years of age, 4 of whom/

ABERDEEN



SCARLET FEVER—{Attack Incidence (per 10,000 of population) / Case Mortality (per 100 cases)} in each year 1882-1935.



DIPHTHERIA—{Attack Incidence (per 10,000 of population)
{Case Mortality (per 100 cases) } in each year 1882-1935.

whom were also suffering from measles; 8 in children in the 5-15 years age-period, and the remaining 5 in adults. The percentage of cases receiving hospital treatment was 98.1.

For all Scotland, diphtheria in 1934 had the highest recorded incidence for the past 36 years; in 1935 there was a decrease as compared with 1934 but the figure recorded was still high and takes its place as the second highest during the period since 1897.

The accompanying chart shows the attack incidence and case-mortality of diphtheria in Aberdeen from 1882 to 1935. The most outstanding peak of incidence occurred in 1913.

Of contacts bacteriologically examined, 1.8 per cent. of the swabbings gave a positive finding. During the preceding decennium, the percentage of positive swabbings averaged 0.7.

Diphtheria Immunisation.

During the year, 28 Schick tests were carried out, with 22 positive results. A total of 134 persons was immunised at the following age-periods: 0-5 -- 105; 5-15 -- 29. Of the 105 children under 5 years of age, 43 were attending St. Peter's Nursery School, Spital.

During 1936 it is proposed to re-introduce an intensive campaign in connection with the artificial immunisation of children of school and pre-school ages. As regards school children, it is intended that only "entrants" should be dealt with and that, at each session, entrants to school will be artificially immunised by the "one shot" method. In addition, facilities for immunisation will be extended at existing Child Welfare Centres and an endeavour will be made to popularise the Centre at the City Hospital.

Typhoid and Para-typhoid Fevers.

In 1935, there was an outbreak of typhoid fever and one of para-typhoid fever. The number of cases affected in the typhoid fever outbreak was 35, and in the para-typhoid fever outbreak, 15. Detailed reports of these outbreaks, including bacteriological findings, are given in Chapter I. of this Report.

In addition to these two outbreaks, there were 4 sporadic cases of para-typhoid fever and 1 of typhoid fever.

Venereal Diseases.

A detailed analysis of cases of venereal diseases which have come to the knowledge of the Health Department is given in the section of this Report dealing with the Venereal Diseases Services. During the year, there were 218 fresh City cases of syphilis, 396 of gonorrhoea, 12 of soft chancre and 154 of non-specific venereal infections.

DISEASES SPREAD BY DISCHARGES FROM THE MOUTH AND NOSE.

Measles.

This disease appeared in epidemic form in the middle of August and continued until December. The number of cases reported to the Health Department in 1935 was 2,849. There were 28 deaths, 23 occurring in children under 5 years of age and 5 in the 5-15 years age-period. The case-mortality was 1.0. The average yearly number of cases during the 1925-1934 decennium was 929, and the average case-mortality 1.8. Of 172 cases receiving hospital treatment, 15 proved fatal.

In/

In the course of the epidemic, numerous cases who were in process of incubating the disease were admitted to the various wards of the hospitals. For the purpose of prophylaxis, both adult and convalescent serum have been employed extensively to avoid further cross infection. The results are summarised in the adjoining Table, from which it is seen that of 219 individuals inoculated with adult or convalescent serum only, protection was obtained in all but five.

MEASLES PROPHYLAXIS.

Outbreak No.	Type of Serum Used.	No. of Patients Inoculated.	Average Dose of Serum.	No. of Patients Protected.	No. Developing Measles.
1	Convalescent	11	6.5 c.c.	All	0
1	Adult	15	18 "	All	0
2	Adult	5	10 "	All	0
3	Adult	5	14 "	All	0
4	Adult	8	14 "	All	0
5	Convalescent	16	6.5 "	14	2
6	Convalescent	3	10 "	All	0
7	Convalescent	4	7.5 "	All	0
7	Adult	2	10 "	Both	0
8	Convalescent	6	6 "	All	0
9	Convalescent	9	5 "	All	0
10	Adult	13	15 "	All	0
11	Adult	3	10 "	All	0
12	Adult	13	12 "	All	0
13	Convalescent	6	10 "	All	0
14	Adult	3	10 "	All	0
15	Adult	16	10 "	All	0
16	Adult	9	15 "	All	0
17	Adult	11	15 "	All	0
18	Convalescent	10	8 "	All	0
18	Adult	4	14 "	All	0
19	Convalescent	7	7.5 "	6	1
20	Convalescent	4	7.5 "	All	0
21	Convalescent	6	6.5 "	All	0
22	Adult	4	10 "	All	0
22	Convalescent	2	10 "	Both	0
23	Convalescent	11	7.5 "	All	0
23	Adult	7	14 "	5	2
24	Convalescent	5	6 "	All	0

German Measles.

There were 24 cases of this disease reported in 1935, as against an annual average of 94 in the preceding decennium. There were no deaths.

Whooping-Cough.

Of this disease, 153 cases were reported, with 7 deaths, giving a case-mortality of 4.6 per cent. All the deaths occurred in children under 5 years of age. The average annual number of cases during the 1925-1934 decennium was 539, with a case mortality of 4.5. Of 9 cases receiving institutional treatment, 2 died. The usual fatal complication is broncho-pneumonia.

Influenza.

Influenza, as distinct from influenzal pneumonia, is not a compulsorily notifiable disease. Influenza, excluding influenzal pneumonia, was registered as the cause of 22 deaths in 1935, as against 5 in 1934.

Acute Primary and Influenzal Pneumonia.

There were 775 cases of primary pneumonia notified in 1935, with 159 deaths./

deaths. During the preceding ten years, the average annual number of cases was 600, and the average annual number of deaths 118. Of Influenzal pneumonia, there were 40 cases with 13 deaths in 1935, as against an annual average of 44 cases and 13 deaths in the preceding decennium.

Meningococcic Meningitis.

Six cases of this disease were notified, two of which proved fatal. Three cases occurred in children under 1 year, with 1 death; 2 in children aged 1 year, with 1 death, and 1 case in a child of 5 years. There was no discoverable relationship between the cases. During the preceding ten years, the average annual number of cases was 4, and the average annual number of deaths 3.

Acute Anterior Poliomyelitis (Infantile Paralysis).

One case of Infantile Paralysis was notified in a child of 7 years. The case received hospital treatment and recovered.

Epidemic Encephalitis.

One case of this disease, in a male adult, proved fatal. The case was receiving institutional treatment.

Tuberculosis.

A detailed analysis of the cases and deaths from tuberculosis in Aberdeen is given in the section relating to Tuberculosis Services.

Chicken-pox.

This disease, by order of the Department of Health for Scotland, ceased to be compulsorily notifiable in December, 1932. During 1935, 83 cases of chicken-pox were voluntarily brought to the knowledge of the Health Department.

DISEASES SPREAD BY THE EXCRETA.

Typhoid and Para-typhoid Fevers.

These diseases have already been referred to under the group of diseases for which there is a specific prevention.

Dysentery.

During 1935, there were 91 cases of dysentery notified, of which 36 received hospital treatment. There were 4 deaths, 2 in children and 2 in adults.

DISEASES SPREAD BY CUTANEOUS INOCULATION.

Erysipelas.

During 1935, there were 128 cases of erysipelas reported, with 5 deaths. In the 1925-34 decennium, the average annual number of cases was 120, and the number of deaths 7.

Scabies.

A record of the number of cases of other inflammatory affections of the skin, including Scabies, receiving treatment at the Skin Department of the City Hospital, is given in the section of this Report dealing with Municipal Hospital Services.

DISEASES ASSOCIATED WITH CHILD-BIRTH.

Puerperal Fever and Puerperal Pyrexia.

During 1935, 123 cases of puerperal pyrexia were brought to the notice of/

of the Department. In order to get cases of puerperal fever into hospital as soon as possible, a provisional diagnosis of puerperal pyrexia is accepted from the practitioner. Should such a case prove, on investigation, to be puerperal fever, the diagnosis is altered accordingly.

Puerperal Fever.

Among 95 confirmed cases of puerperal fever, there were 7 deaths. During the 1930-1934 quinquennium, the average annual number of cases was 77, and the deaths 8.

During 1935, 37 cases occurred in the practice of public institutions, with 3 deaths; 4 cases occurred in the practice of midwives and 1 proved fatal; 54 in the practice of private practitioners, with 3 deaths. Of the 95 cases, 92 were treated in the City (Fever) Hospital and 3 were retained in the institutions where the confinement took place. Puerperal sepsis followed abortion in 7 cases.

Puerperal Pyrexia.

A total of 28 cases was finally recorded as puerperal pyrexia, the cause of the rise in temperature being attributed to mastitis, pneumonia, influenza, and the like. There were 3 deaths all due to lobar pneumonia. During the 1930-1934 quinquennium, the average annual number of cases was 21, and the deaths 2.

Sixteen cases occurred in the practice of public institutions, with 1 death; 11 in the practice of private practitioners, with 2 deaths; and 1 case in a midwife's practice. Of the 28 cases, 18 were treated in the Municipal Hospitals, 5 were retained in the public institutions where the birth occurred, and 5 in their own homes.

Additional information regarding puerperal fever and puerperal pyrexia is given in that part of the Report which deals with Maternity and Child Welfare Services.

Ophthalmia Neonatorum.

During 1935, there were notified 96 cases of ophthalmia neonatorum; this is equivalent to 29 cases per 1,000 registered births. Additional information regarding this disease is given under the heading Maternity and Child Welfare Services.

INSECT AND VERMIN-BORNE DISEASES.

Typhus Fever, Plague.

There were no cases of these diseases during the year 1935.

Infective Jaundice.

During the year, 18 cases of this disease were brought to the knowledge of the Department as having occurred in the City. All were employed in the handling of fish.

Fifteen of the cases received institutional treatment. There was 1 death - a male adult.

The importance of the original work carried out by Professor L.S.P. Davidson and Dr. John Smith has warranted the inclusion (Chapter I) of a Report on their continued research into the causation and incidence of this disease in the City.

TABLE I. - ABERDEEN - DEATHS AT ALL AGES FROM SELECTED CAUSES.
(per 100,000 of population) - Years 1856-1935.+

Year.	Smallpox.	Scarlet Fever.	Diphtheria and Croup.	Measles.	Whooping Cough.	Influenza.	Typhus Fever.	Typhoid and Paratyphoid Fever.	Tuberc. Dis.		Dis. of Digestive System (inc. Diarrhoea)	Cancer and other Malignant Diseases.	Bronchitis.	Pneumonia.	Dis. of the Circulatory System. *
									Respiratory.	Other Tuberculosis.					
1935	0	6	18	16	4	20	0	4	40	16	68	168	57	125	289
1934	0	9	14	3	10	5	0	0	52	12	69	160	41	83	277
1933	0	3	6	6	10	35	0	0	54	12	80	155	56	98	267
1932	0	1	4	14	21	10	0	0	46	26	77	160	62	88	267
1931	0	4	4	5	14	18	0	1	69	21	57	151	83	116	280
1930	1	1	7	14	9	6	0	0	51	20	76	144	47	94	256
Average 1930-34	0.2	4	7	8	13	15	0	0.2	54	18	72	154	58	96	269
1929	0	1	12	0	8	42	0	0	55	26	75	162	75	142	279
1928	0	3	9	30	22	12	0	1	68	34	77	149	57	89	242
1927	0	2	9	1	9	25	0	0	64	33	71	140	71	98	220
1926	0	4	12	12	9	21	0	0	72	38	90	128	54	77	202
1925	0	9	13	17	32	11	0	0	94	26	81	144	57	73	187
Average 1925-29	0	4	11	12	16	22	0	0.2	71	31	79	145	63	96	226
" 1921-1925	0	5	11	33	29	27	0	1	88	31	80	140	80	92	195
" 1916-1920	0	6	16	22	23	73	0	3	106	43	87	121	99	122	178
" 1911-1915	0.2	38	42	56	32	16	0	4	111	49	124	116	101	128	184
" 1906-1910	0	6	15	26	42	20	0	2	116	61	115	103	105	116	180
" 1901-1905	0.1	8	9	41	47	20	3	4	138	69	162	87	145	125	179
" 1896-1900	0	23	18	35	53	29	0.2	9	167	70	210	87	172	109	167
" 1891-1895	0.4	21	22	63	52	56	1	10	181	72	190	81	210	100	156
" 1886-1890	1	14	10	80	66	9	1	15	184	67	202	68	216	100	175
" 1881-1885	0.2	13	15	36	67	1	6	13	204	74	185	69	251	82	159
" 1876-1880	1	35	30	28	66	2	19	29	223	101	194	61	286	72	146
" 1871-1875	48	68	30	53	68	5	20	35	243	107	214	56	281	60	136
" 1866-1870	4	71	5	50	62	8	62	49	298	130	259	59	238	70	122
" 1861-1865	36	93	49	51	62	12	176		274	128	280	57	220	59	122
" 1856-1860	40	118	54	70	69	12	109		322	179	203	56	182	58	111

+ Corrected for transferred deaths in 1904 and subsequent years.

* From 1911 onwards, Cerebral Embolism and Thrombosis excluded.

TABLE II. - PROGRESS OF INFECTIOUS DISEASES DURING PRECEDING TWELVE MONTHS.

		1935.												Whole Year.
		Jan.	Feb.	Mch.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
A. Compulsorily Notifiable.														
Smallpox	Cases	..	..	..	..	..	..	..	..	..	..	..	..	...
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
Scarlet Fever ..	Cases	148	116	123	104	103	133	92	113	144	186	129	100	1491
	Deaths	2	1	1	2	2	..	1	..	1	1	..	..	11
Diphtheria ...	Cases	91	82	94	58	37	52	38	32	36	59	55	64	698
	Deaths	3	1	4	3	3	3	1	4	1	2	3	4	32
Typhus Fever ...	Cases	..	..	..	..	..	..	..	..	..	..	..	..	...
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
Enterica Infections ...	Cases	..	..	1	..	..	..	1	1	7	9	13	23	55
	Deaths	..	..	..	..	..	..	..	..	2	..	..	5	7
Dysentery ...	Cases	12	6	8	1	4	1	5	3	5	9	14	23	91
	Deaths	..	..	..	..	..	..	1	..	1	..	..	2	4
Acute Polio-myelitis ...	Cases	..	..	..	..	..	..	..	..	..	..	..	1	1
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
Epidemic Cerebro-spinal Meningitis	Cases	2	..	..	..	1	..	..	2	..	..	..	1	6
	Deaths	2	..	..	..	..	..	..	..	..	..	..	..	2
Epidemic En-cephalitis ...	Cases	..	..	..	..	..	..	..	..	..	1	..	..	1
	Deaths	..	..	..	..	..	..	..	..	..	1	..	..	1
Acute Pneumonia Primary..	Cases	60	100	104	121	41	43	27	24	38	31	82	104	775
	Deaths	15	23	22	24	4	8	7	2	5	8	14	27	159
Acute Pneumonia Influen-zal.	Cases	8	8	11	9	..	..	..	..	1	..	2	1	40
	Deaths	3	1	3	5	1	..	..	..	..	..	..	..	13
Tubercle Pulmonary.	Cases	14	7	11	14	11	14	10	6	8	9	8	8	120
	Deaths	9	4	8	9	10	4	5	4	3	5	6	4	71
Tubercle Other..	Cases	4	10	5	2	19	4	6	4	1	6	3	7	71
	Deaths	4	4	..	3	..	2	2	4	..	2	4	3	28
Erysipelas ...	Cases	16	9	11	11	11	5	5	3	9	15	22	11	128
	Deaths	1	..	..	..	..	..	..	..	..	..	4	..	5
Puerperal Fever	Cases	6	9	13	11	10	8	5	5	5	6	8	9	95
	Deaths	2	1	2	..	..	..	..	..	..	..	1	1	7
xPuerperal Pyrexia	Cases	5	6	3	3	1	1	4	1	2	..	..	2	28
Ophth. Neonatorum.	Cases	6	4	9	11	7	9	8	12	11	6	6	7	96
Malaria ...	Cases	..	..	..	1	1	1	..	1	1	..	..	..	5
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
Infective Jaundice ...	Cases	4	1	..	..	3	..	3	..	2	2	3	..	16
	Deaths	..	..	..	..	..	..	..	..	..	..	1	..	1
Plague ...	...	..	..	..	..	..	..	..	..	..	..	..	..	...
B. Not Compulsorily Notifiable.														
Measles ...	Cases	1	2	4	..	1	7	5	86	486	1196	954	107	2849
	Deaths	..	..	..	..	..	..	..	..	3	7	12	6	28
German Measles.	Cases	2	..	..	2	1	..	..	1	6	5	6,	1	24
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	...
Whooping Cough	Cases	16	8	19	2	8	3	..	12	5	22	40	18	153
	Deaths	1	1	1	..	..	..	..	..	..	..	1	3	7
Chickenpox	Cases	2	2	5	11	7	17	5	10	7	7	9	1	83
	Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ...	Cases	397	370	421	361	266	298	214	316	774	1569	1354	488	6828
	Deaths	42	36	41	46	20	17	17	14	16	26	46	55	376
Influenza, excl. Influenzal Pneum.	Deaths	3	4	4	6	1	1	1	1	..	..	1	..	22

x Compulsorily notifiable from 1st October, 1929.

TABLE III. - MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES DURING 1935.

Disease.		No. of Cases and Deaths at various Age-Periods.								Cases receiving instit. treatment.			Cases not receiving Instit. treatment.
		At all Ages.	Years.							Municipal Hosps.		Other Insts.	
			Under 1	1-5	5-15	15-25	25-45	45-65	65+	City Hosp.	Woodend Hosp.		
Compulsorily Notifiable.													
Smallpox ...	Cases	-	-	-	-	-	-	-	-	-	-	-	-
	Deaths	-	-	-	-	-	-	-	-	-	-	-	-
Scarlet Fever.	Cases	1491	17	414	827	143	86	4	-	1212	-	1	278
	Deaths	11	1	4	5	-	1	-	-	9	-	1	1
Diphtheria ...	Cases	698	22	166	365	88	43	13	1	683	-	2	13
	Deaths	32	1	18	8	1	-	3	1	32	-	-	-
Enterica Infections...	Cases	55	-	1	8	13	22	8	3	53	-	-	2
	Deaths	7	-	-	-	1	2	2	2	6	-	-	1
Dysentery ...	Cases	91	3	28	34	4	8	7	7	31	-	5	55
	Deaths	4	-	1	1	-	-	1	1	2	-	-	1
Acute Polio-myelitis	Cases	1	-	-	1	-	-	-	-	1	-	-	-
	Deaths	-	-	-	-	-	-	-	-	-	-	-	-
Epidemic Cerebro spinal Meningitis	Cases	6	3	2	1	-	-	-	-	5	-	1	-
	Deaths	2	1	1	-	-	-	-	-	2	-	-	-
Epidemic Encephalitis	Cases	1	-	-	-	-	1	-	-	-	1	-	-
	Deaths	1	-	-	-	-	1	-	-	-	1	-	-
Acute Pneumonia -													
(a) Primary	Cases	775	123	215	127	57	129	75	49	255	210	63	247
	Deaths	159	49	26	3	7	27	22	25	38	50	22	49
(b) Influenzal	Cases	40	2	3	4	4	9	9	9	3	1	2	34
	Deaths	13	-	-	-	2	1	5	5	2	1	-	10
Tuberculosis Diseases -													
(a) Pulmonary	Cases	120	1	2	3	32	55	22	5	9	63	10	38
	Deaths	71	1	1	4	11	26	23	5	12	10	9	40
(b) Other ...	Cases	71	3	16	24	10	6	6	6	5	18	17	31
	Deaths	28	3	7	7	5	2	2	2	4	6	11	7
Erysipelas ...	Cases	128	5	6	2	11	28	51	25	56	-	2	70
	Deaths	5	2	-	-	-	-	1	2	3	-	-	2
Puerperal Fever	Cases	95	-	-	-	34	61	-	-	92	1	2	-
	Deaths	7	-	-	-	1	6	-	-	6	-	1	-
Puerperal Pyrexia	Cases	28	-	-	-	9	19	-	-	16	2	5	5
Ophth. Neonatorum	Cases	96	96	-	-	-	-	-	-	5	-	17	74
Malaria ...	Cases	5	-	-	-	-	4	1	-	1	-	-	4
	Deaths	-	-	-	-	-	-	-	-	-	-	-	-
Inf. Jaundice	Cases	18	-	-	-	11	4	3	-	13	-	2	3
	Deaths	1	-	-	-	-	-	1	-	-	-	1	-
Plague ...	...	-	-	-	-	-	-	-	-	-	-	-	-
Not Compulsorily Notifiable.													
Measles ...	Cases	2849	96	926	1812	11	4	-	-	169	1	2	2677
	Deaths	28	8	15	5	-	-	-	-	13	-	2	13
German Measles	Cases	24	-	4	18	2	-	-	-	3	-	-	21
	Deaths	-	-	-	-	-	-	-	-	-	-	-	-
hooping Cough	Cases	153	19	56	78	-	-	-	-	9	-	-	144
	Deaths	7	4	3	-	-	-	-	-	2	-	-	5
hickenpox ...	Cases	83	15	30	35	2	1	-	-	5	1	2	75
	Deaths	-	-	-	-	-	-	-	-	-	-	-	-
Total..	Cases	6828	405	1869	3339	431	480	199	105	2626	298	133	3771
	Deaths	376	70	76	33	28	66	60	43	131	68	47	129

TABLE IV. - MORBIDITY AND MORTALITY OF INFECTIOUS DISEASES DURING EACH YEAR FROM 1925 to 1935.

