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COUNTY BOROUGH OF CORK

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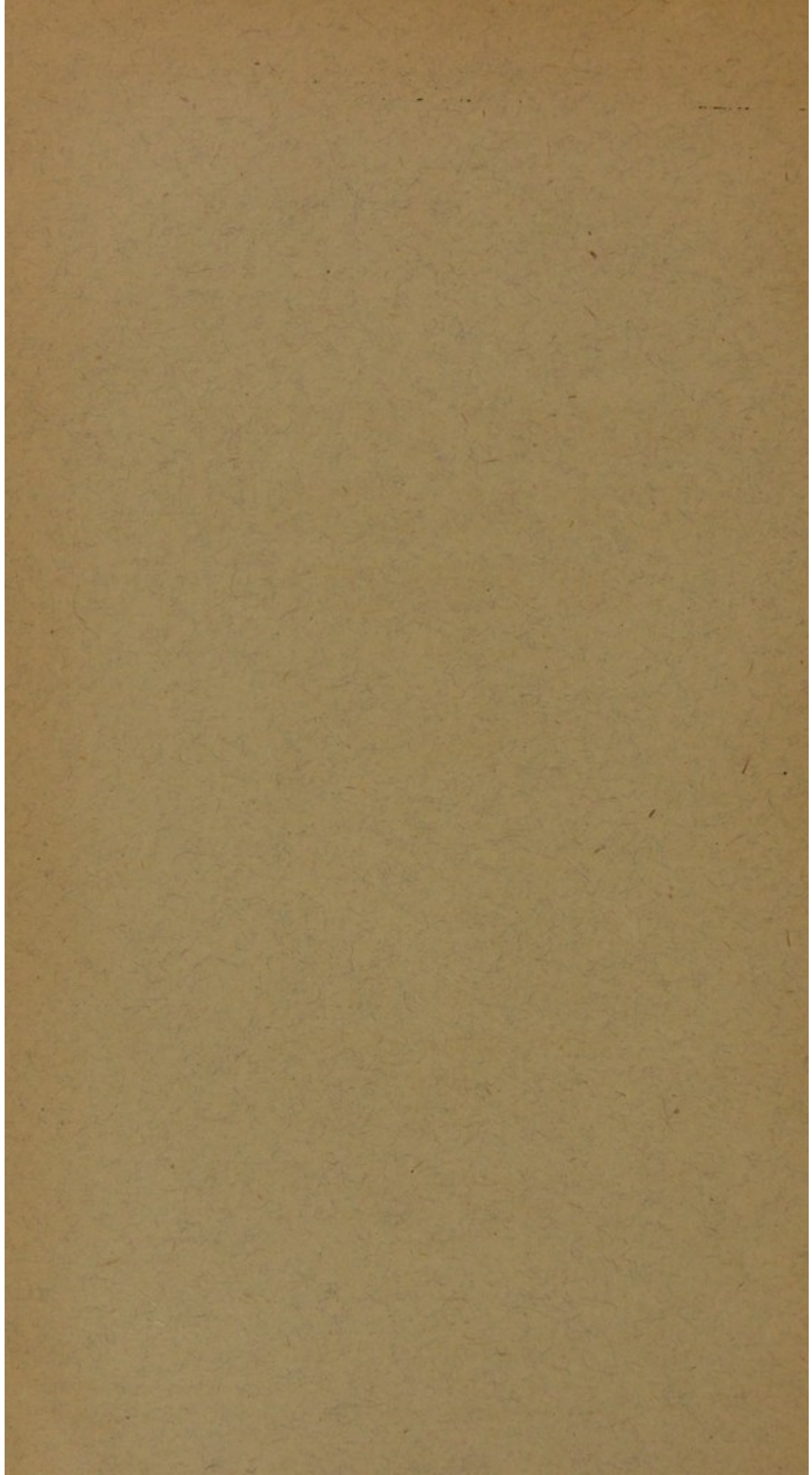
REPORT OF THE  
MEDICAL OFFICER  
OF HEALTH

FOR THE YEAR

1946







# COUNTY BOROUGH OF CORK



## REPORT OF THE MEDICAL OFFICER OF HEALTH

FOR THE YEAR

1946

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J. C. SAUNDERS, M.D., D.P.H.,  
Medical Officer of Health.

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EAGLE PRINTING WORKS, Ltd., SOUTH MALL

1947



# PUBLIC HEALTH STAFF

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## **Medical Officer of Health :**

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## **Assistant Medical Officer of Health :**

Patrick F. Fitzpatrick, M.B., B.Ch., B.A.O., D.P.H.

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Annie M. Sullivan, M.B., B.Ch., B.A.O., D.P.H.

## **School Dentists :**

Mr. R. F. Twomey, B.D.S.

Miss A. McKenna, B.D.S., (Temporary).

## **Public Analyst :**

Daniel J. O'Sullivan, M.Sc., F.I.C.

## **Chief Veterinary Officer :**

S. R. J. Cussen, D.V.S.M., M.R.C.V.S.

## **Assistant Veterinary Officer :**

P. A. Meegan, M.R.C.V.S.

## **Head Sanitary Officer :**

John O'Brien.

## **Sanitary Inspectors :**

Timothy Newman

James V. Nerney

Daniel J. Murphy

Thomas F. Murray

Leo. J. Woodnutt

Miss N. Dunn

## **Tuberculosis Nurse:**

Miss L. Lyndon.

## **Maternity and Child Welfare Nurses :**

Miss M. Gillespie

Miss H. Neville

Miss E. McSweeney

## **School Nurses :**

Miss M. Lordan

Miss M. O'Sullivan

Miss C. Curran.

## **School Dental Nurse :**

Miss M. Bowen.

## **Clerk and Inspector to Port Sanitary Authority :**

J. P. Kieran

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## SUMMARY OF STATISTICS.

Area (in Acres) .....	2,618
Population (Census of Population 1946) .....	75,361
Density of Population (persons to the acre) .....	28.9
Rateable Value .....	£237,309 0 0
Sum represented by a Penny Rate .....	£988
Number of Births .....	1,815
Birth Rate .....	24.0
Number of Deaths .....	1,072 *
Death Rate .....	14.2
Maternal Mortality Rate .....	1.1
Infantile Mortality .....	62
Zymotic Death Rate .....	0.27

\* Includes 37 deaths over and above corresponding figure in body of report. These represent transfers to area by Registrar General of which we have no particulars.



*To the Lord Mayor, Aldermen and Councillors,  
of the County Borough of Cork.*

MY LORD MAYOR AND GENTLEMEN,

It affords me pleasure to present my Annual Report on the health of the city for the year 1946. The main findings have been summarised in the introduction which follows and it is gratifying to be able to state that these indicate, from the public health aspect, that it has been one of the best, if not actually the best, ever experienced. The phthisis death-rate, infant mortality and maternal mortality rates were the lowest ever recorded. The general death-rate was the second lowest in our history and the infectious disease death rate was also very low, having being improved on only once previously (in 1945). Typhoid fever was completely absent and the incidence of the other infectious diseases was also unusually low.

I take the opportunity of thanking those who contributed to this report. To Dr. Fitzpatrick for his help on the sections on tuberculosis and maternity and child welfare ; to Professor Walsh and Professor W. J. O'Donovan for bringing up to date the sections on meteorology and bacteriology respectively ; to Mr. M. J. Riordan, Water Engineer ; Mr. D. J. O'Sullivan, City Analyst and Mr. Cussen, Chief Veterinary Officer. In particular I desire to express my appreciation of the services of Miss F. Corcoran ; in the compilation of tables and correction of proofs her help has been invaluable.

I have the honour to remain,

Your obedient servant,

J. C. SAUNDERS.



## INTRODUCTORY.

## Vital Statistics.

As 1945 marked a definite improvement on its predecessor so this year marks a further improvement on 1945. The general death rate fell from 14.9 to 13.7 per 1,000 (it was 18.1 in 1944). This is the second lowest figure ever recorded, the previous best being 13.1 in 1939. The figures recorded in the appropriate table indicate a steady fall in the death-rate up to 1939 (the year of the outbreak of the world war) followed by a gradual increase during the war years which reached its maximum in 1944 and has since been falling. We may hope, therefore, that the pre-war decline has been resumed and look forward to a further reduction in the years to come.

The tuberculosis death-rate (1.34 per 1,000) was the third lowest on our records. It was 1.29 in 1936 and 1.23 in 1939. Here again we note the tendency adverted to above in connection with the general death-rate, that is, a slow steady decline in the figures which reached its lowest level in 1939 followed by a rather sharp increase corresponding to the war years again reaching its maximum in 1944 and since falling. This rate must be distinguished from the *phthisis death-rate* which refers to deaths from the pulmonary form of the disease only. As explained in the text we differentiate between the two in this report because the latter goes so much further back than the former (to 1891 as compared with 1906). As will be seen in the table concerned, the *phthisis death-rate* for 1936 was the lowest ever recorded namely, 1.04 per 1,000. Once again it is of interest in this connection to note the figure for the crucial year 1939. It was 1.06, only very little higher than that of the present year. The rate increased *pari passu* with the combined rate to a maximum in 1944 followed by the reduction just noted.

The infant mortality rate of 62 per 1,000 was the lowest ever achieved in this area. The lowest figures before this were 72 and 73 in 1934 and 1939 respectively. While it is, of course, a matter of satisfaction to refer to such a low figure one must do so with reserve since the weather conditions in 1946 were all in favour of a low infant death-rate. This matter has been dealt with in the text. Infant mortality in this area was not only lower than that of the country as a whole (63) but it was also lower than that in any of the other county boroughs.

Maternal mortality (1.1 per 1,000) was also the lowest recorded. The fall in this rate, which is one of the most gratifying achievements of medicine, is not to be attributed so much to administrative action as to the successful application of chemotherapy in the treatment of puerperal infection. The infectious disease death-rate (0.27 per 1,000) was only slightly higher than that of 1945 (0.1 per 1,000) which was the lowest recorded. The actual number of cases of infectious disease notified was slightly in excess of that of the previous year.

Attention is drawn to the figures for *population* applicable to this area as indicated in the recently published Preliminary Report on the census of population, 1946. These figures, which are more fully referred to in the text, are deserving of serious consideration. They shew a very marked reduction in the numbers (more than 6 per cent. of the population at the previous census). This reduction has not been paralleled by any other urban area in the country and since it has involved the



dispersion of very large numbers of young adults, particularly of skilled craftsmen, it may have very serious repercussions for the population remaining.

### **Tuberculosis**

As noted above, 1946 was characterised by a substantial fall in the death-rate from this disease and the figures would now seem to indicate that the increased incidence associated with the war years had been brought to a standstill. The main problem in combating tuberculosis is the problem of finding institutional accommodation for the open case, that is, its isolation so as to limit the spread of infection. In comparison with this particular aspect of administration all others are of relative unimportance. There is no use in embarking on elaborate campaigns of case-finding fortified by mass-radiology, tuberculin surveys and contact follow-ups if sufficient bed accommodation is not available when the cases are found. If we are serious in our efforts to reduce the incidence of this disease we must be prepared to find more beds for our patients and any policy which has a retarding effect on this can only be regarded with the gravest possible misgivings. If for any reason it becomes necessary to curtail the amount of institutional treatment afforded to our patients, it is merely a question of time as to when there will be a further spread of the disease in the community and an increased number of cases to be dealt with. It will be most disappointing if it becomes necessary to enforce any undue curtailment on the amount of institutional treatment hitherto available.

Once more I beg leave to advert to the matter of the spread of this disease by the habits of indiscriminate coughing and spitting which are all too prevalent in the community. If we can educate the people up to the realisation of the evil effects of these twin habits we shall have gone a long way to solve the tuberculosis problem. It would be a grave error if, in our zeal to push forward with administrative measures, we should allow this fact to be obscured. The person who expectorates on the public pavement, in a public conveyance or in any other public place is a public enemy and ought to be treated as such. It is not only tuberculosis that is spread by the habit of indiscriminate coughing but all the respiratory infectious diseases including the common cold, influenza and poliomyelitis. It is regrettable to observe how sporadic our attempts have been to eradicate these habits. One noted with hope and pleasure the sudden crop of clever posters which appeared on our hoardings some years ago but, alas, the effort fizzled out in a very short time and (as a consequence) might as well never have been made. These are facts which need to be dinned into the public mind day and night and if we must have unsightly hoardings and disfiguring advertisements we may as well utilise them for this useful public purpose as for the pushing of patent medicines, cigarettes, spirits and other commodities of doubtful value. It cannot be denied that the spread of tuberculosis is in the main by the methods which have been alluded to and if we are to effect any reduction in it we must deal seriously with this aspect of the problem.