Disease.		1935.	1934.	1933.	1932.	1931.	1930.	1929.	1928.	1927.	1926.	1925.	Annual Average. 1925-1934.
A. Compulsorily Notifiable.													
Smallpox ...	Cases	0	0	0	0	0	10	1	0	0	0	1	1
	Deaths	0	0	0	0	0	1	0	0	0	0	0	0.1
Scarlet Fever ...	Cases	1491	2122	1479	318	386	344	424	728	702	843	712	806
	Deaths	11	16	6	1	6	2	2	5	3	8	15	6
Diphtheria ...	Cases	698	719	301	205	326	505	410	458	303	323	432	398
	Deaths	32	25	11	6	7	12	20	15	15	20	22	15
Typhus Fever ...	Cases	0	0	0	0	0	0	0	0	0	0	0	0
	Deaths	0	0	0	0	0	0	0	0	0	0	0	0
Enterica Infections	Cases	55	7	9	5	3	8	7	16	7	3	40	11
	Deaths	7	0	0	0	1	0	0	1	0	0	0	0.2
Dysentery ...	Cases	91	66	143	95	94	91	66	97	48	44	15	76
	Deaths	4	1	2	2	2	3	3	1	4	1	0	2
Acute Poliomyelitis ...	Cases	1	2	10	1	1	1	2	2	3	5	5	3
	Deaths	0	1	1	0	0	1	1	0	0	0	0	0.4
Epidemic Cerebro-Spinal Meningitis	Cases	6	3	5	11	8	2	4	4	2	3	1	4
	Deaths	2	3	3	4	5	3	3	3	2	2	0	3
Epidemic Encephalitis ...	Cases	1	1	1	2	0	1	3	4	1	0	9	2
	Deaths	1	1	1	2	0	1	1	0	0	0	0	1
Acute Pneumonia Primary	Cases	775	593	633	607	706	655	869	485	579	377	497	600
	Deaths	159	95	126	87	150	100	184	112	124	97	102	118
Influenzal	Cases	40	8	43	20	18	12	74	34	136	57	39	44
	Deaths	13	3	20	8	9	2	35	11	21	13	6	13
Tubercle Pulmonary	Cases	120	107	128	140	146	128	126	150	184	219	227	156
	Deaths	71	90	93	79	116	85	91	113	105	119	154	105
Other	Cases	71	51	55	87	94	71	82	129	135	137	144	99
	Deaths	28	21	20	45	36	34	43	55	55	63	43	42
Erysipelas ...	Cases	128	149	113	94	107	144	132	119	95	120	124	120
	Deaths	5	8	6	6	8	11	10	6	2	5	9	7
Puerperal Fever..	Cases	95	91	75	71	74	72	49	48	38	36	18	57
	Deaths	7	8	7	14	6	5	7	10	9	8	10	8
Puerperal Pyrexia	Cases	28	22	21	24	18	20	21	25	..	..	..	..
Ophth. Neonatorum	Cases	96	102	53	60	69	67	70	51	54	48	59	63
Malaria ...	Cases	5	2	2	3	6	5	4	7	4	6	4	4
	Deaths	0	0	0	0	0	0	0	0	0	0	1	0.1
Infect. Jaundice	Cases	18	23	0	0	0	0	0	0	0	0	0	2
	Deaths	1	1	0	0	0	0	0	0	0	0	0	0.1
Plague ...	...	0	0	0	0	0	0	0	0	0	0	..	...
B. Not Compulsorily Notifiable.													
Measles ...	Cases	2849	72	619	1562	203	2461	48	1812	199	991	1322	929
	Deaths	28	5	10	24	9	23	0	50	1	20	27	17
German Measles...	Cases	24	12	27	365	34	9	15	65	22	25	362	94
	Deaths	0	0	0	0	0	0	0	0	0	0	0	0
Whooping Cough...	Cases	153	436	330	752	797	375	428	579	395	362	933	539
	Deaths	7	18	17	36	24	15	13	37	15	15	53	24
Chickenpox ...	Cases	83	106	176	1340	718	866	466	397	336	265	266	494
	Deaths	0	0	0	0	0	0	1	0	0	0	0	0.1
Influenza, excl. Influenzal Pneum.	Deaths	22	5	39	9	27	8	35	10	21	20	12	19

TABLE V. - STATEMENT OF NUMBER OF DECLARATIONS OF CONSCIENTIOUS OBJECTION TO VACCINATION.

Year.	Registered Births.	Deaths before Vaccination.	Survivors.	Con-scientious Objectors.	Percentage.	Year.	Registered Births.	Deaths before Vaccination.	Survivors.	Con-scientious Objectors.	Percentage.	Year.	Registered Births.	Deaths before Vaccination.	Survivors.	Con-scientious Objectors.	Percentage.
1907	4504	470	4034	84	2.1	1916	3627	401	3226	345	10.7	1925	3535	324	3211	262	8.2
1908	4450	511	3939	219	5.6	1917	2966	326	2640	347	13.1	1926	3557	291	3266	262	8.0
1909	4492	526	3966	339	8.5	1918	2817	351	2466	260	10.5	1927	3324	277	3047	243	8.0
1910	4300	448	3852	362	9.4	1919	3481	357	3124	357	11.4	1928	3448	258	3190	299	9.4
1911	4028	478	3550	406	11.4	1920	5010	500	4510	290	6.4	1929	3194	230	2964	269	9.1
1912	4152	511	3641	478	13.1	1921	4326	457	3869	364	9.4	1930	3431	245	3186	301	9.4
1913	3872	467	3405	491	14.4	1922	4038	398	3640	348	9.6	1931	3367	233	3134	323	10.3
1914	4041	481	3560	413	11.6	1923	3847	317	3530	305	8.6	1932	3111	246	2865	364	12.7
1915	3837	483	3354	412	12.3	1924	3527	352	3175	246	7.7	1933	3182	201	2981	348	11.7
												1934	3194	222	2972	400	13.4

CHAPTER III.

SPECIAL HEALTH SERVICES.

MUNICIPAL HOSPITAL SERVICES.

(a) WOODEND HOSPITAL.

This Hospital which was taken over by the Town Council in 1927 from the then Parish Council, was formally opened as a General Hospital in 1928 by the Secretary of State for Scotland.

Reorganisation of Staff:

The following Memorandum by the Medical Officer of Health on the proposed staffing of the medical side of Woodend Hospital was submitted to the Public Health Committee on 25th June, 1935, and received the unanimous approval of the Town Council on 1st July, 1935.

> "Consequent on the resignation of Dr. George Williamson, Visiting Physician to Woodend Hospital, I had a meeting with the Senior Physicians of the Aberdeen Royal Infirmary in order to decide how the medical cases - as opposed to surgical cases - could best be treated.
>
> **Surgical Services:**
>
> It is perhaps advisable first to explain the organisation on the surgical side of the Hospital. As in every General Hospital, the surgical cases may be divided into two main groups:-
>
> (a) General cases.
> (b) Orthopaedic cases.
>
> For some time, the Senior Surgeons at the Infirmary, namely, Professor Learmonth, Mr. F.K. Smith and Mr. William Anderson have acted in a consulting capacity, and their assistants, Mr. Gordon Bruce, Mr. Davidson and Mr. Logie respectively, perform the routine surgical operations.
>
> As regards Orthopaedic Surgery, Mr. A. Mitchell is in charge of this Department, with Mr. Andrew Fowler as his assistant.
>
> This is the ideal surgical unit and has, since its inauguration, worked with complete success at Woodend Hospital.
>
> **Medical Services:**
>
> On receiving Dr. Williamson's resignation, I negotiated with the Senior Physicians of the Aberdeen Royal Infirmary with a view to having an organisation similar to that pertaining on the surgical side. It may be explained that Dr. Williamson had no supervision of the surgical cases in the Hospital.
>
> The three Senior Physicians at the Infirmary, namely, Professor Stanley Davidson, Dr. A.G. Anderson and Dr. J.A. Innes, are willing to serve in a consulting capacity to the Municipal Hospitals, with their respective Infirmary assistants - Dr. Hill, Dr. Morgan and Dr. Duthie. Each of the Senior Physicians would receive a small honorarium. The routine medical work would be performed by the respective assistants of the Senior Physicians.
>
> **Duties of Medical Staff:**
>
> The Senior Consultants would have free access to the Hospital for/

"for purposes of teaching and research. The actual routine visiting work would be carried out by their assistants. It is suggested that Dr. Hill and Dr. Morgan will each have medical wards allocated to them and that Dr. Duthie's duties will continue practically as at present, namely, in charge of pneumothorax cases, but that Dr. Duthie's services will be available in any part of the Hospital, on request, in connection with special cases.

The appointments of the several Assistant Physicians will be revised annually.

It is further arranged that the services of the Visiting Physicians will be available in connection with medical cases in the City Hospital, just as is the case with the Visiting Surgeons.

Permanent Medical Staff:

The permanent medical staff consists of the Medical Officer of Health as Chief Administrative Officer, and four Resident Medical Officers. The salary of the Senior Resident Medical Officer is £350 per annum and of each of the Junior Resident Medical Officers £100 per annum.

General Observations:

This reorganisation of the medical staff will be beneficial both to the patients and to the status of the Hospital. Woodend Hospital will become a medical school for purposes of teaching and research; this is very necessary because cases of Pneumonia and Tuberculosis are not now admitted to the Infirmary as they are statutory diseases for the care and treatment of which the Local Authority is entirely responsible.

Again, the services of these medical specialists will be available for cases requiring specialist medical treatment at the City Hospital.

I am convinced that this reorganisation of the purely medical services is the only method of staffing that should be adopted, and, with this idea, Dr. Williamson agrees.

As regards expenditure, the medical supervision will cost the same as formerly, namely, £600 per annum."

This reorganisation, although it has been in operation for a comparatively short time, has proved very successful.

Accommodation Available:

At Woodend Hospital, 324 beds are available and are allocated to the following diseases:-

(1) Infectious Diseases -		
Tuberculosis	148	
Pneumonia	30	
Rheumatism	6	
		184 beds.
(2) Cases coming within the purview of the Maternity Service and Child Welfare Scheme		16 beds.
(3) General Diseases -		
Medical	74	
Surgical	50	
		124 beds.
Total ...		324 beds.

The number of beds allocated as between medical and surgical cases in the above-named category is fluctuating, because, in senile cases, there is interchangeability in medical and surgical beds. The actual number of beds available for acute cases is 50 for surgical and 50 for medical cases.

Admissions and Discharges.

Table VI. gives the number of admissions and discharges during 1935.

TABLE VI. - ABERDEEN - WOODEND HOSPITAL. Year 1935.

	In Hospital on December 31, 1934.	Admitted during the year.	Discharged during the year.	Died in Hospital	In Hospital on December 31,1935.
A. - General Hospital.					
Surgical Cases ...	70	542	466	74	72
Medical Cases ...	94	1010	815	202	87
Gynaecological Cases	12	244	240	8	8
Total ...	176	1796	1521	284	167
B. - Special Hospital.					
Tuberculosis -					
(a) Respiratory ...	66	123	106	15	68
(b) Other ...	40	122	97	8	57
Rickets & Orthopaedic	10	21	21	0	10
Total ...	116	266	224	23	135
Total A and B ...	292	2062	1745	307	302

During 1935, the daily number of patients under treatment in the General Hospital varied from 152 to 207, the average daily number being 183. In the Special Hospital, the daily number of patients varied from 113 to 146, the average daily number being 133. In 1934, the average daily number of patients was 159 in the General Hospital and 139 in the Special Hospital.

In 1935, the total number of Public Assistance cases admitted was 901, with 195 deaths, as compared with 803 admissions and 157 deaths in 1934. With regard to cases from the County of Aberdeen and other Counties, there were in 1935, 174 ordinary admissions with 23 deaths, whereas from the same areas, 124 cases of tuberculosis were admitted and of these 12 died; the corresponding figures for 1934 were 130 ordinary admissions with 20 deaths, and 144 cases of tuberculosis with 16 deaths.

The operations performed during the year numbered 897, of which 517 were performed under general or spinal anaesthesia.

In June, 1929, arrangements were come to with the Directors of the Aberdeen Royal Infirmary whereby the surgical waiting list of that institution would be decreased by the admission to Woodend Hospital of surgical cases whenever beds were available in the latter institution. During 1935, under this arrangement, 281 general surgical cases were dealt with, as compared with 216 in 1934. These cases were investigated and treated in Woodend Hospital by the surgeons of the Royal Infirmary, who had, in almost all cases, seen the patients in the first instance at the Out-patient Department of the Infirmary.

Treatment of Pneumonia:

During 1935, 306 cases of pneumonia, including 95 cases from the County of Aberdeen and other counties, were admitted to Woodend Hospital and/

and comprised 265 cases of lobar pneumonia and 41 cases of broncho-pneumonia. There were 71 deaths, of which 59 were due to lobar pneumonia and 12 to broncho-pneumonia. Twenty of the deaths occurred among county cases.

The specific anti-pneumococcic serum continued to be used in suitable cases, but these were very few as, of all the cases "typed", over 70 per cent. belonged to Group IV. Specific serum is available only for Type I and Type II infections. The high incidence of Group IV cases is worthy of note and is in accord with the known variation in type incidence in any one place from year to year. This high incidence of Group IV is in marked contrast to the relatively low incidence of that Group which occurred during the past three years.

X-ray Department.

A total of 2,166 cases attended the X-ray Department and 3,240 films were taken. In 1934, the attending cases numbered 1,625 and the films 2,784. There is an increasing demand for X-ray investigation as a diagnostic aid in both medical and surgical cases.

(b) OLDMILL HOSPITAL - Medical Report.

During 1935, the medical administration of Oldmill Hospital was carried out as in previous years and the arrangements for the treatment of Public Assistance cases sent to the institution were found to be adequate and to work satisfactorily.

The medical administration is carried out as follows:-

1. All cases arriving for admission are medically examined and are thereafter allocated either to wards in Woodend Hospital or to the ordinary wards in Oldmill Hospital, according to the findings of the examining Medical Officer. By this means, sick cases are admitted direct to Woodend Hospital.
2. The Medical Officer pays a daily visit to Oldmill Hospital for the purpose of (a) examining inmates who report sick, (b) removing to Woodend Hospital such persons as require special nursing and treatment, and (c) directing treatment in minor ailments (e.g. cuts and bruises) which can be carried out successfully in Oldmill Hospital by a trained nurse from Woodend Hospital.
3. All children are examined monthly or at any other time on request by the Chief Public Assistance Officer. Medical reports are furnished with regard to fitness for "boarding-out".
4. All dormitories, beds, lavatories, clothing, food and cooking arrangements are periodically inspected.

The usual classification of cases was found to be satisfactory, viz:-

1. Infants, under 2 years of age.
2. Children, from 2-15 years of age.
3. Sick persons.
4. Aged and infirm persons.
5. Ordinary cases.

All children under 2 years of age are admitted to Woodend Hospital from which a number of healthy children are later transferred to Thorngrove Home for Mothers and Babies according to available accommodation in the latter institution. All sick infants are treated in Woodend Hospital.

At Oldmill Hospital, a Nursery is set aside for the accommodation of children between the ages of 2 and 15 years. The Nursery is a separate building and accommodates children only.

All inmates - irrespective of age - requiring medical or surgical hospital/

hospital treatment are transferred to Woodend Hospital.

Aged and infirm cases are removed from Oldmill Hospital to Woodend Hospital when their physical or mental condition necessitates treatment in the sick wards.

Admissions: The number of Public Assistance cases admitted to Woodend Hospital during 1935 was as follows:-

	Males.	Females.	Total.
Transferred from Oldmill Hospital Wards ...	111	101	212
Public Assistance cases admitted direct to Woodend Hospital ...	365	324	689
Total	...	...	901

Of this number 139 were children.

Discharges: The number discharged from Woodend Hospital during the year was as follows:-

Males.	Females.	Total.
357	351	708

Deaths: During the year 195 Public Assistance cases died in Woodend Hospital.

Infectious Diseases:

During the year, no cases of infectious disease occurred among the adults. In the nursery, one child was transferred to the City Hospital with diphtheria in January; the same child contracted scarlet fever in June and was again transferred to the City Hospital. She made a complete recovery.

During the year 1935, the congestion in the Public Assistance wards in Woodend Hospital was acute. Actually there was an increase of 98 in the numbers admitted during 1935 as compared with 1934. This caused considerable difficulty in finding the necessary accommodation, as a great many of the beds are permanently occupied by aged persons who, although unsuitable for Oldmill Hospital, do not require the expert nursing and medical attention provided in Woodend Hospital. It would be of great assistance if alternative accommodation could be provided for such persons, as this would liberate more beds for the treatment of acute illness.

In Oldmill Hospital the dietary is adequate. The sanitary arrangements are good and the cleanliness and state of repair of the buildings are excellent. The staff is competent and capable of carrying out the work entailed; the equipment is complete and up-to-date.

(c) CITY HOSPITAL.

The total number of beds available in the City Hospital is 285, distributed as follows:-

Diphtheria	93 beds.
Scarlet Fever...	60 "
Tuberculosis (male).. ...	26 "
do. (female) ...	50 "
Ailing Babies...	22 "
Puerperal Fever	16 "
Erysipelas	6 "
Miscellaneous Diseases (inc. Venereal diseases)	12
	285 beds.

The admissions to the City Hospital during 1935 are shown in Table VII.

Of the 3,389 admissions, 469 cases were admitted from areas outside the City. There were 242 deaths, of which 60 were among County cases.

TABLE VII. - ABERDEEN - CITY HOSPITAL. Year 1935.

	In Hospital on December 31,1934.	Admitted during the year.	Discharged during the year.	Died in Hospital.	In Hospital on December 31,1935.
Smallpox	...	...	...	...	...
Chickenpox	1	3	4	...	...
Scarlet Fever	131	1338	1387	14	68
Diphtheria	99	755	714	43	96
Enterica Infections ...	1	60	22	6	33
Dysentery	2	29	27	3	1
Cerebro-spinal Meningitis	...	8	3	4	1
Acute Poliomyelitis ...	...	1	...	...	1
Acute Pneumonias ...	26	289	260	44	11
Tuberculosis	29	62	35	21	35
Erysipelas	5	79	74	8	2
Puerperal Fever and Pyrexia	13	181	155	25	14
Measles	...	173	150	13	11
Whooping Cough... ...	...	10	5	2	3
Venereal Diseases ...	...	23	23	...	...
Ailing Infants	20	125	94	30	21
Miscellaneous Cases ...	19	253	237	24	4
Total...	346	3389	3192	242	301

The admissions from areas outwith the City were as follows:-

	Cases.	Deaths.
Scarlet Fever	129	5
Diphtheria	81	11
Enterica Infections...	7	0
Dysentery	7	0
Acute Pneumonias	26	4
Tuberculosis	16	5
Erysipelas	22	4
Puerperal Fever and Pyrexia. ...	75	16
Measles	14	0
Whooping Cough	1	0
Venereal Diseases	12	0
Ailing Infants	25	6
Miscellaneous Cases...	54	9
	469	60

The daily number of patients under treatment varied from 194 to 354.