### **Infant Mortality.**

As noted above the figure representing the infant mortality rate (i.e., the number of deaths of infants under 1 year per 1,000 births) was the lowest ever recorded in this area. It has also been noted that this achievement is to be regarded with some degree of caution since there have been



factors in the reduction which are unlikely to recur for some time. Infant deaths are divided into two categories—those which occur in the first four weeks after birth and those which occur between one month and twelve months. The former are termed neo-natal deaths and in the main are due to causes supervening during intra-uterine life which are not amenable to administrative action. Prematurity, congenital debility and other congenital factors are mainly responsible for such deaths and they are inherent rather than environmental. On the other hand, deaths occurring the later period are largely due to preventible causes and are, therefore, amenable to measures which aim at removing these causes. They *may* be due to bad hygienic surroundings, overcrowding, ignorance on the part of the mother, unsuitable methods of feeding and so on. In actual fact they are found, in the great majority of cases, to be associated with the adoption of artificial feeding. In this connection it is of interest to note the findings which have accrued in connection with the investigation into infant deaths initiated in this area some years ago and carried into the past year. The findings are dealt with in the appropriate section of the report. 370 such deaths have now been examined in which no less than 348 infants (over 94 per cent.) had been bottle-fed. This refers to deaths from all causes. In the case of 160 infants who died from gastro-enteritis no less than 98.7 per cent. had been bottle-fed. These figures are too striking to leave any doubt as to the enormous risk to which infants are exposed by artificial feeding and the very grave responsibility assumed by those who unnecessarily advise such methods.

It is unfortunate that there are many mothers who cannot nurse their babies and these constitute a problem which is engaging the attention of some of the best minds in the world of research at present. Unfortunately also it is only too true that there are some mothers who *could* nurse their infants but simply refuse to do so, these constitute a problem of a different character and are, perhaps, no less urgent of study. It is unfortunate too (and reprehensible) that a whole mass of vested interest is thrown into the scale on behalf of the second class of mother which, by an incessant campaign of advertisement and suggestion, has (to its own pecuniary advantage) succeeded in persuading an immense number of mothers that babies are better fed out of tins than by the method devised by nature. It is however a hopeful augury that all the obstetrical specialists now insist on breast-feeding and that the more enlightened mothers realise that this is much the best way. The whole weight of medical research is on the side of breast-feeding and it remains to be seen to what extent its views will prevail against the commercial interests.

### Infectious Disease.

The incidence of infectious disease was unusually low during the year. As mentioned above the actual number of cases notified was only slightly in excess of that of the previous year which was one of the lowest recorded. In the case of *diphtheria* the notifications amounted to 46 (in contrast to 95 in the previous year and 176 in 1944, 376 in 1943 and 372 in 1942). From being one of the greatest scourges which ever visited this city in recent years diphtheria has become of relative insignificance from the statistical point of view. We may thank the introduction of active immunisation for this happy state of affairs. It is regrettable, though, to note that whenever the disease subsides as a result of immunisation, parents immediately become slack about bringing their children to the clinic for protection. The result is the building-up of a fresh susceptible



population and a further outbreak of epidemic proportions. In the text of this report I draw attention to the fact that to date 25,000 children have been treated at our clinic and that amongst this very large number there has not, so far, been a single death from diphtheria. Meanwhile 226 *unimmunised* children have died from the disease. These facts speak for themselves. Our achievements in this city in regard to the prevention of diphtheria are not altogether unworthy of note and we feel, that if properly supported by the parents in the city, the disease would be completely eradicated. To achieve this objective the aim is 100 per cent. immunisation of infants and school children. We are still very short of this.

The number of cases of *epidemic diarrhoea* was the third lowest on record. In connection with this matter an interesting correlation with weather conditions has been forthcoming as a result of reports kindly supplied by Messrs. Bennett, Ballinacurra. These are referred to in the text under the appropriate section and are deserving of study. I take the opportunity of thanking Mrs. D. West for supplying these valuable records. While, of course, not specifically connected with this disease they constitute a valuable contribution to the problem and, indeed, it may be said that they are valuable too from the general public health point of view as permanent records of weather conditions for reference in compiling morbidity statistics.

The two tables on *typhoid fever* (enteric) and *typhus* will well repay study. They constitute a very striking (if silent) tribute to achievement in the field of public health. In the case of typhoid we note that in the first decade (1881-90) the average number of cases was 73.5 per annum. In the following decade it was 82.6; in the third decade 54.3; in the fourth 55.2—in this period occurred the great epidemic of 1920 in which 244 cases and 13 deaths were recorded. In the next decade the number of cases averaged 11.6. In the decade 1931-40 the average was 2.3 and in the ensuing years 3. There has been a steady decline in the number of deaths from 113 in the first decade to a single death in the last ten yearly period. It is also to be noted that there was not a single case of the disease in the city last year and that this also occurred in the years 1930, 1942, and 1943.

We find a similar state of affairs recorded in the table relative to *typhus*. It commences with the record of a huge outbreak in 1881 in which no less than 1,400 cases were recorded and 88 deaths. It will be seen that the disease took a heavy toll in cases and deaths in the ensuing nine years and in the following decade too. Then there is a gradual diminution in the disease until eventually the last case was recorded in 1929 so that it is now sixteen years since a case was recorded. It must not be thought that typhus can never break out here again. This is very far from being the case and indeed, though we have not been attacked for such a long period, it is true to say that the disease is a constant menace. It slumbers in certain sections of the country and breaks out into active form occasionally, usually striking down the poor and ill-nourished. It is spread by the louse and it is the knowledge of this fact which has made the attack upon it possible and with modern weapons such as D.D.T. at our disposal it should be possible to keep the disease permanently at bay provided the attack is sufficiently vigorous.

In the sphere of medicine public health may well be regarded as the silent service. There are no dramatic triumphs, no spectacular victories



to be celebrated. All we can put on record is a slow, steady conquest of pestilence and death. The evidence of this is to be seen in the health statistics of civilised countries. It can be read in practically all the tables in this report. These figures, on the one hand, reflect a very great saving in human life and a great reduction in disease, on the other they represent an enormous saving in financial expenditure. These are facts which, one feels, are not fully appreciated except, perhaps, by the very few who study such subjects. Nevertheless they should be taken carefully into consideration when it comes to evaluating the worth of such services to the community as a whole.

### Vaccination.

In its severest form smallpox is a frightful disease and the management of an outbreak puts a heavy burden of responsibility upon all concerned (Dr. C. O. STALLYBRASS, Deputy M.O.H., City of Liverpool, discussing the recent Mersyside outbreaks of smallpox at a meeting of the North-Western Branch, Society of Medical Officers of Health, September 1946).

The first schedule of the Health Bill 1947 indicates that the Vaccination Acts are to be scrapped, lock, stock and barrel. It is more than probable that before these lines reach print the proposals will have been given the effect of law. I have discussed this matter from time to time with persons returned from the East and they have viewed the suggestion with feelings akin to active horror. Looking back over the years to the time when Jenner published his "Enquiry into the causes and effects of the Variolae vaccinae, etc.," in 1798 one cannot help being impressed by the enormous saving in human life which resulted from his celebrated discovery. If the present generation had any conception of the terrible ravages of smallpox in these countries, it is quite certain that there would be no demand for the repeal of the vaccination acts. If they had any idea of the frightful effects of Asiatic smallpox to-day they would insist on the adoption of every possible protection against it and we are to-day more exposed to the introduction of this form of the disease than at any time in our previous history. We are now but two (or at the most three) days distance from the geographical sources of this disease. In actual fact several outbreaks have been initiated in Great Britain as the result of aerial travel and we in this country are in an especially vulnerable position with Rineanna as the connecting link between the Orient and the Western continent.

One could scarcely conceive a more unpropitious moment to propose the abolition of a method which, for 150 years, has proved itself to be the first line of defence against smallpox. The proponents of repeal suggest that in the event of an outbreak of the disease it will be sufficient to offer mass vaccination to the population and that modern public health methods will suffice to limit the disease to the immediate contacts and to a few secondary cases. This certainly would seem to have met the case so far in England but can we claim to have a public health service as well equipped as that of our wealthy neighbour? Are our isolation hospitals in a condition to deal at once with outbreaks in any part of the country? How many special smallpox hospitals have we at our disposal? Have any medical men in this country ever seen a case of smallpox? Is it not a fact that persons who have been vaccinated in infancy respond much more rapidly and more strongly to vaccination than adult persons who have never been previously vaccinated? And is it not a fact that such persons



are infinitely less liable to develop secondary encephalitis after vaccination ?

"The severity of the disease was such that with two exceptions all persons entirely unvaccinated prior to infection died, *i.e.*, seven out of nine. In one family of four persons all three of the unvaccinated died of confluent smallpox, an unprecedented event in my experience." (Dr. Stallybrass on the Mersyside outbreak).

There are three tables in this report which have a bearing on this subject. They are not entirely without interest. The first of these is Table 10, in which is set out a record of the births and deaths recorded in the city from 1878 down to the present year. One of the columns in this table relates to smallpox and is remarkable for the fact that it indicates that there has not been a single death from the disease in the period of seventy years covered by the table. The second, Table 21 is a summary of the notifications of infectious disease from the year 1879 in which we note that there was one case of smallpox in each of the years 1885, 1891 and 1892, three cases in 1903 and one each in 1904 and 1905, since when there has not been a single one recorded. There has, therefore, been a grand total of 8 cases in the 69 years covered by this table.

And yet it is not that Cork has always been free from smallpox, for we have the record of a very severe visitation which began in December 1871, and did not terminate until the following September, by which time 3,665 cases had been recorded. The mortality in this outbreak was very severe no less than 716 deaths having occurred (a fatality rate of 19.5 per cent.). The particulars of this epidemic are recorded in a report (still extant) of Dr. H. MacNaughton Jones to the Cork Medico-Chirurgical Society. This report is undated but, presumably, it was made between September and December of 1872 or early in the following year. It is apparent that it was made very early after the event and it is of interest now, after the lapse of 75 years, to examine some of the facts which were brought to light in this very informative record. First as to the origin of the outbreak, here are author's words :—

The first case of smallpox occurred at 26 Evergreen Street. Timothy Driscoll, a native of this city, came from Newport sick, in one of Mr. Abraham Sutton's coal vessels, on 10th November, 1871, and had nearly recovered on the 8th December, when the case was reported with three others : one from the same house ; another, a niece of Driscoll's, who frequented the house during his illness, and in whose home Driscoll's wife slept while he was sick ; the fourth person reported on that date lived opposite Driscoll's house. Driscoll's mother sold coal on the premises, so it is very probable that they all had recourse to the house, as they were ignorant of the nature of his complaint.

Driscoll recovered, and is now in America. Ellis, a child from the same place, died in the Union Hospital on the 28th December, 1871. The other two recovered one, in the Fever Hospital, named Egan, and the other named Bease, in the Union Hospital.

In this very interesting report we can trace, month by month, the development of the epidemic. There were 41 cases in December, 184 in January, 392 in February and so on until May when the maximum number of 857 cases occurred, thereafter the outbreak subsided rapidly and finally it terminated with 3 cases in the month of September. There are references too to the question of vaccination and its value in the prevention of the disease and, failing complete protection against the occurrence of the disease, its usefulness in protection against death :

The next three facts which I have put forward, as proved by the past epidemic have reference to vaccination and re-vaccination.

Firstly, the beneficial results of vaccination as shown by the statistics just read.



Secondly, that vaccination loses its preventive and protective power after a certain period of time, differing in various individuals as shown by the numbers of vaccinated who contracted the disease. This shows the value of re-vaccination, which is also proved by the statements I now read for you of those physicians who have written on this subject.

I can certify to the fact that though I saw at least 1,300 cases I knew but two instances of re-vaccinated persons having the disease. I had two cases who within the usual period of incubation were re-vaccinated and had smallpox (one of whom died, though with a large vaccine vesicle on the arm), a mother and infant were admitted to the Fever Hospital, the mother about the sixth day of the disease. The infant was nursing and continuing to do so all through the illness.

I re-vaccinated the infant at once on seeing her (she had not been vaccinated up to this period). The mother got a severe attack, but recovered. The infant showed severe confluent smallpox, the face became covered with a universal scab, also the feet and legs. The vaccine appeared to take, as a redness came and continued to the fourth or fifth day, when any distinction was lost in the surrounding eruption. The infant recovered with the loss of an eye (through carelessness on the part of the mother).

The figures relating to mortality among the vaccinated as compared with the unvaccinated are significant. In the case of the Cork Fever Hospital (now generally known as the North Fever Hospital), 656 cases were admitted. The fatality rate among the *vaccinated* was  $5\frac{1}{2}$  per cent. as against 58 per cent. in the *unvaccinated*, the average being given as  $22\frac{1}{3}$  per cent. Similar figures are given for the South Fever Hospital (referred to as the Union Workhouse) and the actual table is reproduced herewith.

The following are the smallpox statistics of the Cork Union Work-house to the 6th September, 1872 :—

Classification of Ages	Vaccinated		Not Vaccinated	
	Admitted	Deaths	Admitted	Deaths
Under Ten years ....	147	16	235	126
Ten and under Fifteen ....	202	9	73	13
Fifteen and upwards ....	405	17	164	86
Total ....	754	42	472	225
Total number ....	Admitted	Deaths	Mortality	Percentage
	1226	267	Vaccinated ....	6.89
			Not Vaccinated	56.81
			Average ....	21.70

No apology is needed for reviving the long forgotten facts connected with this epidemic. It may perhaps help to put before the people of this city what could happen to an imperfectly protected community. There is no known method of protection, natural or artificial, which yields 100 per cent. efficiency and vaccination is not an exception. As in the case of



immunisation against diphtheria it is apparent that re-vaccination is required after the lapse of a number of years. Nevertheless it is strikingly apparent that vaccination affords a very high degree of protection against *death* from smallpox in these cases in which immunity has diminished with the passage of years. The author's testimony as to the protection against *infection* afforded by re-vaccination is equally striking and I think it may be said that the observation holds good to-day.

We have enjoyed 75 years freedom from smallpox in this city and I think the same may be said of the country as a whole. Equally truly, I think it can be said, that this freedom is about to be terminated, paradoxically enough, by giving the people freedom of choice. During the years 1922 to 1934 inclusive, there occurred in England and Wales 81,340 cases of smallpox (Annual Report of the Chief Medical Officer of the Ministry of Health for the year 1934). It is true that these cases have been described as *variola minor* and that the mortality was very low, but still there occurred 261 deaths. It is a remarkable fact that during the whole of that period this country remained absolutely free from smallpox despite the constant flow of traffic between the two countries. In this connection it is of interest too to advert to the fact that in the year 1921 a demobilised soldier travelled from Euston via Holyhead, Dublin and Cork to Cobh where he was found on arrival to be suffering from classical *variola major*. That none of these incidents gave rise to smallpox may, of course, have been pure coincidence and may have had no relation to the state of vaccination in this country (where it was still compulsory). It certainly could not be attributed to better public health services and in all the circumstances there are good, solid grounds for believing that it was due to compulsory vaccination which protection we are now, in our wisdom proposing to dispense with.

This brings us to consideration of the last of the three tables above referred to. This is to be found at the end of the section in infectious diseases. In the year 1942, when this city was seriously threatened by an outbreak of smallpox in Glasgow, I had occasion to examine the figures for vaccination in the urban areas as published in the Annual Summaries of the Registrar General. The table, which goes back to the year 1936, was then compiled and has been since continued. It will be noted that there has always been a high degree of vaccination in this area. The diminution from 1940 to 1943 has been due to the occurrence of a widespread outbreak of scabies. In 1944 and 1945 there would appear to have been a build-up towards the former figures. In Limerick too there has been a high degree of vaccination, but in Dublin the showing is, in comparison, very poor indeed while the figures for Waterford indicate that the acts were simply not being enforced. An analysis of this table from 1936 to 1945 reveals that in Cork the relation of vaccinations to births has been 79.9 per cent. ; in Limerick, 66.7 per cent. ; in Dublin, 24.1 per cent and in Waterford, 5.9 per cent.

As soon as the terms of the new Public Health Bill became known early in 1946 the effect on the vaccination returns was immediate and dramatic. In this area the average number of vaccinations for the previous 10 years was 1,385 per annum. It will be noted that for 1946 the figure has fallen to 363 ; the average for Limerick from 689 to 67 ; for Dublin from 2,856 to 24 and for Waterford from 40.5 to 6. It is apparent from these figures that compulsory vaccination has had really little popular



support, notwithstanding which the great bulk of the population accepted it in a philosophical manner. There have been individual resisters in every community and indeed individual communities too in this country that have resisted vaccination for a long period, so that the Vaccination Laws became a dead letter in such places, these were individuals and communities which, no doubt, were protected against the introduction of smallpox by the herd immunity of their neighbours. The door is now about to be thrown wide open to the introduction of the disease by abolishing this herd immunity.

Perhaps the most curious feature of this new policy is that there has been apparent no active popular demand for repeal. One did not hear of any such public request and the first intimation of any official change of view was the publication of the Bill. It is true that those who are actively interested in the abolition of vaccination have exerted an influence in this matter out of all proportion to their numbers and while one does not necessarily subscribe to the views of Prof. Bigger that such people are mostly "cranks who disapprove of so-called vivisection and who are often vegetarians" it does appear that their actions are characterised more by zeal than by discretion. It may well indeed be doubted that the anti-vaccinationists would have received much of a hearing in the days when smallpox was rampant in all countries. The proof of this is to be found in the way in which the Jennerian method of prevention spread over the whole of the civilised world. Jenner was a practising country physician who carried out his studies in his native Gloucestershire making use of the fact, which had long been known among the country people, that persons who had accidentally contracted cow-pox, for instance during milking, acquired a condition of immunity which protected them from human smallpox.

Since Edward Jenner's discovery of the process of vaccination variola (smallpox) is no longer to be feared as a popular disease in any of the countries in which vaccination is compulsory. Thus, in Germany there are occasional cases introduced from neighbouring countries, but thanks to the laws enforced by the German Government with regard to inoculation epidemics are no longer possible. (KOLLE & HETSCH, *Experimental Bacteriology*, 1934. Vol. II, p.450).

It would be out of place here to go into a discussion on the proofs of the value of vaccination, they have been set out in the classical work just referred to and are to be obtained from other equally impeccable sources. They are, perhaps, most feelingly advanced by those who have had practical experience of smallpox in its native habitats. The trouble with the present generation would appear to be that it has lost the communal memory of the disease otherwise it does not seem possible to explain the attitude of *laissez-faire* towards vaccination. The new proposals, when implemented, are undoubtedly going to create a community which, in a relatively small number of years, is going to lose entirely its immunity to smallpox and one views with apprehension the enormous burden which will be thrown on the public health services of the country when the disease is introduced, as introduced it will be, sooner or later. If we are serious in our pretensions as to the control of this disease by administrative measures alone, combined with mass vaccination in an emergency, we should take immediate steps to put our house in order and to set up the machinery to control the disease when it comes. We must ensure that there is adequate accommodation for the isolation of patients, adequate staffing and adequate laboratory service to control diagnosis. All this is necessary at the present time but it will become much more urgently



necessary in the course of a few years. The more one contemplates the prospect the more one becomes convinced of the truth of the sentence with which this discussion opened: "In its severest form smallpox is a frightful disease and the management of an outbreak puts a heavy burden of responsibility upon all concerned."

### Ice Cream.

The occurrence of 76 cases of typhoid fever as a result of eating ice-cream at a seaside resort in Great Britain last summer has once again directed attention to the potentialities of this commodity as a vehicle of disease. It was proved that the vendor was an enteric urinary carrier and when he was prohibited from further selling ice-cream the outbreak terminated. The matter was discussed at a sessional meeting of the Royal Sanitary Institute in London on 9th October last, which illustrated in a striking way the difficulties in controlling the manufacture and distribution of the article. Many interesting sidelights were thrown upon the subject. The proceedings are fully reported in the Journal of the Institute (January 1947).

In initiating the discussion Dr. W. R. Martine remarked on the slow and grudging concessions made to the demands of medical officers and sanitary inspectors for standards and expressed the hope that the outbreak would compel steps to be taken to effect some national control of "that popular but often questionable commodity—ice-cream." The amount of control which can be exercised by the public health authority is at present insufficient to secure the bacteriological purity and the nutritive quality of the article. The legal definition, Dr. Martine states, allows an unscrupulous trader to dilute his ingredients far below the proportion recommended by the suppliers of his ice-cream powder. The standard of *quality* in ice-cream appears to be a fat-content of not less than  $7\frac{1}{2}$  per cent. in the final product and many members of the trade are genuinely concerned about the dilution which is occurring. Dr. Martine avers that only some 15 per cent. of all ice-creams examined contain 7 per cent. fat or more. (In another article Mr. R. S. Cross states that he has had samples of cold-mix containing 0.01 per cent. of fat and in one case the fat content of the ice-cream was so small that the analyst could not estimate the quantity present).<sup>\*</sup> It is apparent, therefore, that so far as existent legal sanctions are concerned, there is no limit to which a purveyor may go in the matter of diluting his product ("adulteration" it used to be called when this was a common practice in regard to milk). Dr. Martine expresses himself as in thorough agreement with a suggestion emanating from Manchester that the term "*water-ice*" should be used and the term "ice-cream" prohibited where a reasonably nutritive standard for fat and also solids is not attained.

In connection with this matter, and also in connection with his demand for a reasonable standard of bacteriological purity, Dr. Martine asserts that the profit to be made out of ice-cream to-day by average methods of manufacture is such that any manufacturer, from the "one-gallon-a-week man" upwards, can well afford to put down enough money to ensure a clean and nourishing product and, in proof of this assertion, he has produced a carefully worked-out analysis in which he shows that even with the more expensive type of mix, based on a selling price of threepence per one-ounce portion, the profit ranges from just under 75 per



cent. to over 90 per cent. and on the basis of these figures he asks for the adoption of rigid standards—standards which are within easy reach of every producer if only because of the lucrative nature of the trade.

Although reference has been made to the fact that legislation does not confer control over the nutritive quality of ice-cream in Great Britain, it must not be thought there is no legal control. In comparison with this country these controls are very specific and far-reaching indeed. They are incorporated in the Food and Drugs Act 1938 which, *inter alia*, requires registration of premises, gives powers to local authorities to make bye-laws to ensure hygienic conditions of production and sale and empowers the M.O.H. to stop the sale of ice-cream in certain circumstances. Notwithstanding these provisions it would seem that "the law is totally inadequate for ensuring that the public are provided with a good, clean article of food." After this preamble Mr. Cross goes on to discuss the standards of premises, equipment and cleanliness which might be reasonably expected in the manufacture of ice-cream and devotes particular attention to the implications so far as the small manufacturer is concerned. "The small trader who is keen can," he states, "and will, turn-out an ice-cream which is bacteriologically as clean as that from our largest manufacturers with equipment and premises costing hundreds of pounds. The explanation of this is that the work is not entrusted to employees—he does it himself."

In general it may be said that the modern methods of making up ice-cream involves the preparation beforehand in special factories of the necessary ingredients which are then sent out to the manufacturers in the form of dried powders. Two types of powder are recognised to which the terms "hot mix" and "cold mix" are applied. In the case of hot-mix a heater, homogeniser or emulsifier, a cooler, an ageing cabinet and a freezer are required. The cold-mix type of ice-cream is produced by adding proprietary ice-cream powders to cold water, whisking briskly and then freezing. Any contamination which is allowed to get into the powder will persist in the finished product. The chemical analysis of this type of ice-cream is entirely dependent on the ingredients used in the manufacture of the powder and it was from such type that the unsatisfactory results above referred to were obtained.

It must be apparent that there has been an enormous increase in the consumption of ice-cream. Anyone can verify this for himself by observing what is happening on the streets of our city to-day where can be witnessed the astonishing spectacle of hundreds of people (many of them of otherwise unimpeachable manners) consuming large slabs of the commodity. In pre-war days when the tendency was to utilise high-class ingredients like whole milk, condensed milk, real cream and gelatine the growth of the ice-cream trade was, from the nutritive point of view all to the good. To-day this can scarcely be said and there can be little doubt that there is a very strong tendency to exploit the public craving. The costings leave little doubt on this score. We have seen that the quality of ice-cream can vary from a fat content of 8 per cent. or more at one end of the scale to a content which is negligible at the other end. This shews us that there are unscrupulous traders prepared to cash in on the craving and it is against such persons that the public require to be protected, as they have been protected against the milk vendor who did not scruple to add water to his milk. The remedy for this state of affairs is the creation of legal



standards reserving the term "ice-cream" for a product containing not less than 8 per cent fat.\*

However, from the public health point of view, we are more concerned with the possibility of the spread of disease and it must be impressed that the potentialities here are on a par with those of milk. We have several legal safeguards, in this connection, so far as milk is concerned but none at all for ice-cream and this is of very active concern to us for we know of cases in which it is prepared under conditions which can only be classed as appalling, but in which we are quite powerless to intervene. It is an urgent public health problem and the necessary legal safeguards should be forthcoming with the least possible delay. It has been suggested that the legal standards should include the following as reasonable and likely to protect the public against risk of infection and exploitation :—

1. All premises concerned in any way with the manufacture, sale or distribution of ice-cream to be registered.
2. Premises to conform to certain specifications.
3. Power to be conferred on local authorities to make bye-laws to secure hygienic conditions in connection with the handling, wrapping and delivery of ice-cream, etc.
4. M.O.H. to have power to prohibit sale of ice-cream if he has reasonable grounds for suspecting that is likely to cause food poisoning or likely to cause milk-borne disease.
5. All ice-cream mixes to be pasteurised by the "holder" process immediately before freezing, and plant with the necessary temperature control to be installed.
6. No ice-cream to be sold from a vehicle or in a theatre, cinema, etc., unless wrapped or in a closed container.
7. Provision for the adequate sterilisation of utensils and prohibition of use, for any other purpose, of the accommodation where ice-cream is manufactured.
8. The term "ice-cream" to be reserved for a product containing not less than 8 per cent. fat, and the term "water-ice" to be employed in respect of all products not conforming to that standard.
9. The bacterial content of ice-cream and water-ice to be not more than 100,000 organisms per c.c. and no *Bacillus coli* to be present.