The operations performed at the City Hospital during the year numbered 700, of which 450 were carried out under general or spinal anaesthesia.

X-ray Department: A total of 1,472 cases attended the X-ray Department; 2,052 films being taken.

Cleansing Block and Skin Department: Table VIII. shows that during the year the number of verminous persons, whether members of families with children of school age or not, disinfested at the City Hospital Cleansing Station, was 51, as compared with an annual average of 126 in the 1930-34 quinquennium. This table also shows that a total of 865 persons was treated for scabies in the skin wards of the Cleansing Station, as compared with an annual average/

average of 584 in the preceding five years.

During the past few years there has been a very decided fall in the number of verminous cases requiring disinfestation and this is partly accounted for by the improved housing conditions and partly owing to the fact that the majority of female children now have short hair.

TABLE VIII. - ABERDEEN - CLEANSING STATION - 1935.

	Age-Groups (Years).				All	Aver-
	0-5	5-15	15-25	25 +	Ages 1935.	age 1930-34
Verminous Persons Cleansed	3	16	5	27	51	126
Scabies Cases Treated ...	138	302	132	293	865	584
Total ...	141	318	137	320	916	710

(d) <u>KINGSEAT MENTAL HOSPITAL</u>.

Statistics relating to Kingseat Mental Hospital are dealt with in the section of the Report relating to Mental Health Services.

TUBERCULOSIS SERVICES.

Mortality: There were 99 deaths from tuberculosis, 71 of these being due to pulmonary tuberculosis, 28 to non-pulmonary tuberculosis. Table IX. and Chart (p. 37) show the death-rate since 1856-60.

A still further fall in the mortality from tuberculosis in all its forms is to be recorded for 1935. In the Annual Report for 1934 the opinion was given that the record figure in 1933 of 66 per 100,000 of population was so low that a further reduction in 1934 was hardly to be expected. This reduction in 1934 - to 64 per 100,000 - did, however, occur, and, in 1935, the death-rate from all tuberculosis was 56 per 100,000 of population.

This is the lowest death-rate ever recorded from all forms of tuberculosis in Aberdeen. The decrease as compared with 1933 and 1934 is accounted for by the reduction in the number of deaths from tuberculosis of the lungs, popularly called, even now, 'consumption' or 'phthisis'. The death-rate in 1935 from pulmonary tuberculosis was 40 per 100,000 of population, being the lowest rate yet recorded. This death-rate is to be compared with 52 in 1934, 54 in 1933, 46 in 1932, 69 in 1931 and 133 in 1915. The actual number of deaths from pulmonary tuberculosis on which this rate is based was 71 in 1935, 90 in 1934, 93 in 1933, 79 in 1932, 116 in 1931 and 220 in 1915.

The death-rate in 1935 from pulmonary tuberculosis is less than a third of that of 1915. The year 1915 was, however, one of exceptionally high mortality from tuberculosis and from all other causes. For the quinquennial period 1911-1915, at the beginning of which antituberculosis work was initiated in Aberdeen, the pulmonary tuberculosis death-rate was 111 per 100,000 of population.

The death-rate in 1935 from non-pulmonary tuberculosis - tuberculosis of organs other than the lungs - was 16 per 100,000 of population. The corresponding death-rate in 1934 and in 1933 was 12 in each year - the lowest recorded death-rate for the non-pulmonary varieties of the disease. The increase in 1935 was almost entirely due to an increase in the number of deaths from tuberculous meningitis.

While the continued and meantime progressive fall in mortality is encouraging, there is a lack of evidence as to what exactly is the cause of the fall. If it were possible to point to any line of action which impressed itself beyond the others as an important factor, then this could/

could be intensified and extended, but there is no such outstanding activity. It is still the case that many persons sent for examination and actually found to have pulmonary tuberculosis have the disease in an advanced stage. There are many reasons for this, perhaps the most important being the difficulty in determining by ordinary examination that pulmonary tuberculosis is present. When the physical signs leave no room for doubt the condition is often one of advanced disease. If tubercle bacilli are demonstrated in the spit the same is often true. It will be sufficient to give two illustrations of the facts underlying this statement.

In 1925, there were notified 115 cases of pulmonary tuberculosis with tubercle bacilli in the sputum:-

By the end of 1925 there had died 39
" " " " 1926 " " " 65
" " " " 1927 " " " 73
" " " " 1928 " " " 80
" " " " 1929 " " " 83
" " " " 1930 " " " 85
" " " " 1931 " " " 90
" " " " 1932 " " " 92
" " " " 1933 " " " 94

Of the 21 remaining cases, 8 had either left Aberdeen or their addresses were not unknown. There were, therefore, only 13 of the 115 sputum positive cases of 1925 definitely known to be alive at the end of 1933.

Similarly, in 1930, there were notified 90 cases of pulmonary tuberculosis with tubercle bacilli in the sputum. More than half of these were dead at the end of 1932 and 62 were dead at the end of 1935. Of the 28 remaining, 22 were known to be alive, and there was no knowledge of the whereabouts of the other 6.

If, therefore, it is difficult to diagnose early pulmonary tuberculosis by the ordinary procedure of physical examination or by bacteriological examination, it is strongly indicated that other methods of diagnosis should be resorted to. All patients with suggestive symptoms should be referred to appropriate institutions for X-ray examination of the chest. The suggestive symptoms would, especially in the adolescent and early adult age periods, include anaemia, cough, continued fever or rapid pulse, easy fatigue, indigestion, loss of weight, lack of appetite, 'influenza', frequent 'colds', bronchitis, night sweats, blood spitting and pleurisy. These symptoms persisting for over two or three weeks in a young person should be sufficient in itself to indicate X-ray examination. Young people with a history of close household contact with an infective case of pulmonary tuberculosis should especially be kept under careful observation by the medical attendant of the family. An X-ray examination is easily arranged and is conclusive for all practical purposes. It may be desirable to have another taken after an interval of a month or two if the symptoms persist and if there is found no condition other than tuberculosis to account for them, but this is seldom necessary. X-ray examinations will exclude from the necessity for expensive treatment - expensive both to the individual patient and to the community - many who might be diagnosed from physical signs only as having pulmonary tuberculosis. This function of the X-ray apparatus is itself sufficient justification for its routine use as a diagnostic measure.

As with all other branches of the public health service the co-operation of the general medical practitioner is an absolute sine qua non of the successful administration of tuberculosis. To him we must look for the finding of the first case in a family for detailed and especially radiographic examination. His assistance in persuading young contacts to attend at the Tuberculosis Clinic for X-ray examination is frequently invaluable. Apart from the illness of the individual as an indication for/

for examination, there appears to be only one practical method available for getting hold of the early case and that is by periodical X-ray examination. This is not practicable so far as the whole population is concerned; it would be practicable as applied to immediate contacts of infective cases of the disease only if our X-ray apparatus and staff were added to. It has not been found necessary, however, to suggest such an addition as it has been impossible to persuade more than a rather small proportion of these contacts to attend for radiography.

During the year, the work of the Tuberculosis Clinic at the City Hospital involved the taking of over 2,000 X-ray photographs. These are, as has been suggested, essential for diagnosis and for an accurate recognition of the extent of the disease.

Notifications - Table X.(A) gives the number of tuberculosis cases notified during the year, divided into pulmonary and non-pulmonary cases, and arranged according to sex and age-period. During 1935, 120 cases of pulmonary tuberculosis were notified as against an annual average of 156 in the preceding ten years. There were 71 cases of other forms of tuberculosis notified in 1935, as against an annual average of 99 in the 1925-1934 decennium.

As regards the Site of the Disease, in the 71 cases notified as suffering from tuberculosis other than pulmonary, 16 were suffering from abdominal tuberculosis, 14 from tuberculous meningitis, 10 from tubercle of bones and joints (including the spine), 15 from tuberculous glands (mainly cervical), 12 from tuberculosis of the skin and 4 from generalised and other tuberculosis.

There were 9 deaths of abdominal cases, 15 of meningitis cases, 1 of cases of bones and joints and 3 of other cases.

As regards the number of cases notified during the year in which diagnosis of tuberculosis was confirmed by the Tuberculosis Medical Officer, Table X.(A) shows that the diagnosis was confirmed in 110 pulmonary cases and 46 non-pulmonary cases, a total of 156 cases.

Table X.(B) shows the number of persons belonging to Aberdeen at 31st December, 1935, who were known to be suffering from tuberculosis. The numbers are - 427 pulmonary cases and 163 non-pulmonary cases, a total of 590 cases.

Table X.(C) gives particulars of those who died during 1935, detailing the period that elapsed between notification and death and between discharge from an institution and death.

Institutional Treatment - Table X.(D) gives the number of notified and un-notified cases which received treatment under the Tuberculosis Scheme in Sanatoria or other institutions during 1935. Of the 213 cases admitted, 140 were cases of pulmonary tuberculosis and 73 were cases of non-pulmonary tuberculosis. The number of notified cases admitted to each institution is as undernoted:-

	1935.		
	Pulmonary Tubercle.	Other Tubercle.	Total.
City Hospital - Wards and Shelters...	40	5	45
Woodend Hospital " " ...	85	37	122
Royal Infirmary	6	8	14
Kingseat Mental Hospital	1	1	2
Royal Hospital for Sick Children ...	0	17	17
Nursing Home	2	1	3
Other Hospitals	2	0	2
Total Admissions...	136	69	205
Deduct cases treated in two institutions	5	7	12
	131	62	193

TABLE IX. - ABERDEEN. - MORTALITY FROM TUBERCULOSIS IN YEARS 1856-1935.*
per 100,000 of Population.

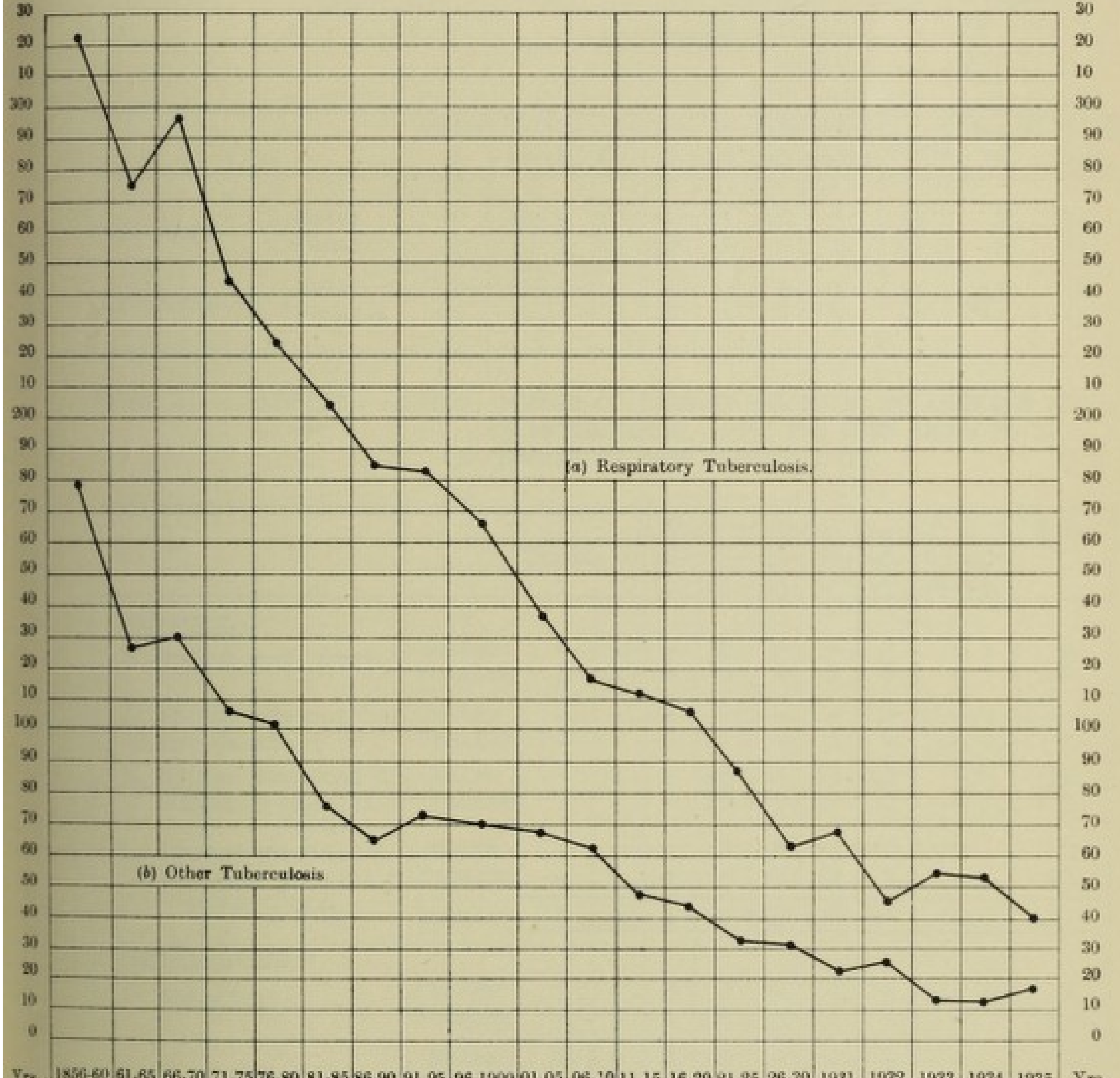
Period.	Respiratory Tuberculosis.			Other Tuberculous Diseases.			All Tuberculous Diseases.		
	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.	Males.	Females.	Both Sexes.
1856-60 .	333	312	322	235	135	179	568	447	501
1861-65 .	267	279	274	158	103	128	425	382	402
1866-70 .	295	300	298	170	98	130	465	398	428
1871-75 .	234	250	243	129	89	107	363	339	350
1876-80 .	217	228	223	112	92	101	329	320	324
1881-85 .	189	216	204	90	62	74	279	278	278
1886-90 .	179	188	184	76	60	67	255	248	251
1891-95 .	179	183	181	83	62	72	262	245	253
1896-1900 .	166	168	167	77	64	70	243	232	237
1901-05 .	143	134	138	79	62	69	222	196	207
1906-10 .	119	113	116	74	51	61	193	164	178
1911-15 .	125	99	111	53	47	49	177	146	160
1916-20 .	104	107	106	49	39	43	153	146	149
1921-25 .	99	81	88	37	27	31	136	108	119
1926-30 .	68	57	62	34	27	30	102	84	92
1931 . .	83	57	69	32	13	21	114	70	90
1932 . .	56	37	46	33	22	26	89	59	72
1933 . .	76	35	54	14	10	12	90	45	66
1934 . .	73	34	52	15	10	12	88	44	64
1935 . .	46	36	40	14	18	16	60	54	56

* Corrected for transferred deaths in 1904 and subsequent years.

ABERDEEN—TUBERCULOSIS, 1856–1935.—QUINQUENNIAL PERIODS.

ALL AGES. BOTH SEXES.

Deaths per 100,000 of Population.



Yrs.	1856-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-1900	01-05	06-10	11-15	16-20	21-25	26-30	1931	1932	1933	1934	1935	Yrs.
(a) RESPIRATORY TUBERCULOSIS.	322	274	298	243	223	204	184	181	167	138	116	111	106	88	62	69	46	54	52	40	
(b) OTHER TUBERCULOSIS.	179	128	130	107	101	74	67	72	70	69	61	49	43	31	30	21	26	12	12	16	

(Corrected for transferred deaths in 1904 and subsequent years.)

TABLE X. - ABERDEEN - (A). CASES OF TUBERCULOSIS NOTIFIED IN 1935.

		NUMBER OF CASES NOTIFIED AS SUFFERING FROM TUBERCULOSIS.									Number of Cases Notified during year in which diagnosis of Tuberculosis has been confirmed.	
		AGE-GROUPS.										
		Under 5	5-10	10-15	15-25	25-35	35-45	45-65	65upwards	Total	Under 15	15 and upwards
Pulmonary	Males	1	1	-	13	14	11	16	3	59	2	55
	Females	2	-	2	19	22	8	6	2	61	2	51
Non-pulmonary	Males	9	7	4	4	1	-	3	3	31	11	10
	Females	10	8	5	6	2	3	3	3	40	13	12

TABLE X. - ABERDEEN - (B). NUMBER OF PERSONS BELONGING TO ABERDEEN AT 31st DECEMBER, 1935, WHO WERE KNOWN TO BE SUFFERING FROM TUBERCULOSIS.

		Number of Known Cases.								Total.
		Under 5	5-10	10-15	15-25	25-35	35-45	45-65	65 upwards.	
Pulmonary.										
1. Sputum not present	Males	-	1	-	2	-	-	1	-	4
	Females	1	2	1	3	1	2	2	-	12
2. Sputum present but not examined	Males	-	-	-	-	-	-	-	-	-
	Females	-	-	-	-	-	1	-	-	1
3. Sputum examined & tubercle bacilli found	Males	-	2	-	25	61	53	49	5	195
	Females	-	-	-	29	65	27	10	4	135
4. Sputum examined & tubercle bacilli never found	Males	-	1	1	8	8	11	10	1	40
	Females	-	-	1	5	13	12	9	-	40
	Total:	1	6	3	72	148	106	81	10	427
Non-Pulmonary:										
1. Abdominal ...	Males	3	-	3	2	-	1	-	-	9
	Females	-	3	1	2	3	1	-	-	10
2. Thoracic ...	Males	1	-	2	1	-	-	-	-	4
	Females	-	-	3	-	-	-	-	-	3
3. Spine ...	Males	1	6	2	3	-	-	-	-	12
	Females	2	3	1	3	1	-	1	-	11
4. Bones and Joints (excl. of Spine)	Males	-	5	3	3	3	1	1	1	17
	Females	-	3	5	3	1	1	-	1	14
5. Superficial glands	Males	2	5	2	1	1	-	1	-	12
	Females	2	4	4	7	3	2	1	-	23
6. Lupus ...	Males	-	-	1	3	1	2	-	1	8
	Females	1	-	1	1	4	4	7	5	23
7. Other parts or organs ...	Males	-	-	1	1	-	3	6	-	11
	Females	-	-	-	-	2	1	3	-	6
	Total:	12	29	29	30	19	16	20	8	163
Pulmonary and Non-pulmonary Total:		13	35	32	102	167	122	101	18	590

TABLE X. - (C) NUMBER OF PERSONS WHO DIED FROM TUBERCULOSIS IN ABERDEEN DURING THE YEAR, WITH PARTICULARS AS TO PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH AND BETWEEN DISCHARGE FROM AN INSTITUTION AND DEATH.

	Pulmonary		Non-pulmonary	
	Males	Females	Males	Females
Number of persons who died from tuberculosis ...	37	34	11	17
Of whom -				
Not notified or notified only at or after death	2	7	5	13
Notified less than 1 month before death ...	2	4	4	2
" from 1 to 3 months " " ...	1	-	-	-
" " 3 to 6 " " " ...	1	3	-	-
" " 6 to 12 " " " ...	4	6	2	-
" " 1 to 2 years " " ...	8	1	-	-
" over 2 years " " ...	19	13	-	2
Number who died within 28 days after discharge from an institution	2	3	1	1
Number who died more than 28 days after discharge from an institution	11	10	-	-

Corrected for transferred deaths.

TABLE X. - (D) NUMBER OF CASES WHICH RECEIVED TREATMENT UNDER THE TUBERCULOSIS SCHEME IN SANATORIA OR OTHER INSTITUTIONS DURING THE YEAR ENDED 31st DECEMBER, 1935

		Number of Patients.					
		In Institutions on Jan. 1.	Admitted during the year.	Discharged during the year.	*Died in the Institutions.		In Institutions on Dec. 31.
		1.	2.	3.	4.	5.	6.
Pulmonary.							
ˣAdults ...	Males	35	70	42	14	2	47
	Females	26	64	50	7	6	27
Children...	Males	1	3	2	1	-	1
	Females	1	3	1	3	-	-
Non-Pulmonary.							
ˣAdults ...	Males	5	12	9	-	3	5
	Females	5	13	9	2	3	4
Children...	Males	5	24	13	2	3	11
	Females	5	24	13	1	5	10
Total:		83	213	139	30	22	105

* In column 4 are those who were in final residence 28 days or over. In column 5 are those who were in final residence under 28 days.

x All patients of 15 years and upwards are classed as adults.