\* As a matter of interest a few samples collected locally were recently submitted for analysis. The fat-content varied from 7.9 per cent. to 3.6 per cent. On the basis of what has been said above this is not such a bad showing but one would scarcely be justified in generalising from such a very limited number of samples. At the moment our real problem is to secure sufficient control over methods of production to ensure a reasonably pure product from the hygienic point of view. It was, however, of interest to note that from the point of view of fat-content the two best samples were made locally, the third best being made elsewhere. Again it was noted that a locally produced sample which is noted for its size actually contained far less by weight than that produced by a rival firm and retailed at the same price. Both these samples cost threepence, one weighed 123 grams and assayed 7.9 per cent. fat; the other weighed only 71 grams and assayed 7.3 per cent. fat. It would seem then that some process is employed to blow out the ice-cream and make it appear that far more was supplied than was actually the case. But perhaps the most interesting feature disclosed was that in the case of two poor samples (3.6 per cent. fat each) the amounts sold were 43 grams for twopence and 57 grams for threepence, so that those who purchased these very inferior products actually paid a much higher price than was asked for the much better samples.



## Control of Food Supplies.

The following remarks are extracted from the report of Mr. S. R. J. CUSSEN, Chief Veterinary officer. They relate to meat inspection and to control over sausage factories and the trades ancillary to slaughtering :—

There are 85 Master Butchers engaged in the sale of meat within the Borough. 42 of these submit their meat for Inspection and Stamping at the Meat Inspection Depot. 52 of these butchers slaughter inside and 33 slaughter outside the Borough, of the 42 who avail of the meat Inspection Depot 16 slaughter outside our jurisdiction.

The Meat Inspection Depot was provided by the Corporation to facilitate butchers in having their meat inspected and stamped before exposing it for sale in their shops. By availing of the Depot they avoid the danger of having diseased meat seized in their shops and therefore would be secured against the risk of having their business prejudiced by the prosecutions which follow such seizures.

The Depot was opened towards the end of 1938. It was intended to put into operation at the same time a set of Bye-Laws known as the "Meat Inspection Bye-Laws," under which it would be unlawful to expose fresh meat for sale unless it had been inspected and stamped with the Corporation Stamp. The Bye-Laws were never adopted, consequently the Depot has more or less lost its value. The 38 butchers who avail of the Depot are doing so at a great disadvantage. They run the risk of having their meat condemned if affected with tuberculosis (which is the most common disease met with in the course of meat inspection), while the 43 who do not avail of the Depot do not run that risk. Their meat may or may not be inspected in their shops and more often than not there is no offal available for inspection, and if it is available the lymphatic glands where evidence of tuberculous disease is likely to be found may be cut away.

I would strongly recommend that the Meat Inspection Bye-Laws be put into operation, so that all meat would go through the Depot and be branded with the Corporation Stamp, which is the only guarantee for the consumer that the meat had been inspected. All butchers would then be on an equal footing.

The Meat Inspection Depot was never intended to take the place of a Municipal Abattoir, but in the absence of the latter, it is the next best thing, and is the only means at the moment of eliminating diseased meat from our supply, but the Meat Inspection Bye-Laws which prohibits the sale of unstamped meat must be put in force.

The inspection of meat is necessary as will be seen from the following table which shows the number of Beef Carcases examined at the Depot and found affected with tuberculosis during the past 8 years :—

Year	Carcases Examined	Affected	Wholly	Partially	Percentage Affected
1939	1,321	502	32	470	38.00
1940	1,567	336	28	308	21.43
1941	5,445	1,678	38	1,645	30.80
1942	4,242	683	10	673	16.10
1943	3,227	666	8	658	20.63
1944	3,702	821	6	815	22.17
1945	3,918	877	9	868	22.38
1946	4,221	931	10	921	22.05



The names of those butchers who avail of the meat inspection service are set out on page 79 of this report.

It is very unsatisfactory that in the second city in Eire we have no Bye-Laws controlling the handling and storage of food, or the care of machinery and utensils, or the conditions under which the premises should be kept, or the disposal of filth and waste in sausage factories and triperies.

In recent years a few small traders have engaged in the manufacture of sausages and puddings whose premises and equipment do not lend themselves to the clean handling of these articles of food. To my mind all sausage factories and triperies should be under strict control. No meat should be allowed into a sausage factory unless thoroughly inspected and stamped. Unscrupulous traders could easily dispose of diseased and inferior meat by manufacturing it into sausages without it being detected by the food inspector. One of my veterinary teachers used to describe sausages and puddings jocosely as "Bags of Mystery" that may contain anything from your neighbour to your neighbour's cat." I did not know as much then as I do now about the manufacture of sausages and puddings and what they could contain. Colouring matter and flavouring agents cover a multitude. Sausages could be very dangerous and could easily give rise to serious outbreaks of food-poisoning. Consumers are under the impression that the meat contained in sausages is already cooked, but it is not, it is raw and consequently the sausage requires to be well cooked before use. The meat in puddings is cooked and these do not require much cooking by the consumer.

Sausage meat in the course of mincing and when going through the filling machine could become contaminated by dirty machinery. In the course of inspections of some of the smaller sausage factories, where facilities for washing and sterilizing the equipment are not available, I have seen sour and partly decomposed meat scraps adhering to the blades of the mincer and to the plunger and outlet pipe of the filling machine.

I would emphasise the great need for the proper control of sausage factories. Bye-Laws should be framed and put into operation under which only buildings that come up to a certain specification as regards floor-space, ventilation, height and drainage and sanitary arrangements would be used for the purpose—all meat to be inspected, handled, and stored in a hygienic manner. Facilities for washing and sterilizing machinery, and utensils to be provided. Persons employed in the factory to be free from disease and clean in person and clothing.

The same applies to triperies where tripe and drisheens are manufactured. We have no proper control over these places, except in a case where the tripery forms part of the licenced slaughtering premises. Bye-laws are required to control the preparation and storage of stomachs used in tripe manufacture, and the storage of blood used for drisheen manufacture. Stomachs are sometimes handled in a most primitive manner even in slaughterhouses within the borough where proper receptacles for receiving them are provided. When the animal is disemboweled the stomach and intestines are thrown in the corner of the slaughterhouse or outside the slaughterhouse door, and there left unemptied of contents



until called for 12 to 24 hours after by the tripe manufacturer. This is due to carelessness on the part of operator, butchers or other employees of occupiers of slaughterhouses who do not observe the slaughterhouse Bye-Laws or who are not held responsible for their observance.

It is no wonder the tripe prepared in Cork is such a dark colour when the partly digested food is left in the stomach for such a long time before being emptied. These stomachs should be emptied and steeped in clean, running water and removed by the tripe manufacturer in reasonable time. There are no laws or regulations to compel the butcher or person in charge of a slaughterhouse to empty contents of a stomach immediately it is disemboweled. Blood for drisheen manufacture is often collected without due regard for cleanliness. I have from time to time found in slaughterhouses blood stored in uncovered and wooden tubs with pieces of wool and even sheeps droppings floating on the surface. This blood *was intended* for drisheen manufacture.

Anything intended for use as human food should not be left exposed to contamination in slaughterhouses, triperies and sausage factories by rats, cats, dogs and flies. Slaughterhouses and triperies are usually infested with rats.

I mention these cases to show the great need for Bye-Laws to bring these places under proper control.

### Disinfestation.

This service was organised during the year. It was based on the known efficacy of the substance D.D.T. as an insecticide. This has been proved to be many times greater than any such substance previously known and the idea behind the scheme was, by the use of this new material, to relieve the poorer section of our community of the incubus placed on them by the infestation of their houses with lice and bugs and, incidentally, flies and fleas. This problem is a perennial one and as D.D.T. is incomparably more effective for this purpose than anything hitherto produced one was justified in viewing a proposed campaign for the eradication of these pests with considerable optimism. Dr. J. D. MacCormack, a Departmental Inspector, who has taken much interest in this problem, came to Cork and explained the technique employed to the staff and as a result the campaign was organised and set on foot.

The city was mapped out into areas, three squads (each consisting of a male and female) working under the supervision of a sanitary inspector worked systematically throughout the year from one end to the other. Generally speaking the worst classes of houses were selected in the beginning, such as tenements and common lodging houses, but many more substantial buildings were dealt with later on. By the end of the year the actual number of dwellings dealt with was as follows :—

Tenements, 534 ; common lodging houses, 16 ; private houses, 2,556 ; making a grand total of 3,106. The number of individual rooms dealt with (included in this total) amounted to 12,743. In addition, personal disinfestation was offered to anyone who cared to avail of it and 1,615 persons were so treated. These figures represent a great deal of very hard work and the staffs engaged are to be complimented not only on the amount of ground covered but for the tact and discrimination exercised, which is reflected in the successful outcome of the venture.



One of the most surprising features of this campaign is the manner in which it was received by the people concerned. Quite apart from the considerable temporary upheaval in their domestic arrangements, one naturally expected that the very nature of the proposal would have caused strong opposition, but such was not the case. On the contrary the staff was welcomed practically everywhere. Naturally there were resisters who refused access to their premises, but these were few and far between. The great majority of people involved realised that this was a service placed at their disposal by the Corporation and likely to be of considerable benefit to them and accordingly they freely availed of it. Quite apart from the fact that not a single complaint reached the department, the figures adduced speak for themselves. Much capital has been made as to the unjustifiable intrusion into the private lives of the community involved in this process, but these objections have been almost entirely doctrinaire in character and are not experienced in actual practice. The average person who is continually pestered by the attentions of the bed-bug and whose night's rest is being destroyed by this persistent creature is scarcely likely to be affected by the ethical considerations involved. If he sees a chance of being rid of his enemy he will welcome it with open arms, as it were, and in effect this is actually what has happened in connection with this campaign.

As to its efficacy, there is scarcely any doubt that it has been a complete success. There have been failures here and there, as was to be expected but from re-inspections made late in the year the permanence of the results have exceeded our most sanguine expectations. Houses which have been heavily infested for generations appear to have been completely rid of the pest and have remained free. Hitherto, the most that could be expected from the materials used was a temporary relief. Adults and young bugs were killed by the direct application of the agents, but any which did not come into contact with the insecticide escaped. The eggs escaped entirely and when they hatched out there was a fresh generation to commence the trouble all over again. The unique quality in D.D.T. is its *residual toxicity* which remains long after it has been applied, sufficiently long to deal with the young bugs as soon as they have left the egg case.\* From the point of view of permanence of results D.D.T. would almost appear to be the ideal insecticide and it is a veritable godsend to poor people compelled to live in insanitary houses, who have no proper facilities for washing and who, very often, are unable to purchase soap and cleansing materials to maintain themselves and their families in decent standards of cleanliness. We should think twice before deciding to deprive these people of the advantages afforded by a product such as D.D.T., justifiably hailed as one of the major discoveries of the age.

The bed-bug may be regarded as the standard when it comes to considering the efficiency of a substance as an insecticide, for he is very tough indeed from the point of view of resistance to unfavourable external influences, but he is no match for D.D.T. And so we find that such pests as the fly and the louse display relatively very little resistance, while the

\* In January 1947 I required bugs for demonstration purposes. One of my inspectors scoured a number of houses which had been noted for their degree of infestation. These houses were situated side by side. Eventually he got some in a house in the centre of the row. All the houses on either side were free of bugs. These houses had been treated early in 1946 but, in the case of the infested house, access could not be obtained at the time and so it remained infested while houses on either side of it remained free from infestation.



ubiquitous flea appears to come somewhere in between. We are very much concerned with these three insects as vectors of disease. In the case of the fly I have previously remarked on his rôle in the spread of epidemic diarrhoea and have drawn attention to the fact that the year 1946 was particularly characterised by the absence of flies and freedom from diarrhoea. D.D.T. is particularly lethal for the house-fly, nothing even remotely approaching it has been produced hitherto and there is no reason to doubt that, applied on a sufficiently wide scale, it should effect a very material reduction in our figures for infant mortality. This being so it would indeed be a very short-sighted policy that enforced any curtailment of its use.

As to the flea, we are not so much concerned with its potentialities as a disease spreader as with its nuisance value—and very few people would deny that the latter is considerable. It is especially associated with the spread of bubonic plague, but this is a disease which is not normally found in these countries and which is dependent on shipping for its introduction. But most people do not appreciate the attentions of the flea and it is therefore a consolation to know that the same agent that disposes of the fly, the louse and the bug, deals with the flea in equal fashion.

The louse, however, is a different proposition. Nowhere in literature is it possible to find a laudatory reference to this creature. Burns sums up the general sentiment in two lines :

“ Ye, ugly, creepin,’ blastit wonner  
Detested, shunned by saunt and sinner.”

There is a distinct social problem created by the louse which places it in a position apart from the other ectoparasites of man, but we are not so much concerned with this now as with its relationship to the spread of typhus fever and even a cursory examination of the appropriate table in this report will shew that typhus is a real problem in this country. It is true, of course, to say that it is a great many years since a case occurred in the city, but we have every reason to know that the disease is still endemic in certain areas in the country where it flares up in epidemic form from time to time. There is always danger, therefore, that it may be introduced from outside with serious consequences for the citizens. It is important then that the public should be made aware of the simple biological fact that without lice there can be no typhus. It is necessary for the organism to pass a part of its life cycle in this parasite and it is by the louse that it is transmitted from one human being to another. It follows from this (typhus being such a deadly disease) that no effort should be spared to remove the causes disposing to its spread and it was not without reason that the government of this country decided to embark on a policy aimed at its complete eradication. If this policy has not achieved its aim, so much the worse. D.D.T. has in practice proved itself the ideal agent for this purpose and it would indeed be regrettable if the promulgation of obscurantist doctrine should have the effect of nullifying its benefits so far as this country is concerned. The benefits of D.D.T. are so far-reaching and so potent that every possible effort should be made to encourage its use on the widest scale possible.

Our objective in this campaign was directed in the first instance, against the bed-bug so as to make living conditions a little more tolerable for those of our people whose misfortune it is to have to live in contact



with this insect. As far as it went I believe the campaign achieved a very high degree of success. Incidental to this aspect we have reason to believe also that we have achieved a very substantial reduction in the number of house-flies, lice and fleas which may have been in these houses, thus producing a further amelioration in the living conditions of such people and, incidentally too, by reason of the reduction in the fly population, predisposing to a reduction of our infant mortality figures. When one considers the amount of time, energy and money formerly spent in trying to reduce the number of flies and compares the relative futility of the methods then used with the efficacy afforded by D.D.T. the wonder is that we do not embark in an all-out effort to eradicate the pest—an aim now well within our competence to achieve. What we have already done I have regarded as one of the most important public health measures ever effected in the city and it was hoped that this aspect of our work would become a permanent feature of public health policy. The results to be expected were so important and so far-reaching that one seemed to be justified in such a hope.

### Baths and Wash Houses.

In discussing such topics as bugs, lice and fleas we are disposed to do so *sotto voce*. In other words the mere suggestion of such topics is socially taboo. By closing our eyes to them we ignore their existence. Similarly with scabies and its causative agent the itch-mite. To the entomologist these creatures are of deep interest and their life-history and habits have been worked out in considerable detail. There is no reason why grown people should not consider them in the same detached fashion and decide what should be done about them if it is considered that their continuance is undesirable.

There is no doubt whatever that the degree of infestation, personal as well as communal, is in direct proportion to the facilities for washing. Where these facilities are adequate there is no infestation, where they are lacking infestation is rampant. Through no fault of their own large numbers of people are compelled to live in houses in which there are not baths. This is by no means confined to tenement houses and similar dwellingplaces, it applies too to a great number of better-class houses. In such circumstances the maintenance of decent standards of personal cleanliness is a very difficult problem and before we indulge in criticism of our more unfortunate brethren we should consider well in what degree we ourselves are responsible for this position.

This is a problem by no means confined to this area, it is, in fact, universal but it has been met in different ways in different places and in some places no attempt has been made to solve it. In general it may be said that the solution to the problem has been the provision of baths to which the citizen could repair and for a small charge (or free of charge as the case might be) cleanse his person as often as necessary. As far back as 1846 an Act of Parliament was passed for the purpose of enabling public authorities to set up such establishments. This Act was an adoptive one and it was availed of by the more progressive and enlightened municipalities. Hitherto nothing has been done in this city in the way of providing such an essential service for the community. It is not to be wondered then that when scabies was introduced to the city in the war years, it became widespread through the city, nor is it to be wondered that certain categories are burdened with vermin more than their share.



It is all very well to assume a censorious attitude towards these persons. Such criticism is almost always based on a totally inadequate knowledge of the difficulties with which they are faced in the matter of maintaining personal cleanliness. In the case of a person living in a house in which there is no bath, how is he to keep himself and his family clean if there is not a public bath to which he can resort? The difficulty is almost insuperable and if this be so in what case is the family living in one of the upper floors of a tenement-house? In this instance the chances of maintaining decent standards of cleanliness are, humanly speaking, impossible. It is to meet the needs of such people that the Act in question was passed and it is not to our credit that we have never done anything hitherto about it. That there is a demand for such a service is clear from our experience at the scabies clinic as many people enquired if they could return for baths after they had been treated and cured.

The Act provided not only for baths but also for wash-houses to which housekeepers could take their household linen, bedding and clothing for washing. Many municipalities have provided facilities of this nature and they have been eagerly availed of. Only those who are conversant with the difficulties experienced by the mother of a family in, say, a tenement can have any adequate idea of what a boon such a wash-house would be. Provisions for such institutions were included in the Public Health Bill 1945 and, no doubt, they will be incorporated in the Local Government Bill which is to follow.

It would almost seem as if one simply has not considered the question of the provision of public baths and wash-houses. We have swimming baths, of course, but these are mere luxuries and do not meet the case. It seems appropriate therefore to bring the matter to public notice now especially when there are so many derelict sites in the flat of the city which, if they are not to be dedicated for open spaces, might at least be used for the erection of buildings which would subserve the purpose indicated. There is no doubt that they would meet an acute public need.



# Section I.—Vital Statistics.

## 1.—Population.

The Preliminary Report of the Census of Population (taken on 12th May, 1946) indicates that the population of this city was 75,361 persons on that date. The corresponding figure in the Census of 1936 was 80,765 so that there has been a decline of 5,404 (or 6.7 per cent.). The number of females in the population has been estimated to be 40,916 as against 34,445 males. The ratio of females per 1,000 males has therefore increased from 1,110 to 1,188 during the inter-censal period. Taking all the urban areas with population over 10,000 only two shew a decline—Cork and Tralee (—2.9 per cent.). The following areas have yielded increased populations: Dun Laoghaire, 12.3 per cent.; Galway, 11.7 per cent.; Bray, 9.5 per cent.; Drogheda, 8.4 per cent.; Dublin, 7.1 per cent.; Dundalk, 6.4 per cent.; Limerick, 4.7 per cent.; Sligo, 2.7 per cent.; Waterford, 1.3 per cent.; Kilkenny and Wexford both shew an increase of 0.5 per cent.

Figures are not yet available for an analysis of the age and sex constitution of the population. They should be of some interest. The population decline in this area has been referred to in previous reports as indicative figures were available during the intercensal period from the Registers of Population collected in 1941 and 1943 in connection with rationing of supplies. These computations indicated reductions of 3,900 and 1,300 respectively. The latest available figures for age and sex are those for the year 1941 (the population has suffered a further decline of 1,473 since that year). These figures are of interest since they indicate that the fall was much greater among males than females and that it was the years 20 to 40 which were principally affected. The relevant table is reproduced herewith:—

Table 1.—Cork City.—Population classified by age-groups for each sex, arranged according to Census Return, 1936 and Register of Population, 1941.

AGE GROUP	MALES			FEMALES			TOTALS		
	1936	1941	Change	1936	1941	Change	1936	1941	Change
Under 1	820	757	— 63	888	778	—110	1,708	1,535	—173
1 Year	809	751	— 58	814	681	—133	1,023	1,432	—191
2 Years	770	805	+ 35	768	749	— 19	1,538	1,544	+ 16
3 „	798	757	— 41	811	720	— 91	1,609	1,477	—132
4 „	785	734	— 51	794	775	— 19	1,579	1,509	— 70
5-9 „	3,721	3,516	—205	3,653	3,693	+ 40	7,374	7,209	—165
10-14 „	3,872	3,588	—284	3,574	3,422	—152	7,446	7,010	—436
15-19 „	3,352	3,388	+ 36	3,717	3,697	— 20	7,069	7,085	+ 16
20-24 „	3,434	2,763	—671	4,159	3,772	—387	7,593	6,535	—1,058
25-29 „	3,122	2,369	—753	3,763	3,612	—151	6,885	5,981	—904
30-34 „	2,723	2,407	—316	2,977	3,111	+134	5,700	5,518	—182
35-39 „	2,567	2,157	—410	2,898	2,846	— 52	5,465	5,003	—462
40-44 „	2,138	1,954	—184	2,360	2,553	+193	4,498	4,507	+ 9
45-49 „	1,973	1,756	—217	2,340	2,143	—197	4,313	3,899	—414
50-54 „	1,907	1,635	—272	2,168	2,061	—107	4,075	3,696	—379
55-59 „	1,725	1,557	—168	1,852	1,883	+ 31	3,577	3,440	—137
60-64 „	1,408	1,410	+ 2	1,649	1,760	+111	3,057	3,170	+113
65-69 „	1,142	1,174	+ 32	1,210	1,371	+161	2,352	2,545	+193
70-74 „	688	853	+165	1,132	1,229	+ 97	1,820	2,082	+262
75-79 „	372	395	+ 23	615	637	+ 22	987	1,032	+ 45
80-84 „	113	152	+ 39	237	295	+ 58	350	447	+ 97
85-89 „	37	38	+ 1	74	91	+ 17	111	129	+ 18
90-94 „	9	5	—4	24	20	— 4	33	25	— 8
95-99 „	1	2	+ 1	2	8	+ 6	3	10	+ 7
Over 100	—	2	+ 2	—	2	+ 2	—	4	+ 4
Totals ...	38,286	34,925	—3,361	42,479	41,909	—570	80,765	76,834	—3,931



In the absence of the corresponding figures for the recent census this table serves a useful purpose. In connection with the population decline it has been suggested that an important factor has been the removal of large numbers of persons from the city area to housing sites in the adjacent rural area. This view is discounted by the table. If it were a factor of any weight at all the reduction would be evenly distributed throughout the age and sex groups but we see that this is not so. There has been a fall of 1,058 in the 20—24 years group (of which 671 is accounted for by males and 387 by females); in the 25—30 group the decline was 904 (753 males and 151 females), while the total decline 3,931 is accounted by 3,361 males and 570 females. It is obvious from these figures that we cannot account the decline by a simple assumption that it has been due to the removal of a large number of families from the city to the neighbouring rural area.

One could regard these figures with the greatest equanimity if they could be held to indicate a reversal of the flow from the country to the towns but, alas, no such interpretation could possibly be put upon them. There has been no slowing down in the flight from the land. The census figures make this clear enough for (with the exception of Cork and Tralee) while all the urban areas show increases which average out at about 4.5 per cent. the population of the remainder of the country has fallen by 3.4 per cent. The only increases registered in the rural areas have been accounted for by internal migration resulting from turf schemes and to the settlement of Irish-speaking colonies and of families under Land Commission Schemes. Depopulation in the rural areas has now reached very serious dimensions, such dimensions in fact that the urban community is at last really beginning to feel the pinch. It is reflected particularly in shortages of food supplies such as milk, butter and eggs, and soaring prices for these commodities and for meat and similar foodstuffs. There seems to be no doubt that large numbers of farmers are going out of milk production because of the difficulty of obtaining labour and, indeed, of the unwillingness of the younger generation to attend to milking. Such a state of affairs is bound to have most serious repercussions in the future. However, reverting to our own immediate problem, it seems clear enough that the decline in population has been due to emigration, but why it should have effected this city to such an extent (while other urban areas have increased their population) is not so clear. One probable explanation is in the large numbers who left the city during the war to work in the English branch of a local manufacturing plant.

The fluctuations in the population figure is shewn in the following table which indicates the totals in the various census and in years in which the Registration of Population was taken (1941 and 1943).

1881	...	...	...	80,124
1891	...	...	...	75,345
1901	...	...	...	76,122
1911	...	...	...	76,673
1926	...	...	...	78,464
1936	...	...	...	80,765
1941	...	...	...	76,834
1943	...	...	...	75,484
1946	...	...	...	75,361



## 2.—Births.

According to the Annual Summary of the Registrar General 1,815 births were *registered* in Cork during the past year (this figure is subject to correction). The number of births *notified* to the Local Authority (in accordance with the provisions of the Notification of Births Acts) was 1,756. In addition to the latter figure 41 still-births were notified, bringing the total of *notified* births to 1,797. On the basis of the Registrar General's figure the birth-rate for the year was 24.0. The general trend of the birth-rate is seen in the following table.