As to outdoor institutional treatment, 969 cases, all of which were of pulmonary tuberculosis except 329, received treatment at the Tuberculosis Institute at the City Hospital. The total number of attendances during the year was 7,546.

Insured Persons (National Health Insurance Act). Of the 120 cases of pulmonary/

pulmonary tuberculosis notified, 62 were insured persons, 40 being male and 22 female. The notified cases of other forms of tuberculosis included 13 insured persons - 8 males and 5 females.

As stated in previous Reports, the Town Council have now assumed full financial responsibility for the treatment of insured tuberculous patients. During the year, the number of prescriptions passed for payment amounted to 1,669.

Food Supply. During 1935, food - chiefly milk - was supplied to an average daily total of 22 patients receiving dispensary or domiciliary treatment.

Supervision of Cases. The Tuberculosis Medical Officer had the assistance of three Tuberculosis Health Visitors or Nurses in the visitation and supervision of tuberculous cases throughout the year. The number of visits made by the Tuberculosis Health Visitors during the year under review was 7,703.

Size of House and Density of Occupancy. Table XI. gives the number of cases occurring in houses of different sizes, along with the average number of inmates. In the case of pulmonary tuberculosis, the average number of inmates, including the patient, varied from 3.0 in one-roomed houses to 4.8 in three-roomed houses, and 5.9 in houses of 5 rooms and upwards. The average for houses of all sizes taken together was 4.6

TABLE XI. - ABERDEEN - TUBERCULOSIS - SIZE OF HOUSE IN RELATION TO NOTIFIED CASES AND REGISTERED DEATHS DURING 1935.

		1 room	2 rooms	3 rooms	4 rooms	5 rooms & up.	Institutional or not stated.	Totals for 1935.	Corresponding Totals for	
									1934.	1933.
Pulmonary Tuberculosis (Cases)	Male	7	19	14	5	4	10	59	61	69
	Female	5	17	23	4	3	9	61	46	59
Both Sexes ...	Cases	12	36	37	9	7	19	120	107	128
	Deaths	10	26	17	5	10	3	71	90	93
Average Number of Inmates, including Patient.		3.0	4.2	4.8	6.7	5.9	...	4.6	4.3	3.6
Other Tuberculosis (Cases)	Male	4	16	5	2	-	4	31	23	26
	Female	11	12	8	4	-	5	40	28	29
Both Sexes ...	Cases	15	28	13	6	-	9	71	51	55
	Deaths	7	7	4	5	-	5	28	21	20
Average Number of Inmates, including Patient.		3.4	5.3	5.3	6.3	-	...	4.9	5.1	4.8
x Houses in City at Census, 1931. Average Number of Inmates.		2.5	3.9	4.2	4.1	4.4	...	4.0	...	...

x Houses of 25 rooms and over are excluded.

In the cases of other forms of tuberculosis, the average ran from 3.4 for one-roomed houses, to 6.3 for four-roomed houses. The average for all houses was 4.9

As regards the position of the tuberculous cases in relation to room and bed accommodation at the time of notification, it was found that of the 120 cases of pulmonary tuberculosis, only 46, or 38.3 per cent., were occupying a separate bed in a separate room, and 9, or 7.5 per cent., had a separate bed but not a separate room. Sixty-two, or 51 per cent., had neither a separate bed nor a separate room.

Loan of Beds. In order to facilitate the separation of the patient from the other members of the household, 13 beds or cots, with the necessary bedding, were given on loan to needful patients. On the last day of the year there were on loan 31 beds with bedding.

MATERNITY AND CHILD WELFARE SERVICES.

Infantile Mortality. During the year 1935, there were 286 deaths among children under one year of age, as compared with an average of 265 during the 1930-1934 quinquennium. The infantile mortality rate, expressed as deaths per 1,000 births, was 91 during 1935, as against an average rate of 84 in the preceding quinquennium. In the preceding year the rate was 77 which is the lowest yet recorded.

The infantile mortality rate throughout Scotland in 1935 was 77 per 1,000 births. Among the principal towns in Scotland, Aberdeen appears fourth on the list, Dundee being first with a rate of 68, Edinburgh second with a rate of 70, and Paisley third with a rate of 88.

The chief causes of mortality among infants in 1935, as appearing in Table XII., were pneumonia and bronchitis, with 97 deaths, as against an average of 67 for the preceding quinquennium; prematurity came next with 64 deaths, being the same as the average for the previous five years.

There were 8 deaths from measles as against an average of 7 in the preceding five years and 4 deaths from whooping cough as against an average of 13.

Mortality at Pre-school period (1 to 5 years). At this age-period, there was also an increase in the number of deaths as compared with the preceding quinquennium, there being 118 deaths in 1935 as against an average of 85. Deaths from pneumonia showed a considerable increase, there being 31 deaths as against an average of 21. As regards infectious diseases, diphtheria and measles also showed an increase. In 1935, there were 18 deaths from diphtheria as against an annual average of 5, and 15 from measles, as against an average of 7.

In Table XIII. the causes of death under 1 year are somewhat differently grouped from those in Table XII. and death-rates are substituted for numbers of deaths.

In Table XIII. also, two interesting columns show the number of infants surviving at the end of one year from birth, and the proportions which the survivors bear to the population. This rate, which represents the net gain to the population, after the perils peculiar to the first year of life have been passed, was, in 1935, 16.4 per 1,000 of population, as compared with an average of 17.5 for the ten years 1925-1934. This rate is a more exact indication than the birth-rate of the real internal addition to the population.

Births. The figures of the births registered in Aberdeen during 1935 are analysed in detail in Chapter V. of this Report.

The particulars regarding the live-births and still-births occurring during the year are as follows:-

Attended by -	No. of Live Births.	No. of Still Births.	No. of Still Births per 1,000 Live Births.
Midwives	575	21	36.5
Maternity Hospital -			
(a) In Wards.	761	72	94.6
(b) At Home..	216	4	18.5
Medical Practitioners	1774	57	32.1
Not attended at birth	-	-	-
	3326	154	46.3

The bodies of 28 still-born children or children who had died soon after birth were examined for spirochetes. None proved to be syphilitic.

TABLE XII.- ABERDEEN - CAUSES OF DEATH AMONG CHILDREN UNDER FIVE YEARS OF AGE. - YEAR 1935.

Causes of Death.	A G E.																	Average for Preceding Five Years. 1930-1934.	
	First Year.												Second to Fifth Years.						
	First Four Weeks				First Three Months			The Four Quarters											
	0-1	-2	-3	-4	^{x}0-1	-2	-3	^{x}0-3	-6	-9	-12	Total	-2	-3	-4	-5	Total	0-1	1-5
Chicken-pox												-					-	-	-
Measles										4	4	8	9	3	3		15	7	7
Scarlet Fever											1	1	2	1		1	4	1	2
Whooping Cough... ...							1	1	1	2		4				3	3	13	9
Diphtheria				1	1			1				1	4	6	3	5	18	0.4	5
Erysipelas									1			1					-	1	0.2
Epidemic Cer.Spin.Meningitis											1	1	1				1	1	1
Tuberculosis of (a)Brain										2	1	3		3	2		5	2	6
(b)Abdomen												-		1		1	2	1	1
(c)Lungs										1		1	1				1	0.4	2
(d)Other Forms												-					-	1	2
Meningitis	1				1			1	2		1	4	1				1	3	1
Hydrocephalus												-	1				1	0.2	0.2
Convulsions	1			1	2			2	3	1		6					-	11	1
Pneumonia	2	1	3	3	9	8	8	25	18	24	9	76	20	4	4	3	31	50	21
Bronchitis			3	1	4	5		9	6	3	3	21	1				1	17	2
Diarrhoea and Enteritis						1		1	2	3		6					-	14	2
Other Digestive Diseases										3	1	4	2	1	1	1	5	3	4
Congenital Malformation of Heart						1	1	2				2	1				1	4	0.2
Other Congenital Malformations	3				3		3	6	2			8			1		1	8	0.2
Prematurity	47	5	5	3	61	3		64				64					-	64	0.2
Atrophy,Debility & Marasmus	9		1	1	11	4	1	16	2	3	1	22	2				2	30	0.2
Atelectasis	5	1			6	3		9				9					-	7	-
Injuty at Birth.. ...	7	2	2		11	1	1	13				13					-	6	-
Syphilis							1	1	1			2					-	0.4	0.2
Burns and Scalds. ...												-	4		1		5	1	3
Suffocation			1	1	2		1	3				3					-	3	0.2
Other Accidents.. ...												-		1	1	1	3	1	6
Other Causes	2	2	1		6	2	2	10	6	5	5	26	8	5	1	4	18	15	8
All Causes.. ...	77	11	16	11	117	28	19	164	44	51	27	286	57	25	17	19	118	265	85
Average for Preceding Five Years.. ...	76	12	16	8	116	26	21	163	45	30	27	265	42	18	13	12	85		

x This column includes all deaths in preceding columns.

TABLE XIII - ABERDEEN - INFANT MORTALITY. - Years 1925-1935.

Year.	No. of Births.	Births per 1,000 of Population.	Deaths of Infants under 1 year.	Deaths of Infants under 1 year per 1,000 Births.	No. of Survivors.	Survivors per 1,000 of Population.	Death-Rates among Children Under 1 year of Age from Chief Causes per 1,000 Births.										Death-Rates from All Causes, per 1,000 Births, at Ages --		
							Prematurity, Congenital Defects, and Diseases of Early Infancy.	Diseases of Digest. Sys. Wasting and Debility, Convulsions.	Bronchitis & Pneumonia.	Common Zymotic Diseases.				Tuberculosis.	Syphilis.	Suffocation.	Under 2 Weeks	Above 2 Weeks and Under 6 Months	Above 6 Months and Under 1 Year.
										Measles.	Whooping Cough.	Diphtheria.	Scarlet Fever.						
1935	3157	18.0	286	91	2871	16.4	31	12	31	3	1	0.3	0.3	1	0.6	1	28	38	25
1934	3071	17.7	235	77	2836	16.3	33	19	16	0	3	0	0.3	0.7	0	0.7	30	34	13
1933	3019	17.6	238	79	2781	16.2	30	19	20	1	2	0	0	0.7	0	1	28	33	18
1932	3188	18.7	296	93	2892	17.0	33	18	22	4	7	0.3	0	2	0.6	1	29	41	20
1931	3231	19.2	292	90	2939	17.4	31	17	27	2	5	0	0.6	3	0	0.6	29	41	20
1930	3303	19.7	265	80	3038	18.1	24	18	21	3	3	0.3	0	1	0	2	23	38	19
Aver. 1930-1934.	3162	18.6	265	84	2897	17.0	30	18	21	2	4	0.1	0.2	1	0.1	1.1	28	37	19
1929	3112	18.7	297	95	2815	16.9	31	27	24	0	2	1	0	3	0.3	2	31	41	23
1928	3314	19.9	313	94	2999	18.1	27	29	17	6	5	0.3	0	2	0.3	2	30	40	24
1927	3182	19.3	334	105	2848	17.3	38	29	25	0.3	2	0	0	3	2	1	40	45	20
1926	3406	20.7	328	96	3078	18.7	30	31	17	2	3	1	0	4	1	1	27	44	25
1925	3390	20.8	368	109	3022	18.5	34	37	18	4	6	1	0	3	1	0.3	31	53	25
Aver. 1925-1929	3281	19.9	328	100	2953	17.9	32	31	20	3	4	1	0	3	1	1	32	45	23
Aver. 1925-1934	3222	19.2	297	92	2925	17.5	31	24	21	2	4	0.4	0.1	2	1	1	30	41	21

Maternal Mortality. During the year under review, there were 19 deaths of women from causes associated with pregnancy or child-birth, including all deaths, whatever the precise cause, within four weeks after child-birth (or later if illness arose as a result of confinement). Of these 19 deaths, 12 were classified by the Registrar-General as due to pregnancy and child-birth.

All these deaths were inquired into by the Health Visitors or information regarding them was obtained from the attending practitioners who readily co-operate in giving the desired information.

		Maternal Mortality.				Puerperal Sepsis	
Year.	No. of Births (Corrected for Transfers)	Total No. of Deaths	Rate per 1,000 Births	Reg.Genl's. Classification Number.	Rate per 1,000 Births.	Number of Deaths.	Rate per 1,000 Births.
1935	3,157	19	6.0	12	3.8	7	2.2
1934	3,071	16	5.2	10	3.3	6	2.0
1933	3,019	20	6.6	16	5.3	6	2.0
1932	3,188	25	7.8	24	7.5	14	4.4
1931	3,231	13	4.0	10	3.1	6	1.9
1930	3,303	20	6.1	15	4.5	4	1.2
Average 1930-1934	3,162	19	6.0	15	4.7	7	2.2

It will be seen from the table that during 1935 there were 6.0 maternal deaths per 1,000 births; of which 3.8 were classified by the Registrar-General as due to pregnancy and child-birth, including 2.2 from sepsis. In the quinquennium 1930-1934, the corresponding rates were - 6.0; 4.7; and 2.2.

There was one death amongst confinements attended by midwives. In 8 cases the patients were attended by general medical practitioners in their own homes and in 1 case by a doctor in a maternity home. In 9 cases the attendance was by public institutions.

One death followed miscarriage. In 4 cases, death occurred before delivery took place. In 2 others, delivery took place prematurely. The remaining 12 deaths were due to or associated with full-time deliveries. All the patients, with one exception, were receiving institutional treatment at time of death.

Report under Midwives (Scotland) Act, 1915. The report for the year 1935 under the Midwives (Scotland) Act, 1915, has already been transmitted to the Central Midwives Board.

The number of Midwives who, during the year, intimated their intention to practise in the district was 11.

Home Visitation. A record of the number of first visits and re-visits to infants under 1 year of age, to children in the 1-5 year period, and to expectant mothers, is here submitted:-

Infants under One Year.				Children one to five Years.				Ante-natal Cases.	
First Visits.		Re-Visits.		First Visits.		Re-Visits.		First Visits.	Re-Visits.
Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.		
2895	170	32,680	2341	962	75	8004	565	225	216
3,065		35,021		1,037		8,569		441	
38,086				9,606					

Voluntary /

Voluntary Health Visitors' Report. The Voluntary Health Visitors' Report, which is separately submitted, indicates the valuable contribution that is made to the work of Maternity and Child Welfare by the voluntary workers.

Ante-Natal Consultations. The extent of the ante-natal work undertaken during the year is summarised as follows:-

	Maternity Hospital Ante-Natal Annexe.	City Hospital Ante-Natal Clinic.	Child Welfare Clinics.
Total No. of Attendances ...	3,735	364 + 49^{x} + 46^{X}	361
Total First Attendances ...	1,007	173 + 28 + 26	281

x Post-Natal Cases.
X Not pregnant.

Post-natal and other Consultations. There were 1,964 post-natal consultations during the year, of which 818 were first attendances.

Child Welfare Consultations. The extent of the work done at the Child Welfare Clinics is summarised as follows:-

(a) Total number of attendances -	(1) Under 1 year of age ...	6044
	(2) Over 1 year of age ...	2688
(b) Number of first attendances -	(1) Under 1 year of age ...	1774
	(2) Over 1 year of age ...	1308

Special Treatment Centres.

(1) **Teeth.** - The Dental Clinic provided the following services:-

(a) Number of Attendances - (1) Mothers 293 (229 cases)
(2) Children 566 (547 cases).

(b) Classified Summary of Conditions remedied:-

	Extractions.	General Anaesthetics.	Anaesthetic (local)	Fillings.	Scalings.
(1) Mothers ...	1649	289	2	0	0
(2) Children ...	2126	566	0	0	0

(c) Number of Dentures supplied ... Nil.

(d) Net cost of Dentures, less sums recovered ... Nil.

(2) **Eyes.** - The Ophthalmic Clinic was utilised to the extent of providing treatment for 37 cases of strabismus.

(3) **Ultra-Violet Light Clinic.** (Duration of Clinic 6 months)

Children under 5 years of age treated at City Hospital:-

Disease.	Cured.	Improved.	Stationary.	Worse.	TOTAL.
Rickets.	Nil.	8	Nil.	Nil.	8
Wasting and Debility.	Nil.	13	Nil.	Nil.	13
Adenopathy.	Nil.	10	Nil.	1	11
	Nil.	31	Nil.	1	32

96 per cent. improved; 3 per cent. worse.

Day Nursery.

The/

Day Nursery.

The Day Nursery at Charlotte Street undertakes the main work under this heading, and there is, in addition, a Play Centre at the Castlegate Child Welfare Centre, which is open daily from 2 to 5 p.m. The attendances and charges at the Charlotte Street Day Nursery are as follows:-

(a) Total Number of Attendances - 4,980

Fresh Admissions (1) Under 1 year - 22
(2) Over 1 " - 53

Average Daily Attendance - 19.

(b) Charges made are as follows:

5d. per day for one child.
9d. " " for two children.
1/- " " for three children.

(c) The receipts for the year amounted to £101.

Food and Milk.

During the year, milk was supplied to the following extent:-

MOTHERS: (1) Nursing ... ... 116) ... 124
(2) Expectant ... ... 8)

CHILDREN: (1) Under 1 year ... 192) ... 247
(2) Over 1 year ... 55)

Ophthalmia Neonatorum.

Ophthalmia Neonatorum is referred to in the sections of this Report dealing with infectious and venereal diseases. The following additional information is submitted:-

Year.	Number of Registered Births	Number of Notified Cases of Ophthalmia Neonatorum.	Rate per 1,000 Registered Births.
1935.	3,329	96	28.8
Average 1930-34	3,297	68	20.7

Confinement Attended by:-	Case Notified by:-			
	Doctor	Midwife	Institution.	Health Visitor
Doctor ...	23	0	0	7
Midwife ...	0	15	0	8
Mat. Hospital	4	0	20	5
Mat. District	1	0	13	0
Other Instits.	0	0	0	0

Number of cases in which infection was gonococcal - 3.
Twenty-eight cases were treated in residential institutions; 26 as out-patients in other institutions; and 42 cases were treated at home.
In 94 cases a complete cure was obtained.
In 2 cases there was a slight impairment of vision in one eye.

Maternity Hospital.

1./

Maternity Hospital .

1. Pre-natal cases -

(a) Number of cases treated in Wards	294
(b) Number of deaths	0

2. Abortions -

Abortions not now admitted.

3 and 4. Number of Confinements -

(a) In Wards	823
(b) In District	231

Number of Deaths -

(a) In Wards	5
(b) In District	0

5. Number of infants born -

	In Wards.	In District.
(1) Alive	761	216
(2) Still	72	4

	In Wards.	In District.
6. Number of deaths of infants within 10 days	29	7

Woodend (Municipal) Hospital.

1. Pre-natal cases -

Number of cases treated	9
Number of deaths	2

2. Abortions -

Number of cases of abortion	3
Number of deaths	1

3. Normal Confinements -

(a) Total No.	(i) with medical attendance	61
	(ii) without " "	0

(b) No. of Deaths - 2.

4. Abnormal or complicated confinements -

(a) Total No.	(i) instrumental deliveries	6
	(ii) other deliveries	16

(b) No. of Deaths - 1

5. Number of infants born -

(1) Alive	79
(2) Still	6

6. Number of deaths of infants within 10 days - 3.

Maternity Homes (Private).

1. Pre-natal cases -

(a) Number of cases treated	3
(b) Number of deaths	1

2. Abortions -

Number of cases of abortion	2
Number of deaths	1

3. /

3. Normal Confinements -

(a) Total No.	(i) with medical attendance	143
	(ii) without " "	3
(b) Number of Deaths		0

4. Abnormal or complicated confinements -

(a) Total No.	(i) Instrumental deliveries	109
	(ii) Other deliveries ...	43
(b) Number of Deaths		0

5. Number of infants born -

(1) Alive	294
(2) Still	9

6. Number of deaths of infants within 10 days - 8.

Homes for Unmarried Mothers before and after confinement.

Unmarried mothers in their second or subsequent pregnancies are admitted to Loch Street Home. Unmarried mothers in their first pregnancy are admitted to Thorngrove Home. A total of 4 unmarried mothers was admitted to Loch Street Home, and 18 unmarried mothers to Thorngrove Home.

Hospitals for Sick Children.

The Marasmus Ward at the City Hospital provides 22 cots for infants suffering chiefly from nutritional disorders. In all, a total of 140 infants was admitted to this ward during the year.

A Ward at Woodend Hospital provides 14 cots for infants suffering chiefly from rickets and orthopaedic disabilities. In all, a total of 21 cases was admitted during the year.

Convalescent Homes.

Number of cases treated -

	Thorngrove Home.	Loch Street Home.
Mothers	272	10
Children under 1 year ...	342	3
Children over 1 year ...	7	41
	621	54

Average duration of residence -

Mothers	3 days	38 days
Children	42 days	76 days.

Home-Helps.

21 Home-Helps were employed in the homes; average period of assistance, 25 days: Cost	£37. 8. 2.
12 Home-Helps were employed for washing; average number of washings per patient, 5: Cost	11. 4. 0.
Total Cost. ...	£ 48. 12. 2.

Treatment of Puerperal Fever and Pyrexia.

The following Table gives various particulars relating to the number of cases notified:-

(1)/

	Puerperal Fever.	Puerperal Pyrexia.
(1) Number of cases notified	95	28
(2) Number removed to City Hospital ...	92	16
(3) Total number of deaths	7	3
(4) Number of cases following instrumental delivery	18	7
(5) Number of deaths occurring under heading (4)	5	1

From the information given under headings (1) and (2), it will be seen that, of the 95 cases of Puerperal Fever notified, 92 were removed to the Puerperal Wards of the City Hospital, and that, of the 28 cases of Puerperal Pyrexia notified, 16 were admitted to the City Hospital. No deaths from these diseases occurred at home.

VENEREAL DISEASES SERVICES.

New Cases.

During 1935, a total of 1,226 new cases from all areas (including those within the Joint Scheme and Outside Areas) attended for treatment at the Treatment Centres which are situated at the Aberdeen Royal Infirmary and at the Aberdeen City Hospital. Of these, 880 were cases from the City of Aberdeen. In the 1930-34 quinquennium, the average number of new cases from all areas was 1,036, including 758 City cases.

In addition to the 1,226 new cases in 1935, 1,324 cases who had not completed their treatment, were carried over from the previous year. During the year, therefore, 2,550 cases were under treatment.

As the number of cases of early infections has been showing a definite increase within the last few years, especially at the adolescent ages, it was considered advisable to submit the following Report to the Public Health Committee. This Report was approved by the Town Council on 18th May, 1936.

The Incidence of Venereal Diseases within the area of the Joint Venereal Diseases Scheme.

Introduction:

During the last few years, there has been a decided increase in the incidence of Venereal Diseases in the North-eastern area, and I therefore consider it necessary to bring the matter to the notice of the Public Health Committee.

Under the Public Health (Venereal Diseases) Regulations (Scotland) 1916, a Joint Treatment Scheme was, in 1917, inaugurated to serve the North-eastern area of Scotland. The participants were the Local Authorities of the City of Aberdeen and the Counties of Aberdeen, Kincardine, Banff, Moray and Nairn. In 1921 the County of Orkney was included and in 1922 the County of Zetland.

The main Treatment Centre was situated at the Royal Infirmary, Aberdeen. Sub-centres were opened at the City Hospital, Aberdeen, and at Chalmer's Hospital, Banff. In addition, arrangements were made for the treatment of cases from the Burgh of Inverness and from the Counties of Inverness, Ross and Cromarty, Sutherland and Caithness.

The/

The accompanying chart and table indicate the general trend of the occurrence of venereal infections in the area, and also show the incidence in the City of Aberdeen alone. With regard to Aberdeen City, the post-War peak of 1920, with 737 new cases, was followed by a decline continuing until 1923, with 468 new cases; but thereafter, a more or less steadily increasing incidence occurred up to 1935, when there was a total of 880 new cases. An additional 346 cases from other areas within the Scheme brings the total dealt with at the Treatment Centres in Aberdeen to 1226 new cases in 1935.

The figures for Scotland as a whole show a peak figure of 16,743 new cases in 1928-29, the Scheme year then being reckoned from May to May, and a decline to 14,566 in 1933. In 1934 there was a rise to a total of 14,717. Of this increase of 153 cases; 112 were accounted for by the North-eastern area, and 59 cases were from Aberdeen itself. The figures for Scotland for 1935 are not as yet available, but, so far as the Aberdeen Treatment Centres are concerned, there was an increase of 135 new cases, as compared with the year 1934, 90 of whom were from the City of Aberdeen.

While there was an increase in the number of cases of all types of the disease, the greatest, proportionately, was in the case of early syphilis. In 1934 there were 48 such cases from Aberdeen; in 1935 there were 114. Other areas accounted for 24 and 34 cases respectively.

The following three reasons account in some measure for the increase in incidence:-

(1) There is a growing demand for information by lay bodies with regard to the causation of venereal disease, and the public have gradually awakened to the fact that venereal infections rank amongst the foremost of modern medical and sociological problems.

(2) There is an increasing extension of facilities for treatment, especially in connection with the times of attendance suitable for those who cannot attend during ordinary working hours.

(3) The third reason must be accepted that there is an actual increase in the prevalence of the disease. The sudden increase from 48 new cases of early syphilis in 1934 to 114 cases in 1935 cannot be otherwise explained. And the same in all possibility holds good with regard to the increase which has occurred in the number of cases of gonorrhoea.

It is, of course, all to the good that so many cases of early syphilis are coming forward for early treatment, but it cannot be denied that there are many others as yet untreated, including known sources, with which there is, at the present time, no adequate method of dealing. It must be remembered that syphilis above all other diseases is not so much an infection of the individual as of a group of individuals - often eventually the entire family.

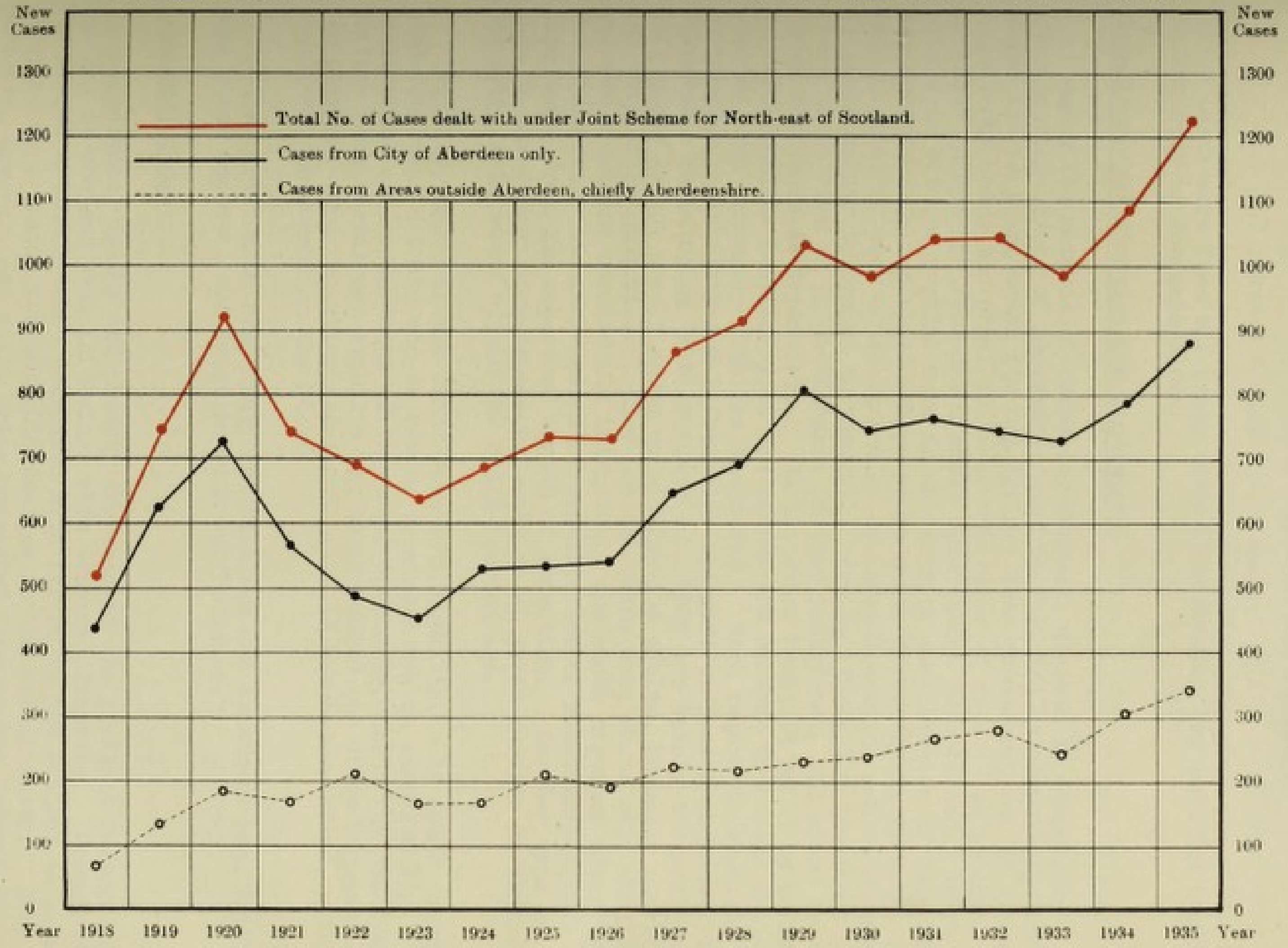
Of the 880 new cases from the City of Aberdeen in 1935, 780 were actually venereally infected; the remaining 100 - though exposed to the risk of infection - were ultimately diagnosed as being non-venereal. The actual incidence, however, must be considerably greater than 780. There are, for example, those who were treated privately and probably a still greater number who have not been treated at all.

Change in Age Incidence:

A disquieting feature is the lowering of the age at which venereal disease is being contracted, as distinct from infantile or juvenile cases in whom infection is accidental or hereditary. A few years ago any case of acquired infection under the age of 18 years was regarded as somewhat of a rarity. In 1935, there were 18 cases of venereal disease acquired/

VENEREAL DISEASES.

Yearly Numbers of New Cases at Aberdeen Royal Infirmary and City Hospital Treatment Centres.



acquired by sexual connection in individuals of 17 years or under, the age distribution being as follows:-

17 years - 5 cases - 4 male and 1 female.

16 years - 5 cases - 2 male and 3 female.

15 years - 7 cases - 5 male and 2 female.

13 years - 1 case - female.

These cases were from all areas within the Scheme, and were not confined to the City of Aberdeen alone.

Compulsory Notification and Treatment:

Among the methods of combating venereal disease is compulsory notification which, of necessity, must be followed by compulsory treatment. There are many arguments for and against this procedure, one of the main objections being the possibility or otherwise of cure. As in other diseases, there are some cases where cure cannot be obtained; there are others in which a partial cure in the form of amelioration of symptoms may be effected, and still others where cure, particularly from the Public Health point of view of amelioration of infectiousness, can be ensured. It seems unfair to compel an incurable case to attend for treatment if there is no risk of infectiousness in that individual, and where it is known that cure is impossible. On the other hand, it would be unfair to differentiate between types and compel the curable to attend while dealing more leniently with the incurable. With regard to syphilis in particular, curability and infectivity are more or less synonymous, the infectious cases being usually curable. They are mainly the early and infectious types, mostly young or middle-aged adults, sexually active and very often unmarried. They are the cases who, above all, should receive treatment carried out intensively and under rigorous supervision. The old chronic incurable cases of syphilis are of relatively little importance from the aspect of spread of infection. Another type of case in whom compulsory treatment would be of great service is that of the syphilitic woman within the child-bearing age.

Finally, there is the child born with syphilis. It seems entirely anomalous that a child who is merely verminous may be compulsorily disinfested at the instance of the Local Authority, while the child who suffers from hereditary syphilis may be prevented (as often happens) by the parents, from receiving treatment until it has become blind, with resultant dependence on the State.

The question of compulsory notification and treatment has, however, many other aspects, and bristles with difficulties.

Recommendations:

Ignorance, apathy and prudery are amongst the greatest factors that one has to contend with in dealing with venereal diseases. Fortunately, the almost national taboo exercised with regard to the subject is being overcome by a desire for enlightenment as to the actual facts. Many patients, however, are still being prevented from coming forward for treatment on account of popular stigma, a stigma which consigns all venereally infected individuals, whether they may be guilty or not of a breach of our social codes, to the same social category of moral outcasts. Until the stigma of the venereal infection is removed and until public opinion comes to regard those afflicted with such diseases as cases of infectious disease instead of as moral lepers, no great advance will be made.

In my opinion, the time is now opportune to embark on an intensive campaign of propaganda, not only for the benefit of adults, but also of those/

those approaching adult life; to the latter, the need for knowledge of the dangers of venereal disease is even greater. There is no reason for undue alarm, but the earlier warning is given, the earlier it may be acted upon, with consequent lessening of permanent risk to health.

The most useful type of instruction is that given in the form of popular lectures, with, or even without cinematograph aid. At such lectures, it is important that the audience should be invited to ask questions regarding any point about which they may be in doubt. At these lectures, separation of the sexes is advisable in persons under 20 years of age, but, beyond that age, there appears to be no objection to having mixed audiences.

I recommend that, during the coming winter, a series of lectures be conducted for (1) adults over 20 years of age; (2) male adolescents from 16 to 20 years; and (3) female adolescents from 16 to 20 years. The lectures would be under the direct supervision of Dr. F.J.T. Bowie, Chief Venereal Diseases Officer for the Joint Venereal Diseases Scheme. Dr. Bowie would be assisted by several medical members of the Public Health Department, and I consider it advisable that the general practitioners should be invited to co-operate in giving lectures on the basis of a definite fee per lecture. Propaganda of this nature will entail the hire of halls, with attendant expenses. If this scheme of lectures is commenced in, say, October next and continued intensively from October till December, expenditure would be incurred in respect of the hire of halls and payment to medical practitioners, but, until the scheme is definitely outlined, it is impossible to give any accurate estimate of expenditure.

From a health point of view, I strongly recommend that the Committee adopt this suggested course of public lectures.

In connection with these lectures, assistance would be asked from the British Social Hygiene Council, which, no doubt, will give the loan of cinematograph films free of charge.

If this scheme is adopted by the Council, it will, I am assured, receive the support of the Youth Organisations within the City, and it will necessarily follow that action on similar lines will be advocated in the other areas covered by the Joint Venereal Diseases Scheme.

(Signed) HARRY J. RAE.
Medical Officer
of Health.

Incidence of Venereal Diseases in City of Aberdeen and in Other Areas: Years 1918-1935.

Year.	Total No. of Cases.	Aberdeen City.	Other Areas.
1918	516	445	71
1919	757	621	136
1920	919	737	182
1921	744	572	172
1922	699	491	208
1923	634	468	166
1924	693	528	165
1925	738	534	204
1926	737	542	195
1927	872	649	223
1928	910	693	217
1929	1037	802	235
1930	986	745	241
1931	1040	769	271
1932	1042	754	288
1933	979	731	248
1934	1091	790	301
1935	1226	880	346

VENEREAL DISEASES SERVICES.

JOINT SCHEME FOR TREATMENT OF VENEREAL DISEASES IN CITY OF ABERDEEN AND NORTH-EASTERN COUNTIES.

Treatment Centres at Aberdeen Royal Infirmary and City Hospital.

TABLE XIV. - NUMBER OF NEW CASES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre.	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M	F	M	F	M	F	M	F	M	F
A.	1935	Royal Infirmary	916	183	53	358	55	11	-	105	41	83	27
		City Hospital...	310	38	22	123	38	9	-	31	17	19	13
		Both Centres ...	1226	221	75	481	93	20	-	136	58	102	40
	Average 1930-34	do.	1036	143	87	438	81	14	-	63	31	111	68
B.	1935	Royal Infirmary	622	129	41	226	36	4	-	81	30	52	23
		City Hospital...	258	27	21	106	28	8	-	25	28	15	10
		Both Centres ...	880	156	62	332	64	12	-	106	58	67	33
	Average 1930-34	do.	758	97	62	325	63	10	-	49	22	80	50

VENEREAL DISEASES SERVICES.

TABLE XV. - - ATTENDANCES AT TREATMENT CENTRES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre.	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M	F	M	F	M	F	M	F	M	F
A.	1935	Royal Infirmary.	41,509	8,573	5,738	17,900	5,405	55	-	443	2,999	142	254
		City Hospital...	13,824	1,516	910	9,623	1,528	19	1	70	110	22	25
		Both Centres ...	55,333	10,089	6,648	27,523	6,933	74	1	513	3,109	164	279
	Average 1930-34	do.	47,085	8,142	6,421	24,246	5,935	67	0	765	983	225	301
B.	1935	Royal Infirmary.	35,179	6,677	4,240	16,436	4,674	26	0	382	2,437	74	233
		City Hospital ...	13,066	1,433	860	9,095	1,444	18	1	66	104	21	24
		Both Centres ...	48,245	8,110	5,100	25,531	6,118	44	1	448	2,541	95	257
	Average 1930-34	do.	41,070	6,328	4,936	22,187	5,532	57	0	679	902	182	267

VENEREAL DISEASES SERVICES.

TABLE XVI.- IN-PATIENT CASES.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Treatment Centre	Total.	Syphilis.		Gonorrhoea.		Soft Chancre.		N.S.V.D.		Conditions other than Venereal.	
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.	1935.	Royal Infirmary.	89	20	16	31	14	-	-	2	2	3	1
		City Hospital...	23	1	2	14	6	-	-	-	-	-	-
		Both Centres ...	112	21	18	45	20	-	-	2	2	3	1
	Average 1930-34	do.	131	36	24	42	20	1	-	2	4	1	1
B.	1935.	Royal Infirmary.	28	5	9	10	1	-	-	1	-	1	1
		City Hospital...	11	-	2	7	2	-	-	-	-	-	-
		Both Centres ...	39	5	11	17	3	-	-	1	-	1	1
	Average 1930-34	do.	59	16	11	16	11	1	-	1	2	-	1

VENEREAL DISEASES SERVICES.

TABLE XVII--LABORATORY EXAMINATIONS.

(A) From All Areas. (B) From City of Aberdeen.

Area.	Year.	Laboratory.	Total Exams.	Wassermann.		Spirochete.		Gonococcus.	
				Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
A.	1935.	x Royal Infirmary. City Hospital.)	16,519	2,177	9,607	65	77	1,127	3,466
	Average 1930-34	do.	17,386	2,512	9,610	18	59	885	4,302
B.	1935.	x Royal Infirmary. City Hospital.)	14,407	1,796	8,882	58	66	877	2,728
	Average 1930-34	do.	14,831	1,996	8,421	12	53	745	3,604

x Serological and bacteriological services transferred to City Hospital during 1935.

Attendances for Treatment.

As will be seen from Table XV. the total number of attendances of cases from all areas at both Centres during 1935 was 55,333, as against an average of 47,085 in the preceding quinquennium.

For the City of Aberdeen, there were 48,245 attendances during 1935, being 7,175 more than the average for the quinquennium 1930-1934.

In-Patients.

Table XVI. shows the number of cases dealt with in hospital.

During the year, 112 cases from all areas were admitted for in-patient treatment, 89 being admitted to the Royal Infirmary and 23 to the City Hospital. The average number admitted during the 1930-1934 quinquennium was 131.

A total of 39 cases was admitted from the City - 28 to the Royal Infirmary and 11 to the City Hospital. The average number admitted during the preceding quinquennium was 59.

The reason for the smaller number of admissions in 1935 as compared with the preceding quinquennium is that in the year under review the period of stay in hospital was longer than in preceding years.

Laboratory Examinations.

During 1935, the serological and bacteriological services carried on under the Joint Scheme at the Royal Infirmary were transferred to the City Hospital.