1881-90	...	...	...	26.2
1891-1900	...	...	...	27.2
1901-10	...	...	...	26.0
1911-20	...	...	...	24.7
1921-30	...	...	...	23.5
1931-40	...	...	...	22.6
1941	...	...	...	21.8
1942	...	...	...	22.2
1943	...	...	...	23.2
1944	...	...	...	24.7
1945	...	...	...	22.4
1946	...	...	...	23.2

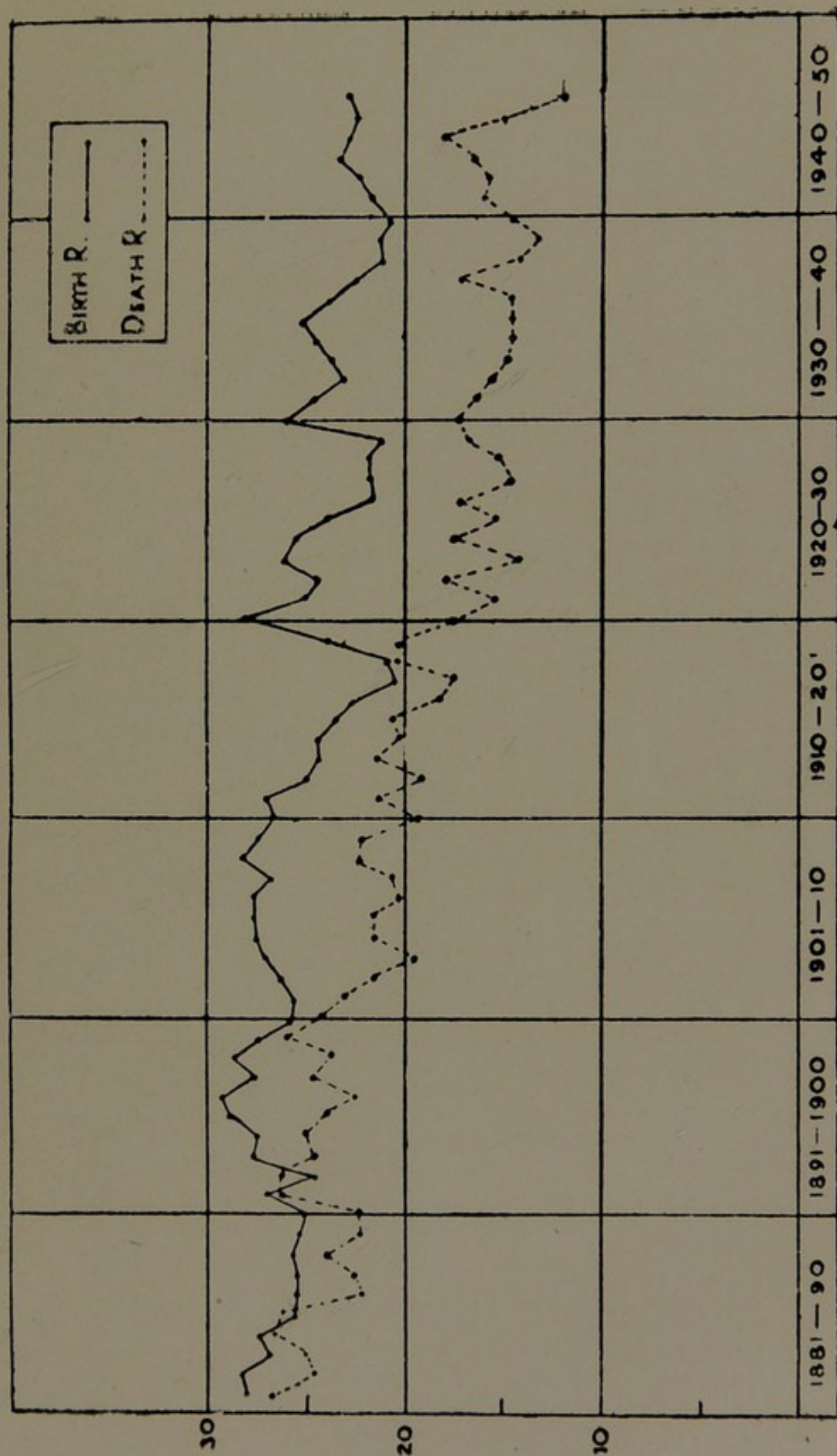
Table 2.—Birth Rates for Cork City and Éire from 1881.

Year	Cork	Éire	Year	Cork	Éire
1881	27.7	24.0	1914	24.3	22.3
1882	28.2	23.8	1915	23.2	22.0
1883	27.0	23.4	1916	22.6	21.1
1884	27.4	23.5	1917	20.2	20.0
1885	25.6	23.1	1918	20.8	19.9
1886	25.4	22.7	1919	23.8	19.9
1887	25.5	22.5	1920	28.3	21.6
1888	25.7	22.1			
1889	25.2	22.0	1921	24.6	19.7
1890	25.0	21.6	1922	24.2	19.5
			1923	26.2	20.5
1891	26.9	22.3	1924	25.5	21.0
1892	24.6	21.7	1925	23.8	20.8
1893	27.8	22.1	1926	21.5	20.6
1894	27.4	22.1	1927	21.7	20.3
1895	28.9	22.3	1928	21.7	20.1
1896	29.2	22.7	1929	20.9	19.8
1897	27.5	22.5	1930	25.4	19.9
1898	28.7	22.3			
1899	27.3	22.1	1931	24.4	19.4
1900	25.8	21.8	1932	23.0	19.0
			1933	23.7	19.3
1901	25.6	21.8	1934	24.4	19.5
1902	26.2	22.2	1935	24.8	19.6
1903	27.1	22.1	1936	23.7	19.6
1904	27.4	22.7	1937	22.3	19.1
1905	27.6	22.6	1938	21.1	19.4
1906	27.5	22.8	1939	21.1	19.1
1907	25.6	22.4	1940	20.7	19.1
1908	27.3	22.7			
1909	26.3	22.9	1941	21.8	18.9
1910	25.8	22.8	1942	22.2	22.0
			1943	23.2	21.8
1911	26.0	22.8	1944	24.7	22.2
1912	24.8	22.7	1945	22.4	22.3*
1913	24.2	22.6	1946	23.2	

\* From *Annual Summary* of Register General.



FIG. 1—BIRTH AND DEATH RATES FROM 1881 TO PRESENT YEAR









Examination of the notifications as to place of birth shewed that 968 took place in the mothers' homes the balance having occurred in various institutions and private hospitals.

The number of illegitimate births notified during the year was 37 representing 2.0 per cent. of the total notified births. The corresponding figures for the previous year were 40 births being 2.4 per cent. of the total registered births.

### 3.—Deaths.

1,072 deaths have been assigned to this area in the Annual Summary of the Registrar General for 1946. This is equivalent to a crude death rate of 14.2 per 1,000 of the population. The figures for 1945 were 1,128 deaths and the rate 14.9 per 1,000. There is some discrepancy between our figures collected locally (shewn in Table 5) and those of the Registrar General. This discrepancy has persisted in successive years and has been previously alluded to. According to our records the number of deaths was 1,035 (compared with 1,112 in the previous year). The difference, it is to be assumed, is explained by the occurrence of deaths in other places of persons normally resident in Cork, of which deaths we would be unaware. Actually the difference between ours and those of the Registrar General are not of statistical significance. The information to be obtained from our age-grouping is slightly more detailed than that of the Registrar General and a comparison has been made in the following table of the number of deaths in each age-group as recorded from locally collected statistics for the years 1945 and 1946.

Table 3—Deaths according to age-groups

Age Group	1946	1945	Difference
0-1 years	109	156	— 47
1-5 „	24	23	+ 1
5-15 „	17	26	— 9
15-25 „	29	35	— 6
25-35 „	36	41	— 5
35-45 „	67	50	+ 17
45-55 „	94	99	— 5
55-65 „	181	184	— 3
65-75 „	263	289	— 26
75-85 „	170	169	+ 1
85 Upwards	45	40	+ 5
Males	489	541	— 52
Females	546	571	— 25
TOTAL	1035	1112	— 77

Table 5 sets out the death rates per 1,000 persons living in Cork City, Eire and in England and Wales during the period 1881 to 1946. These figures do not necessarily represent the relative healthiness of the communities concerned since they are based on crude death rates. In order to compare such conditions the figures would have to be based on standardised death-rates. The general trend of the death-rate is, however, indicated by this table.



Table 4.—Analysis of Causes of Death at different age-periods during the year 1944

Causes of Death:	TOTAL	Sex		Un. 1 yr.	1 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and up
		M.	F.											
Measles .....	4	2	2	—	2	1	1	—	—	—	—	—	—	—
Diphtheria .....	2	1	1	—	2	—	—	—	—	—	—	—	—	—
Influenza .....	11	7	4	—	—	1	—	—	—	—	4	3	2	1
Encephalitis .....	2	2	—	—	—	—	—	1	—	1	—	—	—	—
Pulmonary Tuberculosis	79	44	35	—	—	5	11	11	21	18	8	4	1	—
Other Tuberculosis :														
(1) Meningitis .....	7	4	3	1	3	2	—	1	—	—	—	—	—	—
(2) Intestinal .....	6	3	3	1	2	1	1	—	—	—	—	1	—	—
(3) Bone and Joint .....	7	5	2	—	—	1	—	1	1	1	3	—	—	—
(4) Other Forms .....	2	—	2	—	—	—	1	—	—	1	—	—	—	—
Cancer .....	92	38	54	—	—	—	—	2	6	16	31	29	6	2
Diabetes .....	4	2	2	—	—	—	—	—	—	—	2	2	—	—
Hemiplegia :														
(a) Haemorrhage .....	52	16	36	—	—	—	—	—	1	6	12	21	10	2
(b) Thrombosis .....	16	5	11	—	—	—	—	—	—	2	3	6	5	—
Cardiac Disease .....	330	153	177	—	1	1	7	8	14	18	65	115	81	20
Arterio-Sclerosis .....	18	6	12	—	—	—	—	—	—	1	1	5	6	5
Bronchitis .....	68	45	23	2	—	—	1	1	6	7	10	29	10	2
Broncho-Pneumonia .....	21	10	11	8	5	—	—	—	—	1	3	3	1	—
Lobar-Pneumonia .....	17	5	12	—	1	—	—	1	2	4	3	3	3	—
Other Respiratory Diseases .....	22	9	13	—	1	—	—	—	2	4	6	7	2	—
Peptic Ulcer .....	9	6	3	—	—	—	—	—	1	3	4	1	—	—
Gastro-Enteritis .....	19	10	9	19	—	—	—	—	—	—	—	—	—	—
Hepatic Cirrhosis .....	2	1	1	—	—	—	—	—	—	1	1	—	—	—
Nephritis .....	17	10	7	—	—	2	1	1	2	3	4	2	2	—
Puerperal Causes .....	2	—	2	—	—	—	—	2	—	—	—	—	—	—
Congenital Debility, etc. ....	56	31	25	56	—	—	—	—	—	—	—	—	—	—
Violent Deaths .....	26	13	13	3	2	2	—	3	1	1	3	6	4	1
Other Defined Causes :														
(1) Gastro-Intestinal .....	6	3	3	—	1	—	—	—	—	—	1	3	1	—
(2) Convulsions .....	6	3	3	4	2	—	—	—	—	—	—	—	—	—
(3) Central Nervous System .....	11	7	4	—	—	—	—	2	1	1	3	3	1	—
(4) Blood Diseases .....	7	2	5	—	—	1	—	—	1	—	2	2	1	—
(5) Genito-Urinary .....	14	13	1	—	—	—	1	—	2	—	1	3	6	1
(6) Marasmus .....	7	1	6	6	1	—	—	—	—	—	—	—	—	—
(7) Rheumatism .....	6	2	4	—	—	1	—	—	—	1	—	3	1	—
(8) Hepatic Disease .....	3	—	3	—	—	—	—	—	—	—	1	—	2	—
(9) Septicaemia .....	5	4	1	1	—	—	1	—	1	—	1	1	—	—
(10) Gangrene .....	5	3	2	—	—	—	—	—	—	—	—	2	1	2
(11) Senile Decay .....	33	11	22	—	—	—	—	—	—	—	1	3	20	9
(12) Syphilis (Cong.) .....	2	1	1	2	—	—	—	—	—	—	—	—	—	—
(13) Meningitis .....	3	1	2	2	—	1	—	—	—	—	—	—	—	—
(14) Hernia .....	5	2	3	—	—	—	—	—	—	—	3	1	1	—
(15) Brain Tumor .....	5	2	3	—	—	—	2	1	1	—	—	1	—	—
(16) Miscellaneous .....	26	7	19	4	1	—	—	1	4	4	5	4	3	—
Totals .....	1035	489	546	109	24	19	27	36	67	94	181	263	170	45

The figures in this table are computed from returns of weekly deaths by the District Registrars, they have not been corrected for *inward transfers* and accordingly do not correspond with the returns of the Registrar General.



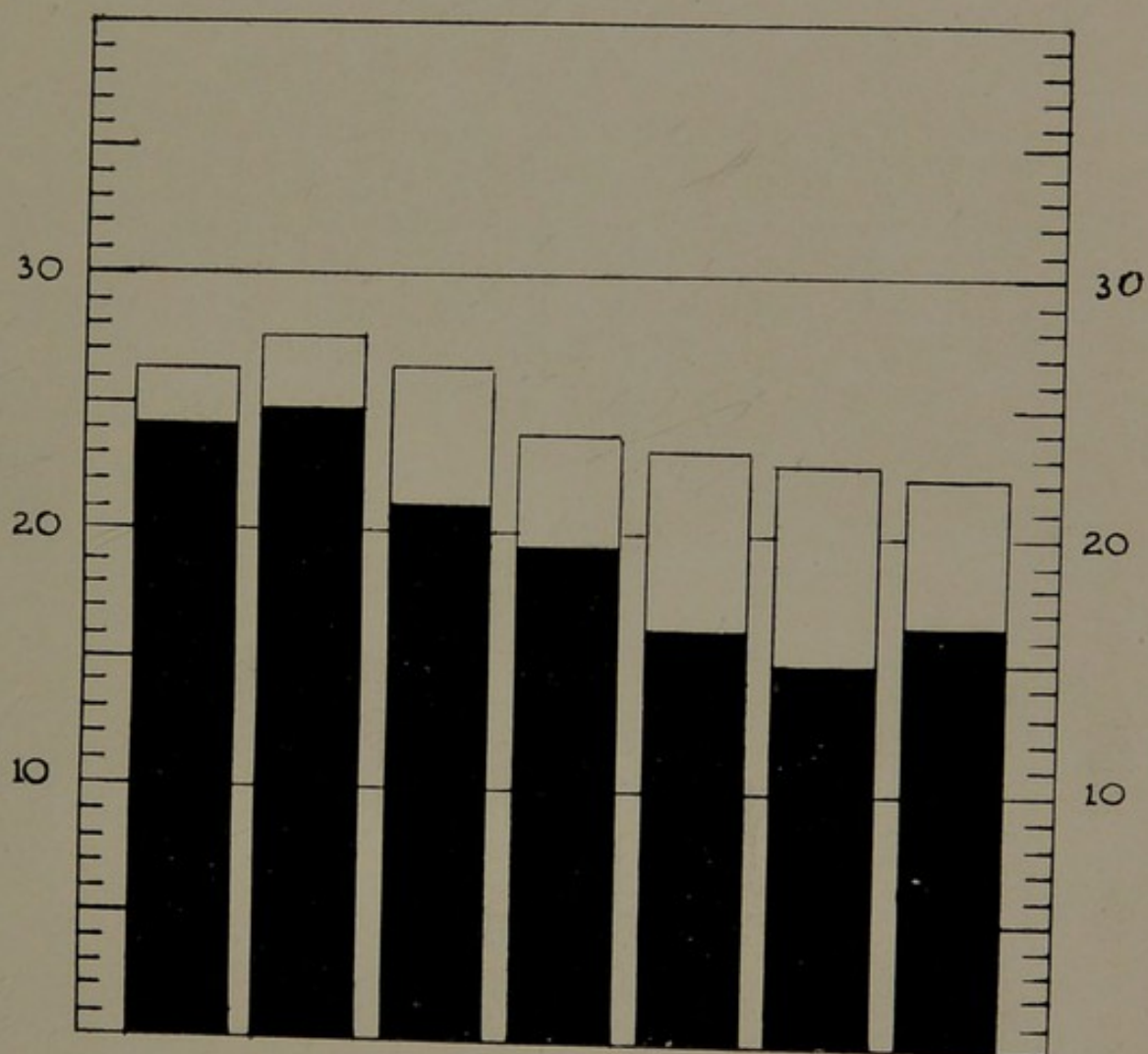


FIG. II.—BIRTH AND DEATH RATES AS DECENNIAL AVERAGES FROM 1881 TO PRESENT YEAR

The lower (black) portion of each column represents the death rates, the total height of column the birth rates.







Table 4, which is based on Abstract V. of the Registrar-General's Annual Report, is an analysis of the causes of death during the year. It differs from Abstract V. in this respect that the age-groups are more extended and that the causes of death have been sub-divided in some instances. For example, under the headings "other forms of tuberculosis" and "other defined diseases" the various causes of death are more fully set out. This has been made possible by the system of weekly collection of deaths from the district Registrar's registers and the card-index system of filing which has been adopted in connection with it. This table is compiled from the weekly returns collected by us from the local Registrars and the totals do not correspond with those of the Registrar-General in his Summary, which are not fully corrected. The number of deaths in this table amounts to 1,035 (as compared with 1,072 in the Summary) so that the error is but slight and probably due to deaths in other places which have been allocated by the Registrar-General to this area. Once again I have to acknowledge the assistance received from the Registrar-General in the compilation of these figures.

Table 5.—Crude Death Rates per 1,000 living for Cork City, Eire and England and Wales, 1881-1946.

Year	Cork	Eire	E. & W.	Year	Cork	Eire	E. & W.
1881	26.8	17.1	18.9	1914	20.2	16.1	14.0
1882	24.7	16.9	19.6	1915	20.7	17.5	15.7
1883	24.9	18.6	19.6	1916	18.2	16.5	14.3
1884	26.7	17.4	19.7	1917	17.4	16.9	14.2
1885	26.2	18.0	19.2	1918	20.4	17.5	17.3
1886	22.1	17.4	19.5	1919	20.2	17.9	14.0
1887	22.4	17.9	19.1	1920	17.5	14.7	12.4
1888	24.1	17.4	18.1	1921	15.4	14.3	12.1
1889	22.3	16.9	18.2				
1890	22.2	17.6	19.5	1922	18.0	14.7	12.8
				1923	14.0	14.0	11.6
1891	26.9	17.6	20.2	1924	17.8	15.0	12.2
1892	26.4	18.7	19.0	1925	15.5	14.7	12.2
1893	24.5	17.3	19.2	1926	17.3	14.0	11.6
1894	24.9	17.7	16.6	1927	14.7	14.8	12.3
1895	23.9	17.7	18.7	1928	15.2	14.2	11.7
1896	22.6	15.9	17.1	1929	16.9	14.6	13.4
1897	24.7	17.8	17.4	1930	17.3	14.1	11.4
1898	23.7	17.7	17.5	1931	16.4	14.5	12.3
1899	26.3	17.0	18.2				
1900	24.2	19.1	18.2	1932	15.7	14.4	12.0
				1933	14.9	13.6	12.3
1901	23.0	17.1	16.9	1934	14.7	12.9	11.8
1902	21.5	17.0	16.3	1935	14.8	13.9	11.7
1903	19.4	17.0	15.5	1936	14.7	14.3	12.1
1904	21.6	17.6	16.3	1937	17.4	15.3	12.4
1905	21.7	16.4	15.3	1938	14.1	13.6	11.6
1906	20.2	16.2	15.5	1939	13.1	14.2	12.1
1907	20.6	17.0	15.1	1940	14.6	14.1	14.0
1908	22.2	17.1	14.8				
1909	22.1	16.8	14.6	1941	16.1	14.6	12.9
1910	19.3	16.6	13.5	1942	15.9	14.0	11.6
				1943	16.5	14.7	12.1
1911	21.2	16.3	14.6	1944	18.1	15.4	12.7
1912	19.1	16.2	13.4	1945	14.9	14.4	
1913	21.5	16.8	13.8	1946	13.7		



The principal causes of death (in order of importance) were as follows :—

1.	Heart Disease	...	...	330	(317)
2.	Cancer	...	...	92	(116)
3.	Pulmonary Tuberculosis	...	...	79	(86)
4.	Bronchitis	...	...	68	(83)
5.	Cerebral Haemorrhage	...	...	68	(69)
6.	Premature Birth, etc.	...	...	56	(54)
7.	Senile Decay	...	...	33	(44)
8.	Violence	...	...	26	(16)
9.	Broncho-pneumonia	...	...	21	(28)
10.	Diarrhoea and Enteritis	...	...	19	(50)
11.	Lobar Pneumonia	...	...	17	(13)
12.	Nephritis	...	...	17	(16)

The figures in parenthesis denote the corresponding number last year.

**Cardiac Disease.** As usual this condition accounts for the great bulk of the deaths. Stress has been laid on deaths from heart disease and allusion made to the fact that the majority of them are found to be recorded in the later age-groups which gives rise to the supposition that they represent a degenerative condition rather than an infective one. This feature has been reproduced this year as shewn in the following table.

Table 6.—Analysis of deaths from heart disease from 1931.

Year	Under 5 years	5/15 years	15/25 years	25/35 years	35/45 years	45/55 years	55/65 years	65/75 years	75 yrs and up	Total
1931	—	6	3	5	18	31	66	87	34	250
1932	—	6	2	9	17	39	50	99	36	258
1933	—	2	4	5	15	31	58	83	42	240
1934	1	3	4	5	20	17	66	103	39	258
1935	2	3	1	7	11	29	63	93	36	245
1936	4	3	3	7	6	32	64	98	48	265
1937	—	5	6	9	16	24	72	112	64	308
1938	1	2	2	2	12	35	67	106	76	304
1939	—	1	4	2	12	27	63	108	61	278
1940	2	—	5	4	12	21	66	109	74	293
1941	—	3	2	6	12	22	82	108	71	306
1942	1	1	1	5	11	25	74	131	60	317
1943	—	1	7	4	16	28	81	133	79	349
1944	1	1	3	5	13	35	63	155	114	390
1945	—	3	6	4	12	24	62	123	83	317
1946	1	1	7	8	14	18	65	115	81	330

The general trend of deaths from heart disease is shewn in the following table in which a comparison is made with deaths from cancer and pulmonary tuberculosis.



Table 7.—Trend of mortality from the three principal causes of death in Cork City from 1931.

Year	Condition		
	Heart Disease	Cancer	Pulmonary Tuberculosis
1931	250	124	103
1932	258	98	111
1933	240	114	106
1934	258	111	107
1935	245	133	115
1936	265	121	85
1937	308	117	96
1938	304	106	99
1939	278	143	86
1940	293	114	96
1941	306	125	88
1942	317	149	106
1943	349	120	107
1944	390	123	118
1945	317	116	86
1946	330	92	79

**Cancer.** The number of deaths attributable to this disease recorded by us was 92 as compared with 116 in 1945. The corresponding figures of the Registrar-General are 97 (uncorrected) and 106. The discrepancy observable here, no doubt, is due to a difference in classification, all forms of malignant disease being classed by us under this heading. For comparative purposes the Registrar-General's are the more correct figures. On the basis of 97 deaths the rate was 1.2 per 1,000 of the population.

**Phthisis Death Rate.** The deaths from pulmonary tuberculosis numbered 79 equivalent to a rate of 1.0 per 1,000 of the population. The corresponding figures for last year were 86 and 1.1 per 1,000 respectively.

**Infant Mortality.** The number of deaths of children under one year of age was 109 which is equivalent to a rate of 62 per 1,000 live births. In 1945 the number of deaths was 156 and the rate 89 per 1,000. The contributory factors are discussed in Section V.

**Maternal Mortality.** There were 2 deaths from causes under this heading during the year. The maternal mortality rate was 1.1.

**Infectious Disease Death Rate.** The number of deaths from the principal infectious diseases was 19 equivalent to 0.27 per 1,000 of the population. Of the 19 deaths so recorded, 11 were due to influenza.



Table 8.—Showing the number of deaths from the principal epidemic diseases during the past ten years.

Year	Typhus Fever	Typhoid Fever	Scarlatina	Puerperal Fever	Diphtheria	Measles	Diarrhoea	Whooping Cough
1935	—	—	—	1	7	7	56	1
1936	—	—	7	1	8	10	41	5
1937	—	—	10	—	17	—	52	12
1938	—	1*	3	—	7	—	33	3
1939	—	—	1	1	3	—	39	6
1941	—	—	1	—	5	21	52	—
1940	—	—	—	—	5	6	36	—
1942	—	—	—	—	21	—	52	2
1943	—	—	—	1	17	—	52	4
1944	—	—	—	2	5	6	65	28
1945	—	—	—	—	3	—	50	—
1946	—	—	—	—	2	4	18	—

\* Infection in this case was incurred outside the City area.