From Table XVII. it will be seen that 16,519 examinations were carried out during 1935, including 14,407 for the City of Aberdeen.

The bodies of 28 still-born children, or children who had died soon after birth, were examined for spirochetes. None proved to be syphilitic.

Ophthalmia Neonatorum.

A total of 96 cases was reported during 1935. The average annual number during the preceding ten years was 63.

BLIND PERSONS SERVICES.

In terms of Section 2 (1) of the Blind Persons Act, 1920, a Scheme was drawn up by the Town Council and approved by the Department of Health on 31st January, 1935. The functions of the Council under the Blind Persons Act, 1920 (other than those relating to technical education) are, subject to the provisions of the Administrative Scheme under the Local Government (Scotland) Act, 1929, made by the Council, carried out by the Public Health Committee of the Council.

In this connection, the following Statement, with particulars relating to the year ended 31st March, 1936, shows the arrangements made in terms of the approved Scheme.

Children below five years of age.

In the case of any such children whose natural guardians are incapable of properly undertaking their care, the Council has agreed to arrange, where necessary or desirable, for their admission to the Royal Blind Asylum and School, Edinburgh, or other similar Institution, on terms to be arranged with the Institution, or for their boarding out with suitable guardians.

There were no certified blind children in this age group at 31st March, 1936.

Maintenance during Technical Education.

The Council has arranged to pay a maintenance allowance of 15s. to 25s. per week in respect of each blind person undergoing a course of technical education at the Aberdeen Asylum for the Blind (hereinafter referred to as "the Asylum").

At 31st March, 1936, 14 persons - 7 males and 7 females - were receiving assistance towards their maintenance during the period of technical training; 13 in the Aberdeen Blind Asylum and 1 at the Royal Blind Asylum, Edinburgh.

Workshop Employment.

The Council has arranged to make a contribution of £40 per annum to the Asylum in respect of each trained blind person employed in the workshops of the Institution, and has arranged to pay £20 per annum in respect of each pensioner formerly employed at the Asylum. These rates will be subject to annual review either in the months of April or May, after consultation with the Asylum.

The number of persons employed in the Blind Asylum Workshops was 57 - 41 males and 16 females.

The occupations of the blind persons employed in the Workshops were as follows:-

Occupation.	Male.	Female.	Total.
Basket Makers	9	4	13
Brush Makers	5	4	9
Knitters and Sewers ...	-	1	1
Labourers	7	-	7
Machinists	-	4	4
Mat Makers	4	-	4
Mattress Makers	7	1	8
Quilt Makers	-	1	1
Rope, Twine & Net Makers.	4	-	4
Upholsterers	1	-	1
Wire Workers	3	-	3
Miscellaneous	1x	1x	2
Total...	41	16	57

x Male = Collector; female = Shorthand Typist.

The number of pensioners formerly employed at the Asylum was 11 - 7 males and 4 females.

Home Workers.

The Council has arranged for the employment of approved blind persons under the Scheme of Assistance to Home Workers approved by the Council and carried on by the Aberdeen Town and County Association for Teaching the Blind at their Homes (hereinafter referred to as "the Association"), and has agreed to make a contribution to the Association at a rate of £8 per annum in respect of each blind person so employed.

Of the 8 persons employed outwith the Blind Asylum, 3 were employed under the Home Workers' Scheme. The occupations are as follows:-

	Male.	Female.
Basket Maker	1 (HW)	-
Hawkers	2	-
Masseur	1	-
Piano Tuner	1 (HW)	-
Pianist,etc.	1 (HW)	1
Teacher (Home)	1	-
	7	1

Profession /

Profession or Business.

The Council has agreed to grant assistance to approved blind persons towards setting them up in a profession or business, the amount of such assistance to be determined according to the special circumstances in each case, by agreement, or after consultation with the Asylum or Association.

No application for assistance was received during the year under review.

Home Teaching, etc.

The Council has arranged with the Association for the care and assistance of blind persons outwith Institutions for the Blind, including the provision of home teaching, instruction in simple occupations, and visitations In respect of the provision of these services, the Council has agreed to make a contribution to the Association not exceeding £1. 8s. per head of the blind persons on the roll of the Association ordinarily resident in the burgh. This rate will be reviewed annually.

This contribution is made on condition that no person shall be employed as a home teacher unless he or she has gained, or gains within two years of the date of his or her appointment, the Home Teaching Certificate of the College of Teachers of the Blind.

The number of blind persons on the roll of the Association at 31st March, 1936 was 195.

Registration.

The Council has set up and will maintain a register of blind persons ordinarily resident in the burgh.

Register of the Blind as at 31st March, 1936.

Numbers according to Different Age Groups of all Blind Persons on the Register.

0-4		5-15		16-17		18-39		40-49		50-69		70+		Total		
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total
-	-	4	-	3	-	32	36	23	10	58	61	23	36	143	143	286

Certification.

The Council has set up a clinic for the examination of all persons from the burgh claiming to be blind.

During the year ended 31st March, 1936, 31 persons belonging to the City were examined at the Blind Persons Clinic or at their own homes. Of the 31, 18 were certified blind and 13 were found to be not blind. In addition, 29 persons were re-examined.

National Services.

(1) Printing of Music and Literature.

The Council has agreed to make a contribution of £11:10.6. per annum to the Royal Blind Asylum, Edinburgh.

(2) Home Teachers' Examination.

The Council has agreed to make a contribution to the College of Teachers of the Blind, London, of 10s. in respect of each person in the burgh making application to undergo the Home Teachers' Examination of the College.

(3)/

(3) Circulation of Music and Literature.

The Council has agreed to make an annual grant of not less than £5 to the National Library for the Blind, London.

Domiciliary Assistance to Necessitous Blind Persons.

Procedure as to Applications and Payments.

1. Applications for assistance shall be made to the Medical Officer of Health, who shall cause investigation to be made as to the circumstances of the applicant and report to the Public Health Committee. If the granting of assistance is approved by that Committee and the Town Council, the appropriate payments shall be made by the City Chamberlain weekly, or at other intervals, if specially instructed, in particular cases.

Conditions of Domiciliary Assistance.

2. The foregoing assistance shall be given subject to the following conditions:-

(a) The applicant shall be certified as blind under the arrangements made for the certification of blind persons, in terms of the Council's Scheme for the Administration of the Blind Persons Act, 1920.

(b) The applicant shall have ordinarily resided in the City for a period of at least three years prior to the date of application for assistance; provided that, where the applicant has not been ordinarily resident in the City for three years, he shall be granted such assistance within the scale set forth in paragraph 5 as the Committee and the Council may decide, having regard to the circumstances of the case.

(c) The applicant being trainable or employable, shall not have refused training or employment when offered to him or her.

(d) The applicant shall not appeal for alms, nor beg, nor act as a street musician in the City or elsewhere while in receipt of a grant.

(e) The applicant shall, if and when required -

- (i) Undergo a course of technical education.
- (ii) Undergo re-examination of eyesight.
- (iii) Accept ophthalmic treatment which may lead to improved vision.

(f) The applicant shall give all such information as to his or her means as may be required from time to time by the Medical Officer of Health.

Calculation of Existing Means.

3. The method to be followed in calculating the value of existing means in connection with this Scheme shall generally be that adopted in the award of pensions under the Old Age Pensions Acts.

Periodical Review of Cases.

4. All cases assisted under these arrangements shall be subjected to a detailed review at regular intervals of about six months.

Amount of Allowances.

5. The payment by the Town Council to necessitous blind persons shall be such sum per week as may be necessary to provide minimum total subsistence as follows:-

(1)/

(1) Single persons, 21 years of age and over, living alone or in lodgings	£1. 5. 0.
(2) Blind couple, married before the date of Scheme coming into operation	2. 0. 0.
(3) Blind couple, married after the date of Scheme coming into operation - Allowances to be at Committee's discretion.	
(4) Blind wife of sighted man...	0. 12. 0.
(5) Blind husband with sighted wife...	1. 16. 0.
(6) Single blind person living with parents and unfit for training or employment -	
Age 16-18	0. 15. 0.
Age 18 and over	1. 0. 0.

At 31st March, 1936, 99 persons were in receipt of domiciliary assistance, and are summarised as follows:-

Males:- married - 23; single or widowed - 16.

Females:- married - 11; single or widowed - 49.

With regard to medical attendance, the Council instructed the Medical Officer of Health to appoint a general practitioner, at a modified annual fee, to attend necessitous blind persons. It was explained that a similar arrangement had been in operation for several years in connection with trainees at the Aberdeen Asylum for the Blind.

Arrangements were made whereby medicines should be supplied on special prescription forms and that these prescriptions should be sent to the Central Checking Bureau for the purpose of pricing, as is the case with prescriptions for tuberculosis patients.

Aged and Infirm Blind.

The Council has agreed to make provision, where the need arises, for the care and assistance of aged or infirm blind persons by boarding them out with suitable guardians, in residential homes for the blind, or otherwise.

Arrangements with Institutions.

In their arrangements with the Institutions referred to herein, the Council has laid down the following conditions:-

(1) That the audited accounts of the Institutions shall be annually submitted to it.

(2) That the Institutions shall not undertake any new scheme or extend in any way their operations so as to affect the financial arrangements between the Council and the Institutions without first obtaining the consent of the Council.

(3) That the Institutions shall accept the procedure laid down in paragraph 11 of the Council's Approved Scheme under Section 2 (1) of the Blind Persons Act, 1920, for the settlement of disputes, etc.

(4) That the Council is satisfied with the management of the Institutions.

The foregoing arrangements may be altered from time to time by the Council, with the approval of the Department of Health for Scotland.

MENTAL HEALTH SERVICES.

Kingseat Mental Hospital.

Under the provisions of the Local Government (Scotland) Act,1929, the administration of the Kingseat Mental Hospital was transferred to the Public Health Committee of the Town Council.

On 31st December, 1935, there were on the Register of Certified Patients 386 male and 310 female inmates, a total of 696, being an increase of 20 males and a decrease of 10 females as compared with the corresponding figures for the previous year, viz., 366 males and 320 females. Of these 696 patients, 25 were private (Service) patients, the cost of whose maintenance and treatment is met by the Ministry of Pensions. At the end of 1935 there were 21 Voluntary Patients in residence - 2 less than in 1934.

Table XVIII. shows the admissions, re-admissions, discharges and deaths of Certified Patients during the year ended 31st December, 1935. In Table XIX. information is given as to the admissions, re-admissions, discharges and deaths of Certified Patients from the date of the opening of the Hospital, 16th May, 1904, until the end of 1935.

Admissions. A total of 114 patients was admitted under certificate - 53 males and 61 females. The following statement shows the types of Mental Disorder in the admissions of Certified Patients during the year:-

Form of Mental Disorder	Admissions		
	M	F	TOTAL.
Idiocy or Imbecility -			
(a) With Epilepsy	-	-	-
(b) Without Epilepsy	-	-	-
(c) Moral	-	-	-
Insanity occurring in later life.			
1. Epileptic Insanity	1	2	3
2. General Paralysis	2	2	4
3. Infect.Exhaustion Psychosis	8	9	17
4. Mania -			
(a) Simple	5	4	9
(b) Acute	3	3	6
(c) Chronic	-	-	-
5. Melancholia -			
(a) Simple	1	1	2
(b) Acute	6	7	13
(c) Chronic	-	1	1
6. Alternating Insanity	-	-	-
7. Paranoia	2	2	4
8. Dementia -			
(a) Praecox	14	10	24
(b) Senile	2	8	10
(c) Organic	4	3	7
(d) Alcoholic	-	-	-
9. Paraphrenia	5	9	14
10. Not Insane	-	-	-
	53	61	114

Fourteen of these cases had at some previous date been inmates either/

either of this or of another mental hospital. In 17 cases heredity was a predisposing cause of the mental disorder. In 12 patients congenital mental deficiency was present, together with some form of psychosis. Alcohol was the causal factor in 10 patients. As is generally the case, the physical state of many of the patients admitted was indifferent, very few being in average good health.

Discharges. A total of 52 patients was discharged. Of these, 34 recovered - 13 males and 21 females - giving a recovery rate - calculated on the number of admissions for the year - of 29.8 per cent. Eighteen patients were discharged unrecovered, 6 of whom were relieved and 12 not improved.

Deaths. A total of 52 Certified Patients died, giving a percentage of 7.5 on the average number resident during the year. This rate is similar to the average death-rate in the Scottish Mental Hospitals during the past year. The causes of the 52 deaths were as follows:-

Diseases of the Heart and Blood Vessels	25
Pulmonary Tuberculosis	4
General Paralysis of the Insane..	6
Exhaustion from Acute Psychosis..	3
Carcinoma of Uterus, Colon, Pylorus - 1 each. ...	3
Ulcerative Enteritis	2
Influenza	2
Tubercular Peritonitis, Acute Appendicitis, Infarction of Bowel, Acute Lobar Pneumonia, Septicaemia, Diabetes, Chronic Interstitial Nephritis - 1 each	7
	52

Voluntary Patients. During the year, 13 voluntary patients were admitted; 14 were discharged, of whom 10 were either recovered or relieved and 4 were not improved. One voluntary patient died.

Service Patients. As already stated, the Service Patients during the year numbered 25. In the month of October the hospital was visited by Dr. R. Cunyngham Brown, a Medical Officer of the Ministry of Pensions. He reported very favourably on the care and treatment of these patients.

The usual lectures and demonstrations were given by the matrons and medical staff.

At the Preliminary Examination of the Royal Medico-Psychological Association for proficiency in mental nursing, 5 nurses passed; 3 attendants and 6 nurses passed the Final Examination of this Association.

The statutory visits to Kingseat Mental Hospital by H.M. Commissioners of the General Board of Control were made by Dr. W.N.J. Chapman on 11th and 12th June, and by Dr. Aidon G.W. Thomson on 10th, 11th and 15th October.

TABLE XVIII/

TABLE XVIII. - KINGSEAT MENTAL HOSPITAL.

Admissions, Re-Admissions, Discharges and Deaths of Certified Patients during the year ending 31st December, 1935.

	M.	F.	T.	M.	F.	T.
In the Hospital, 31st December, 1934	365	320	685			
Absent on Probation	1	...	1			
Absent on Pass	...	...	...			
Total on Register				366	320	686
Cases Admitted -						
First admissions	43	57	100			
Not first admissions	10	4	14			
Total cases admitted during the year				53	61	114
Total cases under care during the year				419	381	800
Cases Discharged -						
Recovered	13	21	34			
Relieved	2	4	6			
Not Improved	–	12	12			
Died	18	34	52			
Total Cases discharged and died during the year				33	71	104
Remaining in the Hospital, 31st December, 1935	384	310	694			
Absent on Probation	2	...	2			
Absent on Pass	...	...	...			
Total on Register				386	310	696
Average daily number on Register during the year				373	315	688
*Persons under care during year. ...				...	...	...
Persons admitted				53	61	114
Persons recovered				13	21	34
Transferred to other asylums... ...				1	12	13
Transferred from other asylums. ...				8	7	15

* Persons, i.e., separate persons, in contradistinction to cases, which may include the same individual more than once.

TABLE XIX. - KINGSEAT MENTAL HOSPITAL.

Admissions, Re-Admissions, Discharges and Deaths of Certified Patients from the opening of the Hospital, 16th May, 1904 to 31st December, 1935.

	M.	F.	T.	M.	F.	T.
Persons admitted during period from 16th May, 1904 to 31st December, 1935.	1716	1604	3320			
Re-Admissions	285	334	619			
Total Cases admitted.. ...				2001	1938	3939
Discharged Cases -						
Recovered	603	645	1248			
Relieved	225	196	421			
Not Improved	40	43	83			
Died	747	744	1491			
Total cases discharged and died since the opening of the Hospital				1615	1628	3243
Remaining on 31st December, 1935.				386	310	696
Average number on register during the period				284	269	553
Cases transferred from other asylums				342	332	674
Cases transferred to other asylums				97	79	176

PORT SANITARY SERVICES.

Trade and Shipping.

The total foreign and coastwise shipping entering the Port during 1935 was 25,541 vessels, of which 1,456 were foreign. The total tonnage of all vessels was 2,645,614, of which 365,360 was foreign.

Medical Inspection of Shipping.

The amount of shipping entering the Port during the year, differentiated as between foreign and coastwise, together with the number of ships inspected and the nature of the defects and the number of notices issued in connection therewith, are set forth in the following table:-

		Number of Vessels	Tonnage of Vessels	Number Inspected		Number Reported to be Defective	Number of Notices Issued.
				By the Medical Officer of Health.	By the Sanitary Inspector		
Foreign	Trading	334	282,140	12	245	241	4
	Fishing	1,122	83,220	-	6	6	-
Total Foreign		1,456	365,360	12	251	247	4
Coastwise	Trading	2,222	689,781	-	32	29	3
	Fishing	21,863	1,590,473	-	315	208	-
Total Coastwise		24,085	2,280,254	-	347	237	3
Total Foreign and Coastwise		25,541	2,645,614	12	598	484	7

It will be seen that of the 24,035 vessels entering the Port, 22,985 were fishing vessels.

Three seamen, 1 suffering from scabies, 1 from pneumonia and 1 from tuberculosis, were admitted to the Municipal Hospitals for treatment in 1935; the necessary disinfection was carried out in each case.

Rat Destruction: Precautions against Plague and Infective Jaundice.

Trapping of rats within the area of the Harbour Commissioners is regularly carried out, and the rats are submitted to laboratory examination for plague and infective jaundice. In all, 63 rats were thus examined during 1935. Nine rats showed the presence of L. icterohaemorrhagiae.

The following measure of work on rat destruction carried out by the two whole-time rat-catchers of the Health Department is submitted:-

Number of pieces of poison bait laid ...	149,349
Number of pieces of poison bait eaten ...	35,140
Dry poison bait (mice) laid	500 pieces.
Dry poison bait (mice) eaten	20 "

In addition, liquid poison in the form of red squill, was sold by the Health Department to occupiers of business premises and dwelling-houses within the City. The quantity sold amounted to fully 18 gallons, sufficient for the making up of 35,620 baits.

No ships arrived in Aberdeen from plague-infected ports.

Under the Public Health (Deratisation of Ships) Regulations (Scotland), 1929, 145 ships were inspected during the year, and 9 Deratisation Exemption Certificates were issued.

LABORATORY SERVICES.

The aim of the Department is to provide laboratory facilities for the prevention, diagnosis and treatment of disease.

At the end of 1935, all examinations in connection with venereal disease were transferred to the City Hospital laboratory. The majority of these examinations was formerly carried out at the Royal Infirmary.

The following statement gives in detail the number and results of examinations for the City of Aberdeen (including City Hospital and Woodend Hospital) during the year 1935.

	Positive.	Negative.	Total	Grand Total.
Diphtheria:				
Throat, nose and ear swabs	1,543	14,769	16,312	16,312
Tuberculosis:				
Sputum	961	1,967	2,928	
Pus	8	60	68	
Faeces	0	26	26	
Urines	0	120	120	
Cerebro-spinal fluids	17	100	117	
Pleural fluids	2	26	28	3,287
Typhoid Fever:				
Blood cultures	58	123	181	
Widals	41	214	255	
Faeces	44	99	143	
Urines	2	76	78	657
Paratyphoid Fever A, B and C:				
Blood cultures	16	31	47	
Widals	24	659	683	
Faeces	75	121	196	
Urines	5	101	106	1,032
Bacillary Dysentery:				
Faeces	173	819	992	992
Food Poisoning:				
Blood cultures	1	7	8	
Blood agglutinations	4	2	6	
Faeces	21	13	34	
Urines	0	4	4	
Food stuffs	0	2	2	54
Puerperal Fever:				
Blood cultures	45	201	246	
Pus	191	20	211	457
Undulant Fever:				
Blood cultures	0	2	2	
Blood agglutinations	3	230	233	
Faeces	0	1	1	236
Venereal Diseases:				
Wassermann Reactions	492	2,784	3,276	
Kahn Tests	503	2,646	3,149	
Gonococcal smears	475	1,731	2,206	
Spirochaetes	16	21	37	8,668

Carry forward.. 31,695.

	Positive.	Negative.	Total.	Grand Total.
Brought forward...				31,695
Biochemical Examinations:				
Blood sugar			248	
Blood urea			286	
Urine sugar			292	
Urine urea			49	
Faeces for blood			52	
Van den Bergh test			28	
Blood Cholesterol			4	
Test meals			82	
Urine for bile			26	
Blood for icteric index			29	
Miscellaneous			6	1,102
Chemical Examinations:				
Paint samples			6	
Miscellaneous			1	7
Water, Food and Drug Samples:				
Bacteriological examination of waters			257	
Chemical examination of waters			5	
Swimming bath waters			102	
Bacteriological examination of milks			76	
All samples analysed under the Sale of Food & Drugs Acts			1,266	1,706
L. icterohaemorrhagiae:				
Blood agglutinations	7	22	29	
Urines	0	4	4	
Cerebro-spinal fluids	0	1	1	34
General:				
Blood counts			584	
Differential cell counts			560	
Blood cultures (various)			484	
Faeces for organisms			5	
Faeces for protozoa			26	
Malaria	2	12	14	
Histological specimens			88	
Ophthalmia neonatorum	14	239	253	
Sputum for organisms			205	
Pus and fluids for organisms			700	
Throat, nose and ear swabs for organisms			1,670	
Eye swabs for organisms			139	
Teeth for organisms			10	
Cerebro-spinal fluids(other than tuberculosis)			190	
Urines for bacteriological examination			421	
Urines for pathological examination			3,459	
Vaccines			108	
Pleural fluids (not tuberculosis)			5	
Autopsies			28	
Blood grouping			32	
Animal specimens			3	
Urines for lead			1	
Miscellaneous			6	8,991
Carry forward..				43,535.

Animal /

	Positive.	Negative.	Total.	Grand Total.
Brought forward ...				43,535
Animal Inoculation:				
Guinea pigs inoculated with milk deposit for tubercle bacilli			95	
Guinea pigs inoculated with human material for tubercle bacilli			85	
Guinea pigs inoculated with human material for L.icterohaemorrhagiae			82	
Guinea pigs inoculated with animal emulsions for L.icterohaemorrhagiae			107	
Guinea pigs inoculated with material from throat or nose for diphtheria virulence test			38	
Mice inoculated with sputum for typing of pneumococci			300	
Rabbits inoculated with urine for Friedmann test			2	
Mice inoculated with pus for B.tetani			1	710
				44,245
In addition to the above examinations for the City of Aberdeen, 20,274 examinations were carried out for the North-Eastern Counties within the Laboratory Services Scheme.				20,274
Total number of examinations for 1935				64,519

VETERINARY SERVICES.

The activities of the Health Department that are subject for discussion under the above heading relate mainly to the control of food supplies at the four private slaughterhouses situated within the Burgh, and to the administration of the Diseases of Animals Acts and Orders and the inspection of dairies and cow sheds under the Milk and Dairies (Scotland) Act, 1914.

The bulk of the work under the Diseases of Animals Acts consists of the supervision of the animals landing from Ireland. These have to be examined on arrival at the Marts in order to see that they are free from disease and they are kept in the parts of the Marts specially set apart for the purpose. Licences have to be issued for their movement and those remaining unsold have to be detained in the Burgh in specially licensed buildings and fields until a specified time has elapsed. Weekly visits have to be made to these fields in order to see that the owners of the animals are not attempting to avoid keeping the animals the specified time. Frequent visits have also to be made to the railway sidings and lairages attached to the boats carrying livestock and visits have also to be made periodically to the licensed piggeries in the City in order to see that the pig-keepers comply with orders relating to the boiling of foodstuffs.

MILK CONTROL.

Milk and Dairies (Scotland) Act, 1914.

No administrative difficulties in the operation of this Act were encountered during the year. Owing to the extension of the boundary in May of this year, the number of registered producing dairies within the City/

City is now twenty-two - an increase of seventeen as compared with last year.

Inspection of Cows and Dairy Premises.

The average number of cows kept in the dairy premises now within the City boundary was 404. The premises were visited and the cows examined quarterly. The animals in all the dairies were in very good condition and well cared for. Hygienic conditions were very satisfactory and the premises were suitable and maintained in a satisfactory condition. All the new dairies were exceptionally satisfactory both with regard to the condition and class of cow kept and the sanitary condition of the premises.

Eleven cases of sub-acute mastitis were dealt with, the animals affected being removed temporarily from the herd until they could be pronounced cured. Samples of milk were taken from three cases of suspected tuberculous mastitis but they proved negative on biological examination. The milk from the affected cows was discarded until proved negative. One case of tuberculous emaciation was found and dealt with under the Tuberculosis Order.

Bulk Sampling.

The wholesale dairies were visited regularly during the year and bulk samples of milk were taken at the milk depots as the consignments arrived from the farms. Two hundred and forty-two samples were examined biologically and of these thirty-three were found to be positive for the tubercle bacillus. This gives a percentage of 13.2 positive samples which is a heavy infection and indicates that more frequent inspections of the dairy herds in Aberdeenshire and Kincardineshire are necessary in order that cows giving tubercle bacilli in milk may be detected and slaughtered at an early date. It is now possible to examine herds three times annually but even more frequent visits will have to be paid before satisfactory results can be obtained. Bulk sampling of milk alone is not entirely satisfactory, but if used rather as a supplement to individual inspection of cows, it can act as a very excellent control.

Inspection of Cattle in Markets.

The Auction Marts were inspected regularly each week and all the cows exposed for sale were examined. Since regular inspection has been carried out, the type of cow sold in the markets in Aberdeen has, on the whole, been very satisfactory and any cows found to be unfit for transport are ordered to be slaughtered locally.

Bovine Tuberculosis.

On clinical examination of the dairy herds one case of tuberculous emaciation was found and the cow was condemned and dealt with under the Tuberculosis Order of 1925.

No action was necessary under Sections 13 and 14 of the Milk and Dairies (Scotland) Act, 1914.

No animal was tested with tuberculin.

Certified Milk.

No licences have been issued for the production of Certified or Grade A (T.T.) Milk. During the year, 15 firms of milk retailers had their licences to retail Certified Milk renewed.

Pasteurised Milk.

The Northern Co-operative Society, Limited, were licensed to pasteurise milk in their premises at Berryden Road and to sell pasteurised milk in 33 branch shops belonging to the Society. A renewal licence was/

was also granted to the Aberdeen and District Milk Agency, Limited, to pasteurise milk in their premises at Lilybank, Kittybrewster. Eighteen applications for renewal were also received from other retailers. The applications were granted for the year.

The pasteurising plants on both licensed premises were regularly inspected and samples of milk were taken monthly for bacteriological examination. No samples containing tubercle bacilli were found.

INSPECTION OF MEAT.

Fat Stock Markets.

Regular examination of cattle exposed at the various markets was carried out as formerly, particular attention being paid to fat cows. A number of these so-called fat cows were detained for local slaughter on account of injury and disease. The disease for which the animals were detained for local slaughter was chiefly tuberculosis. No animals, other than cows, were detained for local slaughter.

Slaughterhouses.

There are four private slaughterhouses in operation within the Burgh; two of these belong to the Flesher Incorporation. As has been pointed out in previous Reports, it is extremely difficult to secure adequate inspection of meat in four widely separated slaughterhouses.

The number and class of animals killed in slaughterhouses during the year were as follows:-

Cattle.					Sheep.			Other Animals.
Oxen	Heifers	Cows	Bulls	Calves	Sheep	Lambs	Pigs.	
35,029	28,705	770	78	72	140,173	2,574	6,389	7

The following table gives the number of carcases inspected and the weight of meat seized as unfit for human food in these slaughterhouses during the year:-

	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs
Number of carcases inspected	*	78	770	*	72	*	6,389
Number of carcases seized wholly -							
(1) For Tuberculosis ...	47	1	80	80	2	-	30
(2) For other diseases...	14	-	30	4	2	35	21
Number of carcases of which portions were seized -							
(1) For Tuberculosis ...	181	4	53	203	-	-	137
(2) For other diseases...	22	2	60	7	-	3	35
Total weight of meat seized	81,742 lbs.	1,673 lbs.	76,530 lbs.	92,037 lbs.	627 lbs.	1,564 lbs.	7,597 lbs.

* Accurate figures as to the number of oxen, heifer and sheep carcases inspected are not available. Every ox, heifer or sheep carcase showing evidence of disease is, of course, thoroughly examined, and all carcases of bulls, cows, calves and pigs are inspected.

Particulars/

Particulars are given below regarding the carcases seized wholly for diseases other than tuberculosis:-

Disease.	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs
Actinomycosis	1	-	1	-	-	-	-
Neoplasms	-	-	-	-	-	1	-
Pyaemia	-	-	1	-	-	1	3
Septicaemia	-	-	1	-	-	-	-
Septic Mastitis	-	-	3	-	-	2	-
Septic Metritis	-	-	11	-	-	-	1
Septic Peritonitis	4	-	-	1	-	5	2
Septic Pericarditis	1	-	-	-	1	-	-
Erysipelas	-	-	-	-	-	-	6
Dropsy	-	-	4	1	-	9	1
Pneumonia	2	-	-	1	-	1	-
Pleurisy	-	-	-	-	-	1	-
Decomposition	2	-	1	-	-	10	4
Extensive bruising	-	-	2	-	-	2	-
Fevered or badly bled	3	-	4	-	-	3	-
Joint Ill	-	-	-	-	1	-	-
Rickets & Malnutrition	-	-	-	-	-	-	4
Gangrene	-	-	2	1	-	-	-
Acute Enteritis	1	-	-	-	-	-	-
Total ...	14	-	30	4	2	35	21

Meat Marts.

In Aberdeen there are two large wholesale meat marts, to which carcases are consigned from County Districts. As a routine, all such carcases are inspected by the Meat Inspector in Aberdeen; the following table gives the number of carcases and the weight of meat seized as unfit for human food in these marts:-

	Oxen	Bulls	Cows	Heifers	Calves	Sheep	Pigs.
Number of carcases seized wholly -							
(1) For Tuberculosis ...	1	-	3	-	-	-	-
(2) For other diseases ...	5	1	9	6	1	61	14
Number of carcases of which portions were seized -							
(1) For Tuberculosis ...	3	-	2	1	-	-	-
(2) For other diseases ...	15	1	21	14	2	9	5
Total weight of meat seized ..	5,125 lbs.	1,233 lbs.	8,703 lbs.	3,451 lbs.	155 lbs.	2,829 lbs.	2,109 lbs.

Every seizure made was by consent of the owner of the unfit food and on no occasion were legal proceedings with regard to unfit food necessary.

Slaughter of Animals (Scotland) Act, 1928.

There were two prosecutions under the above Order during 1935 and fines to the extent of £5 were imposed.

During the year, 91 licences were issued for the use of the mechanically operated instrument.

Diseases of Animals Acts.

The routine work necessary under the various Acts and Orders was carried out.

Control of Other Foods.

In addition to the control of milk and milk food products, and of meat, the Health Department continues an extensive supervision of other foods. Thus, the Fish Market is visited daily, and the quantity of fish destroyed as unfit for human food in 1935 was 5,688 lbs. as compared with 9,560 lbs. in 1934./

1934. The sale of fruit and vegetables, both wholesale and retail, is also under intensive supervision. So also considerable attention continues to be paid to the inspection of tinned foods, and all factories where such articles are prepared are regularly visited. Provision curing yards, wholesale warehouses, and shops are also subjected to routine visitation.

CHAPTER IV.

ENVIRONMENTAL HYGIENE.

HOUSING CONDITIONS.

In terms of the Housing (Scotland) Act, 1935, the Sanitary Inspector carried out a survey of dwelling-houses with a rateable value of £45 and under in order to ascertain the degree of overcrowding according to the standard laid down by the Act. The results of the survey are contained in a special Report issued by the Sanitary Inspector in March, 1936.

1. Number of Houses Built by Private Enterprise.

The scheme for assistance to private enterprise terminated on 31st March, 1934. In 1935, 538 houses were erected as against 416 in 1934 and 488 in 1933.

The number of houses built by private enterprise shows an increase and during the current year an even larger number of houses will be erected. Although the process is slow, it cannot be doubted that the purchase of these houses by individual householders renders many houses vacant and this will in some measure tend to diminish the number of overcrowded and sublet houses.

2. Number of Houses erected by the Local Authority.

During the year, a total of 570 new houses, under the Housing Schemes, was completed, and at 31st December, 1935, the following houses were in course of erection:- 228 houses in St. Machar Ward, including 162 in Froghall district, and 258 in Torry Ward, including 192 at Craiginches.

Including 886 houses erected in connection with the Improvement Scheme, the total number of houses completed in the City since 1919 under the Corporation Housing Schemes, was 3,874.

3. Type and Rental of Houses:

The room capacity of the 3,874 additional houses is as follows:-

208	houses contain	4 rooms.
2626	" "	3 "
1040	" "	2 "

The respective rentals of most of these houses, exclusive of rates, are as follows:- 4 rooms - £32. 10/-; 3 rooms - ranging from £22 to £28, with a cheaper type at £15 and £16; and 2 rooms - £12 to £14 (48 houses at £19 and £20). Certain of the houses built in connection with the Slum Clearance Scheme are let on a differential basis - 552 three-roomed and 54 four-roomed.

FACTORIES, WORKSHOPS and WORKPLACES.

Factories - Table XX is submitted giving details of the administration of the Factory and Workshop Act, 1901. No prosecutions had to be instituted under the Act, but a large number of defects discovered during the routine inspections was remedied.

Workshops - The number of workshops, exclusive of bakehouses, registered at the end of 1935 was 684, as compared with 680 in 1934. Every workshop is inspected by the Sanitary Staff at least once a year, and an effort is made to keep it in accordance with the requirements of the Public Health Act and the Factory and Workshops Acts. Fish-curing and provision-curing works are inspected very frequently, some of them almost daily, the primary object of the visit being the inspection of food. The majority of the defects found during 1935 had reference to lack of cleanliness.

CHAPTER IV.

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HOUSING CONDITIONS.

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1. Number of Houses Built by Private Enterprise.

The scheme for assistance to private enterprise terminated on 31st March, 1934. In 1935, 530 houses were erected as against 416 in 1934, and 486 in 1933.

The number of houses built by private enterprise shows an increase and during the current year an even larger number of houses will be erected. Although the process is slow, it cannot be doubted that the purchase of these houses by individual householders renders many houses vacant and this will in some measure tend to diminish the number of overcrowded and sublet houses.

2. Number of Houses erected by the Local Authority.

During the year, a total of 576 new houses, under the Housing Schemes, was completed and at 31st December, 1935, the following houses were in course of erection:- 362 houses in St. Machar Ward, including 168 in Froghall district, and 298 in Torry Ward, including 192 at Craiginches.

Including 562 houses erected in connection with the Improvement Scheme, the total number of houses completed in the City since 1919 under the Corporation Housing Schemes, was 3,872.

3. Type and Rental of Houses.

The room capacity of the 3,872 additional houses is as follows:-

208 houses contain 4 rooms.
2586 " " 3 "
1078 " " 2 "

The respective rentals of most of these houses, exclusive of rates, are as follows:- 4 rooms - £32. 10/-; 3 rooms - ranging from £22 to £28, with a cheaper type at £15 and £16; and 2 rooms - £12 to £14 (22 houses at £19 and £20). Certain of the houses built in connection with the Slum Clearance Scheme are let on a differential basis - 398 three-roomed and 94 four-roomed.

FACTORIES, WORKSHOPS and BAKEHOUSES.

Factories - Table XI is submitted giving details of the administration of the Factory and Workshop Act, 1901. No prosecutions had to be instituted under the Act, but a large number of defects discovered during the routine inspections was remedied.

Workshops - The number of workshops, exclusive of bakehouses, registered at the end of 1935 was 685, as compared with 680 in 1934. Every workshop is inspected by the Sanitary Staff at least once a year, and an effort is made to keep it in accordance with the requirements of the Public Health Act and the Factory and Workshops Acts. Fish-curing and [illegible] works are inspected very frequently, some of them almost daily, the primary object of the visit being the inspection of food. The majority of the defects found during 1935 had reference to lack of cleanliness.

TABLE XX. - ABERDEEN - FACTORIES, WORKSHOPS and WORKPLACES, 1935.

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

	Number of		
	Inspections	Written Notices	Prosecutions
Factories (including Factory Laundries)	1,025	204	-
Workshops (including Workshop Laundries)	1,466	215	-
Workplaces (other than Outworkers' premises)	54	34	-
Total	2,545	453	-

2. - Defects found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts[x]				
Want of Cleanliness	370	365	-	-
Want of Ventilation	4	2	-	-
Overcrowding	-	-	-	-
Want of drainage of floors.. ..	-	-	-	-
Other nuisances	60	57	-	-
(Insufficient ..	-	-	-	-
Sanitary Accomm. (Unsuitable or defective	19	18	-	-
(Not separate for sexes	-	-	-	-
Offences under the Factory & Workshop Acts.				
Illegal occupation of underground bakehouses (s.101)	-	-	-	-
Other offences ... .. (excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Dept. of Health (Factories & Workshops Transfer of Powers)Order, 1921).	-	-	-	-
Total	453	442	-	-

[x] Including those specified in Sections 2, 3, 7 and 8 of the Factory & Workshop Act, 1901, as remediable under the Public Health Acts.

Bakehouses - The bakehouses, of which there were 75 in the City in 1935, as against 78 in the preceding year, were, as usual, inspected every quarter, or oftener, and were found, on the whole, to be in a satisfactory condition. Certain sanitary defects in connection with bakehouses were remedied at the suggestion of the Health Department.

Home Workers - With regard to home workers, the usual routine inspections were made in connection with the sanitary condition of the premises and the prevention of infectious diseases.

Inspection of Plans - During the year under review, plans of 66 premises, chiefly alterations and additions to existing buildings, were examined and reported on. Certain recommendations in regard to the sanitary requirements of the premises were given effect to prior to the approval of the plans by the Town Council.

TABLE XXI. - ABERDEEN - METEOROLOGICAL RECORD FOR EACH MONTH (From King's College Observatory).

YEAR 1935

MONTH.	BAROMETRIC PRESSURE (at 32°F. and Sea Level)			TEMPERATURE OF ATMOSPHERE.				Mean Daily Temp. of Ground (4 ft. Below surface)	Relative Humidity Sat = 100	RAINFALL		SUNSHINE		WIND									
														Direction; and Duration in Hours.									Velocity.
	Absolute Highest	Absolute Lowest	Mean Daily Range	Absolute Highest	Absolute Lowest	Mean Daily Temp.	Mean Daily Range			Duration	Amount	Duration	Percentage of possible sunshine	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm	Average No. miles per day.
	Inches	Inches	Inches	$^{\circ}$F.	$^{\circ}$F.	$^{\circ}$F.	$^{\circ}$F.	$^{\circ}$F.	%	Hrs.	Inches	Hrs.											
January	30.85	28.69	0.28	54.5	27.5	40.9	7.9	42.6	80	107	1.7	38	16	32	0	20	13	108	117	243	207	4	263
February	30.42	28.56	0.34	55.6	24.3	40.3	10.1	40.7	77	81	1.8	63	24	28	5	16	68	143	165	117	129	1	262
March	30.89	29.20	0.23	61.7	27.7	43.8	9.4	41.2	77	80	2.1	101	28	5	8	117	174	158	79	152	48	3	241
April	30.35	28.62	0.25	54.9	28.9	42.7	9.0	43.4	83	133	4.2	107	25	30	61	97	110	28	32	133	226	3	278
May	30.57	29.77	0.12	62.1	30.2	45.5	10.3	47.0	80	59	1.6	172	32	92	139	108	85	50	8	61	198	3	208
June	30.37	29.17	0.20	70.7	41.4	53.4	9.6	50.6	84	111	4.2	136	26	11	72	177	161	161	38	24	69	7	207
July	30.31	29.33	0.18	76.8	44.1	58.3	13.9	55.5	76	82	2.9	223	42	16	24	33	87	201	82	167	117	17	208
August	30.35	29.20	0.16	73.2	43.5	58.5	11.2	57.1	79	59	2.4	149	32	39	16	82	139	139	98	92	114	25	161
September	30.30	28.57	0.26	65.3	38.7	53.1	10.8	55.6	78	103	4.2	141	37	20	3	27	46	183	204	93	144	-	219
October	30.07	28.34	0.34	58.5	32.4	46.6	10.1	51.1	79	124	3.1	80	25	44	6	20	17	194	213	133	117	-	274
November	30.12	28.58	0.20	52.5	31.3	42.6	9.8	45.9	84	128	4.3	47	20	2	3	70	165	139	191	73	77	-	259
December	30.84	28.48	0.25	46.0	20.3	36.6	7.8	40.9	87	124	3.2	46	22	7	3	11	88	75	71	153	335	1	228
Monthly Average	30.45	28,88	0.23	61.0	32.5	46.9	10.0	47.6	80	99	3.0	109	27	27	28	65	96	132	108	103	148	5	234
Total for Year.	...	...	...	...	...	...	...	...	...	1191	35.7	1303	...	326	340	778	1153	1579	1298	1241	1781	64	...

Slaughterhouses. At the end of 1935, there were 4 licensed slaughterhouses within the City.

Other Offensive Trades. The offensive trades in Aberdeen, within the meaning of the Public Health (Scotland) Act, 1897, are concerned chiefly with tallow-melting or oil extracting from ox bones or fish livers, soap boiling, knackering, hide factoring, and the manufacture of manures and fish meal. At the end of the year, 22 firms were carrying on one or more offensive trade, and the total number of trades so conducted was 36.

New Applications for Establishment of Offensive Trades. During the year, two applications were received. The respective particulars of these applications were as follows:-

(1) To establish the business of gut and tripe cleaning and tallow-melting within the premises at Fraser Road.

(2) To establish the business of gut cleaning within the premises No. 34 Wellington Road.

The Town Council had under consideration both the petitions and representations on behalf of the objectors, as also a report submitted by the Medical Officer of Health and Sanitary Inspector.

Both applications were refused on the following grounds:-

(1) The terms of the Reports submitted by the Medical Officer of Health and Sanitary Inspector;

(2) The objections made at the meetings of the Council and the petitions lodged against the granting of the applications;

(3) The proximity of dwelling-houses and other buildings to the premises of the applicants;

(4) The difficulty of conducting businesses of the nature referred to without nuisance; and

(5) The fact that, under the Aberdeen and District Joint Town Planning Scheme, 1933, a definite area has been set aside for the establishment of such businesses.

Number of Inspections made and manner and conduct of business. Excluding visits to slaughterhouses, the number of visits to premises in which offensive trades are being carried on was 2,313.

Complaints were received during the year regarding offensive smells from the Hardgate Knackery, and, on instructions from the Department of Health for Scotland, a Report was prepared by the Medical Officer of Health and Sanitary Inspector. Excerpts from this Report are given in the Sanitary Inspector's Annual Report, along with particulars regarding complaints in respect of smells from other offensive trades.

ATMOSPHERIC CONDITIONS.

Weather and Disease. In Table XXI. is summarised the state of the weather in Aberdeen for each month throughout the year under review.

As regards sunshine, the month which enjoyed the most sunshine was July, with 223 hours for the whole month, or seven hours a day, while the month with least sunshine was January, with 38 hours for the whole month, or one hour a day. As regards the actual percentage of possible sunshine, January was lowest with 16 per cent., as against 21 in preceding years. The total amount of sunshine for the year under review was 1,303 hours as against 1,495 hours in 1934.

December was the coldest month, with a temperature of 36.6° F., the warmest/

warmest months being August, with a temperature of 58.5° F. and July with 58.3° F. The difference in temperature between the coldest and warmest months was 21.9° F., which was slightly above the average for the year 1934 20.0° F. The mean temperature for the whole year was 46.9° as against 48.1° in 1934. The mean daily range of temperature, or the difference between the highest and lowest for the day, averaged 10.0° F. in 1935.

During 1935, the driest month was May with 1.6 inches of rainfall, (including snow or hail). November was the wettest, with 4.3 inches of rainfall. April, June and September followed with 4.2 inches. The total amount of rainfall was above the average for preceding years.

In 1935, the most prevalent winds in Aberdeen were from the north-west and south, the least prevalent winds being north and north-easterly winds.

WATER SUPPLY.

The following Table (Table XXII.) measuring in percentages the degree of purity of the water in terms of bacillus coli, provides evidence of the present state of the water as compared with the previous year.

TABLE XXII. - ABERDEEN - QUALITY OF WATER - TYPICAL BACILLUS COLI.

ear.	Samples from -	Absent in 100 c.c. %	Present in 100 c.c. %	Present in 50 c.c. %	Present in 20 c.c. %	Present in 10 c.c. %	Present in 5 c.c. %	Present in 1 c.c.& less. %
935.	Cairnton Intake -							
	River Water at Intake	...	...	...	...	6	35	59
	Aberdeen Tap Water	75	25	...	...	...	...	...
934.	River Water at Intake	...	...	...	...	8	31	61
	Aberdeen Tap Water	52	23	15	4	6	...	...
berdeen Tap Water 1907, .e. before filtration.		...	...	13	...	29	33	25

ESTABLISHMENT OF A CREMATORIUM.

In terms of remit from the Council the Medical Officer of Health submitted a Report on 4th June, 1930 on the suggested establishment of a Municipal Crematorium.

On that occasion no definite action was taken, but in the end of 1935 a private company was formed which transmitted to the Council plans of a crematorium which they proposed to erect on a site at Kaimhill. They requested the sanction of the Town Council to this proposal in terms of the Cremation Act, 1902. The Council, having been assured that the erection and operation of a crematorium on this site would not be injurious or dangerous to health, approved of both site and plans and a private crematorium will be established on this site possibly within the next year.

CHAPTER V.

STATISTICAL COMMENTARY.

POPULATION.

The population of the City with the extension of the City boundaries has been estimated by the Registrar General to the middle of the year as 175,373.

The accompanying table gives the percentage and number of population at each of the principal age-periods.

TABLE XXIII. - ABERDEEN - POPULATION AT VARIOUS AGE-PERIODS - 1935.

(As estimated from Proportions at Census of 1931)

		Under 1 yr.	1 and under 5 yrs.	5 and under 15 yrs.	15 and under 25 yrs.	25 and under 45 yrs.	45 and under 65 yrs.	65 yrs and upwards.	All ages.
ercentage of opulation at ach age(according to census)	1921	2.35	6.66	19.41	20.00	27.00	18.42	6.16	...
	1931	1.75	6.81	17.22	18.65	28.51	19.81	7.25	...
stimated Population at each ge-period in	1935	3069	11,943	30,199	32,707	49,999	34,741	12,715	175,373

BIRTHS.

(TABLE XXIV.)

The total number of births during the year 1935, corrected for transfers, was 3,157 (2,956 legitimate and 201 illegitimate), equivalent to a rate of 18.0 per 1,000 of the population, as against a rate of 17.7 per 1,000 in 1934. The average rate for the 1930-34 quinquennium was 18.6.

Proportion of Males to Females: The number of male infants to every 100 female infants, corrected for transfers, during 1935 was 108, as compared with 95 for 1934.

Illegitimate Births: In 1935, the number of illegitimate births after correction for transfers, was 201, and amounted to 6.4 per cent. of the total births. The average rate for the 1930-34 quinquennium was 7.6.

Still-Births: In 1935, the number of still-births was 154, and amounted to 46 per 1,000 registered births. In 1934, the rate was 56.

MARRIAGES.

(TABLE XXIV.)

During the year 1935, there were 1,755 marriages within the City, equivalent to a rate of 10.0 per 1,000 of the population as against 9.7 in 1934. The average rate for the 1930-34 quinquennium was 9.1.

Residence: In 1935, 1,279 of the males married were ordinarily resident in Aberdeen, the remaining 476 coming from outwith the City. As regards the females, 1,385 were ordinarily resident in the City, and 370 lived outside the City.

Status: Of the 1,755 marriages in 1935, the persons married included 124 widowers and 58 widows.

DEATHS./

DEATHS.

(TABLE XXIV.)

The total number of deaths during 1935, corrected for transfers, was 2,375, equivalent to a death-rate of 13.5 per 1,000 of the population. For the quinquennium 1930-34, the average annual number of deaths was 2,225 with a rate of 13.0.

The Average Age at Death: Of all persons dying during 1935, the average age at death was 51.8 years. In the preceding quinquennium, it was also 51.8 years.

Excess of Birth-rate over Death-rate: In Table XXIV. will be found a column giving the excess of the birth-rate over the death-rate since the commencement of registration. The excess in 1935 was 4.5. For the quinquennium 1930-34, the excess was 5.5. The usual excess of birth-rate over death-rate for many years prior to 1911 was about 11 to 14.

ANALYSIS OF THE DEATH-RATE.

Mortality in Relation to Age and Causes (Tables XII., XXV. & XXVI.)

Infant Mortality: This is dealt with in detail in the section of this Report relating to Maternity and Child Welfare Services.

Mortality at Pre-School Age-Period (1 to 5 years), excluding Infant Period: The number of deaths at this age-period was 118, equivalent to a death-rate of 9.9 per 1,000 of the population at this age, as compared with an average of 7.4 in the preceding five years. Deaths from diphtheria, measles and pneumonia were considerably above the average.

Mortality at School Age-Period (5-15 years): The deaths at this age-period amounted to 67 or 2.2 per 1,000 of population at this age, as against 1.7 in the preceding quinquennium. The deaths from scarlet fever and diphtheria were above the average at this age-period.

Mortality at Adolescent Age-Period (15 to 25 years): The deaths at this age-period were 63 or 1.9 per 1,000 of the population, as against an average rate of 2.1 in the preceding five years.

Mortality at Early-Mature Age-Period (25 to 45 years): The number of deaths at this age-period was 205, giving a rate of 4.1 per 1,000 of the population. The rate for the preceding quinquennium was 4.5.

Mortality at Late-Mature Age-Period (45 to 65 years): The deaths amounted to 536, with a rate of 15.4 per 1,000 of the population at this period, as compared with an average rate of 15.5 for the preceding quinquennium.

Mortality at Post-Mature Age-Period (65 years and upwards): The deaths amounted to 1,100, with an equivalent rate of 86.5 per 1,000 of the population, as compared with an average rate of 82.4 for the 1930-34 quinquennium.

Mortality at All Ages: The death from all causes has already been referred to.

The percentage fall in the death-rate from the decade of 1861-70 up to the end of 1935 is for each age-period as follows - 61 for the pre-school (including the infant) period; 71 for the school period; 80 for the adolescent period; 68 for the early-mature period; 35 for the late-mature period; and 9 for the post-mature period.

During 1935, the diseases responsible for the largest number of deaths were as follows:- Diseases of the circulatory system, 507 deaths; Diseases of the nervous system, 355 (including 290 due to cerebral haemorrhage); respiratory diseases, 348; malignant diseases, 295; zymotic diseases, 159; digestive diseases, 119; and tuberculosis diseases, 99 (including 71 from pulmonary tuberculosis).

VARIATIONS IN MORTALITY FROM SELECTED CAUSES SINCE 1856.

The variations in the mortality from selected causes at all ages since/

since the year 1856 - the second year of civil registration - can be conveniently followed in Table I (p. 23).

Infectious Diseases: These, including tuberculosis, are dealt with in greater detail in the part of the Report devoted specially to Infectious Diseases.

Cancer and other Malignant Diseases: The cancer death-rate was 168 per 100,000 of the population in 1935, as compared with a rate of 160 in 1934. During the 1930-34 quinquennium, the average rate was 154.

Pneumonia: The death-rate from pneumonia was 125 per 100,000 of the population, as against an average of 96 during the 1930-34 quinquennium.

Bronchitis gave a death-rate of 57 per 100,000 of the population, as compared with an average of 58 for the preceding quinquennium.

Diseases of the Digestive System: In 1935, the death-rate was 68 per 100,000, as against an average of 72 in the 1930-34 quinquennium.

Diseases of the Circulatory System: The death-rate from these diseases was 289 per 100,000, as compared with an average of 269 for the preceding quinquennium.

TABLE XXIV. . - ABERDEEN - MARRIAGE, BIRTH AND DEATH RATES - 1856-1935.
(Per 1,000 of Population).

ear.	Population.	Marriages		Births[x]			Deaths[x]			Excess of Birth-rate over Death-rate.
		Number	Rate per 1000 of Population.	Number	Rate per 1000 of Population.	Illegit. Births per 100 Total Births.	Number	Rate per 1000 of Population.	Average Age at Death.	
935	175,373	1,755	10.0	3,157	18.0	6.4	2,375	13.5	51.8	4.5
934	173,215	1,683	9.7	3,071	17.7	7.0	2,165	12.5	52.5	5.2
933	172,036	1,524	8.9	3,019	17.6	6.3	2,240	13.0	52.1	4.6
932	170,562	1,467	8.6	3,188	18.7	8.0	2,293	13.4	51.2	5.3
931	168,608	1,519	9.0	3,231	19.2	7.8	2,346	13.9	53.0	5.3
930	167,718	1,557	9.3	3,303	19.7	8.7	2,083	12.4	50.0	7.3
an of 30-34	170,428	1,550	9.1	3,162	18.6	7.6	2,225	13.0	51.8	5.5
929	166,833	1,558	9.3	3,112	18.7	9.0	2,422	14.5	50.3	4.2
928	165,952	1,531	9.2	3,314	19.9	8.8	2,237	13.5	48.2	6.4
927	165,075	1,502	9.1	3,182	19.3	7.5	2,180	13.2	49.1	6.1
926	164,204	1,403	8.5	3,406	20.7	7.0	2,115	12.9	48.0	7.8
925	163,337	1,519	9.3	3,390	20.8	7.4	2,170	13.3	46.5	7.5
an of 25-29	165,080	1,503	9.1	3,281	19.9	7.9	2,225	13.5	48.4	6.4
21-25	161,622	1,582	9.8	3,763	23.3	8.2	2,303	14.3	44.4	9.0
16-20	161,568	1,754	10.9	3,479	21.5	10.6	2,439	15.1	41.7	6.5
11-15	164,324	1,489	9.1	3,959	24.1	10.2	2,752	16.8	38.1	7.4
06-10	163,620	1,360	8.3	4,505	27.5	9.7	2,512	15.4	37.6	12.2
01- 5	158,082	1,428	9.0	4,872	30.8	8.5	2,763	17.5	34.9	13.3
96-1900	145,740	1,356	9.3	4,636	31.8	8.3	2,644	18.1	33.3	13.7
91-95	131,627	1,099	8.4	4,114	31.3	9.8	2,539	19.3	32.9	12.0
86-90	117,587	911	7.8	3,827	32.5	10.4	2,370	20.2	...	12.3
81-85	108,959	848	7.8	3,712	34.1	10.6	2,159	19.8	...	14.3
76-80	100,419	788	7.9	3,480	34.7	10.9	2,100	20.9	...	13.8
71-75	91,941	705	7.7	3,169	34.5	12.1	2,063	22.4	...	12.1
66-70	84,234	684	8.1	3,010	35.7	12.9	1,978	23.5	...	12.2
61-65	77,040	624	8.1	2,663	34.6	...	1,915	24.9	...	9.7
56-60	73,458	524	7.1	2,397	32.6	...	1,772	24.1	...	8.5

[x] Corrected for transferred births for 1911 and subsequent years.

[x] Corrected for transferred deaths for 1904 and subsequent years.

TABLE XXV. - ABERDEEN - MORTALITY FROM ALL CAUSES AT VARIOUS AGE-PERIODS[x]

(per 1,000 of population at each age)

Year.	Infantile Mortality.	Age Period.						All Ages.
	Deaths of Infants under 1 year per 1,000 Births.	0-5 years	5-15 years	15-25 years	25-45 years	45-65 years	65 years and upwards	
1935	91	26.9	2.2	1.9	4.1	15.4	86.5	13.5
1934	77	21.3	2.1	2.0	4.1	15.0	80.4	12.5
1933	79	22.5	1.6	2.3	4.9	15.4	82.1	13.0
1932	93	27.0	1.5	1.8	4.9	16.1	81.6	13.4
1931	90	25.0	1.5	2.7	4.4	15.6	92.0	13.9
1930	80	24.2	2.0	1.9	4.1	15.4	76.0	12.4
Mean of 1930-34	84	24.0	1.7	2.1	4.5	15.5	82.4	13.0
1929	95	28.4	1.8	2.9	4.6	16.7	94.0	14.5
1928	94	31.5	1.8	2.4	4.8	15.0	82.2	13.5
1927	105	30.2	1.9	1.7	4.1	15.7	83.7	13.2
1926	96	30.0	2.2	2.4	4.3	14.8	79.8	12.9
1925	109	35.4	1.7	2.3	5.5	13.6	80.3	13.3
Mean of 1925-29	100	31.1	1.9	2.3	4.7	15.2	84.0	13.5
1921-25	115	42.2	1.8	2.8	5.3	15.5	82.3	14.2
1916-20	127	41.0	2.9	4.0	6.8	17.4	82.8	15.1
1911-15	143	49.7	4.0	4.1	6.7	20.0	86.5	16.8
1906-10	128	42.5	2.9	3.5	7.0	19.5	84.2	15.4
1901-05	143	52.2	3.1	4.6	7.4	21.3	83.3	17.1
1896-1900	144	54.2	3.4	5.0	9.2	22.2	81.6	18.1
1891-95	147	57.5	4.5	5.8	9.3	22.7	86.5	19.3
1886-90	140	52.9	4.8	7.0	10.5	22.9	88.1	20.2
1881-85	126	50.9	5.4	6.4	10.1	23.8	86.3	19.8
1876-1880	129	53.1	6.2	7.7	11.3	22.1	86.6	20.9
1871-75	133	57.5	7.7	8.2	12.0	22.6	91.5	22.4
1866-1870	133	68.0	7.2	8.9	12.4	22.2	91.2	23.5
1861-65	130	68.9	8.1	10.5	13.4	24.7	98.7	24.9
1856-60	126	67.8	9.3	9.8	12.6	21.8	97.5	24.1

[x] Corrected for transferred deaths in 1904 and subsequent years.

TABLE XXVI. - ABERDEEN - MORTALITY AT VARIOUS AGE-PERIODS FROM VARIOUS CAUSES.

(Corrected for Transferred Deaths)

Age.	All Causes.	Zymotic Diseases.			Tuberculous Diseases.		Respiratory Diseases.			Diseases of Circulatory System	Diseases of Gen.-Urinary System.	Nervous Diseases.			Dis. of Digestive Sys. inc. Diarrhoea	Malignant Diseases.	Developmental Dis. (exc. old age).	Accident and Violence.	Debility, Atrophy, Inanition.		Miscellaneous.
		Ordinary.	Venereal.	Septic.	Phthisis.	Other Tuberculous	Pneumonia.	Bronchitis.	Other Respiratory.			Cerebral Haem. etc.	Convulsions.	Other Nervous.					Under Age of 1 year.	Above Age of 65 years	
							A. - Number of Deaths - Year 1935.														
Under 1 year.	286	15	2	5	1	3	76	21	5	1	2	0	6	8	10	0	83	3	22	-	23
1- 5 years.	118	42	0	3	1	7	31	1	1	2	3	0	0	4	5	0	3	8	-	-	7
5-15 "	67	20	0	1	4	7	6	0	1	1	3	1	0	7	4	1	0	6	-	-	5
15-25 "	63	4	0	1	11	5	10	0	0	6	5	1	0	4	1	1	0	8	-	-	6
25-45 "	205	8	1	5	26	2	28	4	3	18	9	7	0	11	21	16	0	19	-	-	27
45-65 "	536	17	3	5	23	2	32	10	4	109	32	65	0	16	37	126	0	29	-	-	26
65 + "	1100	23	2	2	5	2	37	64	14	370	50	216	0	9	41	151	0	31	-	52	31
All Ages.	2375	129	8	22	71	28	220	100	28	507	104	290	6	59	119	295	86	104	22	52	125
1935.							B. - Death-Rate per 100,000.														
All Ages.	1354	74	5	13	40	16	125	57	16	289	59	165	3	34	68	168	49	59	...	...	71
Average 1930-1934. All Ages.	1306	52	3	10	54	18	96	58	19	269	61	173	7	28	72	154	49	61	...	...	64