**Uncertified Deaths.** Eight uncertified deaths were recorded during the year as compared with eleven in 1945.

**Deaths from Violence.** In the 26 recorded instances the cause of death was as follows :—

Falls	.....	6
Motor Vehicles	.....	6
Horse-drawn Cars	.....	2
Burns	.....	3
Drowning	.....	2
Asphyxia (infants)	.....	3
Miscellaneous	.....	4

In the case of deaths attributed to falls the average age was 77 years. There has been a marked increase in the number of deaths in which mechanically-propelled cars were involved. The number of deaths attributed to motor car accidents in previous years is as follows :—

1934	.....	4	1940	.....	3
1935	.....	7	1941	.....	3
1936	.....	6	1942	.....	4
1937	.....	6	1943	.....	3
1938	.....	2	1944	.....	1
1939	.....	2	1945	.....	0
1946	.....	6			







**Summary of Births and Deaths Registered during the Years 1873 to 1944, inclusive, in the Cork Urban Sanitary District with the number of Deaths from some of the principal causes.**

YEAR	POPULATION	Rate per 1,000 persons represented by		BIRTHS	NUMBER REGISTERED																					
					DEATHS.																					
					NUMBER CAUSED BY																					
		DEATHS from			TOTAL NUMBER	Under 1 year of age	At 65 years & upwards	Smallpox	Measles	Scarlet Fever	Typhus	Whooping Cough	Diphtheria	Enteric Fever	Diarrhoea	Influenza	Pneumonia	Tuberculous Disease		Cancer	Violence	Inquest Cases	No. in Public Institutions	Number of Uncertified		
All Causes	Principal Zymo- tic Diseases	Pulmonary	Other forms																							
1878...		31.7	27.0	—	2,546	2,464	350	681	...	61	1	...	59	1	...	75	...	...	...	...	23	87	863	...		
1879...		33.5	29.0	3.8	2,707	2,689	319	711	...	49	65	...	19	2	...	48	...	...	...	...	30	113	977	...		
1880...		28.5	30.8	5.9	2,620	2,837	376	624	...	73	204	...	47	13	...	86	...	...	289	...	23	99	1026	...		
1881...	80,124	27.7	26.8	4.1	2,167	2,101	271	611	...	36	30	88	61	4	4	87	...	...	237	...	14	82	673	...		
1882...		28.2	24.7	2.3	2,212	1,935	282	490	...	20	8	54	25	5	4	55	...	...	274	...	11	77	574	...		
1883...		27.0	24.9	2.0	2,161	1,993	236	572	...	35	8	46	5	10	11	38	...	...	271	...	9	50	646	...		
1884...		27.4	26.7	2.8	2,199	2,139	253	553	...	41	27	37	45	6	13	51	...	...	292	...	12	50	671	...		
1885...		25.6	26.2	2.3	2,054	2,098	247	614	...	6	48	21	55	5	9	35	...	...	287	...	7	36	587	...		
1886...		25.4	22.1	2.1	2,037	1,769	225	430	...	12	30	17	5	8	42	50	...	...	263	...	11	40	525	...		
1887...		25.5	22.4	1.8	2,042	1,792	252	490	...	34	1	12	6	2	20	67	...	...	236	...	15	43	490	...		
1888...		25.7	24.1	3.5	2,058	1,934	288	501	...	146	6	21	49	18	9	30	...	...	231	...	7	32	499	...		
1889...		25.2	22.3	1.9	2,023	1,786	253	497	...	1	10	5	88	7	9	32	...	...	278	...	8	34	433	...		
1890...		25.0	22.2	1.0	2,005	1,778	214	571	...	1	5	7	14	8	12	29	...	...	295	...	20	43	479	...		
1891...	75,345	26.9	26.9	1.4	2,024	2,025	281	630	...	—	4	5	29	11	17	34	...	...	295	...	15	35	557	...		
1892...		24.6	26.4	1.9	1,978	1,988	297	560	...	40	...	23	42	3	17	17	...	...	203	...	17	65	682	...		
1893...		27.8	24.5	1.3	2,092	1,844	268	517	...	6	2	7	14	3	14	51	...	...	314	...	15	58	596	...		
1894...		27.4	24.9	1.8	2,062	1,874	310	517	...	51	15	2	16	4	13	32	...	...	296	...	31	63	609	...		
1895...		28.9	23.9	1.6	2,179	1,798	287	494	...	1	3	8	65	2	16	28	...	...	261	...	24	68	657	...		
1896...		29.2	22.6	1.2	2,144	1,766	229	477	...	2	2	7	16	1	24	40	...	...	299	...	14	66	619	...		
1897...		27.5	24.7	2.7	2,073	1,858	316	452	...	75	1	3	59	10	9	47	...	...	260	...	22	64	680	...		
1898...		28.7	23.7	1.9	2,160	1,787	285	493	...	3	1	11	25	4	13	86	...	...	283	...	14	75	640	...		
1899...		27.3	26.3	2.8	2,060	1,980	276	525	...	34	1	6	33	5	8	121	...	...	320	...	9	79	749	...		
1900...		25.8	24.2	1.4	1,944	1,821	235	496	...	9	22	4	1	2	5	59	...	...	281	...	7	51	597	...		
1901...	76,122	25.6	23.0	1.9	1,942	1,745	272	440	...	3	17	2	36	11	5	73	...	...	289	...	13	54	558	...		
1902...		26.2	21.5	1.3	2,031	1,667	258	430	...	21	3	...	30	4	5	34	...	...	287	...	25	65	564	...		
1903...		27.1	19.4	1.3	2,066	1,476	232	336	...	2	4	...	44	4	5	37	...	...	279	...	19	46	518	...		
1904...		27.4	21.6	1.0	2,089	1,642	249	408	...	8	1	1	27	6	8	27	...	...	352	...	39	75	563	...		
1905...		27.6	21.7	1.0	2,099	1,650	276	468	...	14	...	2	...	7	8	47	...	103	294	...	18	50	605	...		
1906...		27.5	20.2	1.7	2,094	1,535	279	406	...	...	...	4	14	11	5	92	...	65	261	81	62	20	54	593	...	
1907...		25.6	20.6	1.5	1,946	1,570	254	427	...	...	2	6	52	5	4	48	...	77	278	84	77	14	53	609	84	
1908...		27.3	22.3	1.9	2,084	1,700	281	472	...	13	6	6	13	9	16	79	...	62	245	93	59	12	53	651	83	
1909...		26.3	22.1	2.3	2,000	1,680	251	457	...	3	15	5	72	11	15	54	...	106	264	78	62	13	75	673	91	
1910...		25.8	19.3	0.9	1,965	1,469	189	489	...	...	2	3	7	11	13	34	...	71	233	75	73	25	50	630	77	
1911...	76,673	26.0	21.2	1.9	1,992	1,622	277	377	...	17	2	...	28	10	5	78	...	91	252	73	64	28	61	627	81	
1912...		24.8	19.1	0.7	1,903	1,464	204	412	...	6	5	...	11	6	6	18	...	69	231	71	66	16	56	560	58	
1913...		24.2	21.5	1.9	1,853	1,645	253	424	...	16	4	2	...	3	6	114	...	110	202	79	95	14	57	643	60	
1914...		24.3	19.9	2.1	1,897	1,551	226	367	...	9	9	1	64	13	4	67	...	85	231	79	74	15	48	581	60	
1915...		23.1	20.7	1.5	1,778	1,584	235	418	...	14	12	...	22	14	5	49	...	152	211	72	66	13	50	590	79	
1916...		22.6	18.2	1.0	1,732	1,394	182	387	...	6	6	1	11	9	6	35	...	97	189	69	66	14	31	564	51	
1917...		20.2	17.5	0.8	1,552	1,340	169	395	...	...	1	1	14	3	3	34	...	74	202	78	62	24	40	51	60	
1918...		20.8	20.5	2.2	1,599	1,570	189	326	...	88	1	1	27	6	8	40	...	247	187	75	61	20	29	596	43	
1919...		23.8	20.2	1.1	1,825	1,551	183	414	...	1	2	3	7	32	1	40	...	248	156	58	69	19	26	564	50	
1920...		28.3	17.5	1.9	2,169	1,341	173	355	...	2	5	...	40	60	13	22	...	69	159	46	86	30	32	574	59	
1921...		24.6	15.4	1.4	1,887	1,181	144	313	...	...	...	1	1	56	4	1	...	40	125	34	75	71	82	482	59	
1922...		24.2	18.0	1.06	1,853	1,383	173	392	...	38	...	...	...	42	2	...	...	37	128	176	39	70	39	28	571	67
1923...		26.2	14.0	0.7	2,007	1,071	133	332	...	...	...	1	...	23	1	24	...	4	55	130	32	84	28	38	446	42
1924...		25.5	17.8	1.4	1,990	1,386	175	396	...	...	...	...	81	12	2	10	...	25	146	164	32	94	18	29	568	40
1925...		23.8	15.5	0.8	1,827	1,185	136	397	...	...	2	...	2	6	5	45	...	8	60	134	31	92	25	38	457	32
1926...	78,490	21.5	17.3	2.4	1,687	1,359	220	361	...	75	6	1	32	18	2	53	...	13	116	126	46	82	25	27	501	37
1927...		21.7	14.7	0.5	1,101	1,152	148	343	...	1	6	...	...	9	2	24	...	17	63	129	35	78	28	27	449	52
1928...		21.7	15.0	0.8	1,767	1,179	135	398	...	...	4	...	8	22	2	28	...	17	80	109	29	101	27	34	459	34
1929...		20.9	16.7	1.4	1,816	1,308	156	404	...	15	3	1	30	33	1	25	...	12	81	141	17	92	26	44	552	42
1930...		25.4	16.1	1.8	1,998	1,264	155	399	...	22	8															



Table 9.—INFANT DEATH RATE.

Year	Births	Deaths under 1 year	Deaths per 1000 Births	Year	Births	Deaths under 1 year	Deaths per 1000 Births
1881	2167	271	124	1914	1897	226	119
1882	2212	283	127	1915	1778	235	132
1883	2161	236	109	1916	1732	182	105
1884	2199	253	110	1917	1552	169	108
1885	2054	247	120	1918	1559	189	118
1886	2037	225	110	1919	1825	183	100
1887	2042	252	123	1920	2169	173	79
1888	2058	288	139	1921	1887	144	76
1889	2023	253	125	1922	1853	173	93
1890	2005	214	106	1923	2007	133	66
1891	2024	281	138	1924	1990	175	87
1892	1978	297	150	1925	1827	136	74
1893	2092	268	132	1926	1687	220	130
1894	2063	310	150	1927	1701	148	87
1895	2179	287	131	1928	1764	135	76
1896	2144	229	106	1929	1816	156	85
1897	2073	316	152	1930	1998	155	77
1898	2160	285	131	1931	1921	138	71
1899	2060	276	133	1932	1819	168	89
1900	1944	235	120	1933	1852	165	89
1901	1942	272	139	1934	1922	139	72
1902	2031	258	127	1935	1945	162	83
1903	2066	232	112	1936	1921	154	80
1904	2089	249	118	1937	1818	187	103
1905	2099	276	131	1938	1708	129	76
1906	2094	279	133	1939	1711	125	73
1907	1946	254	139	1940	1670	153	92
1908	2084	281	134	1941	1680	142	85
1909	2000	251	125	1942	1706	171	100
1910	1965	189	96	1943	1781	197	113
1911	1992	277	139	1944	1721	188	108
1912	1903	204	106	1945	1690	156	89
1913	1853	253	136	1946	1756	109	62



## Section. II.—Infectious Diseases

The following diseases are compulsorily notifiable in this area :—

Small Pox	Acute Influenzal Pneumonia
Cholera	Malaria
Typhus	Dysentery
Typhoid (Enteric Fever)	Encephalitis Lethargica
Simple Continued Fever	Cerebro Spinal Fever
Scarlatina	Poliomyelitis
Puerperal Fever	Ophthalmia Neonatorum
Diphtheria	Pemphigus Neonatorum
Membranous Croup	Puerperal Pyrexia
Erysipelas	Trachoma
Measles	Undulant Fever
Diarrhoea	Whooping Cough
Acute Primary Pneumonia	

The last six diseases were made notifiable by the Public Health (Infectious Diseases) Regulations 1941.

The Infectious Disease (Notification) Act, 1889, was by a resolution of the Corporation, dated 7th February, 1890, adopted in the County Borough.

The Act was subsequently made to apply to the following diseases :—

Name of Disease	Date of Resolution making Act applicable	Period in force
Cerebro-Spinal Meningitis ...	13 July, 1900 ...	Till 31st December, 1900
do. ...	22 February, 1907	Till revoked
Measles ...	26 May, 1905 ...	do.
Diarrhoea ...	14 December, 1906	1 July, 1907, to 31 Oct., 1907
do. ...	12 February, 1909	1 July, 1909, until revoked
Poliomyelitis or Infantile Paralysis ...	10 November, 1916	Till revoked

The Infectious Disease (Prevention) Act, 1890, was, by a resolution of the Corporation, dated 11th March, 1892, adopted and put into force in the County Borough.

The Public Health Acts Amendment Acts, 1907, was adopted and put into force by a resolution dated the 24th January, 1908, save as regards Sections 21, 24 to 33, 48, 66, 78 to 86, and 91 to 95.



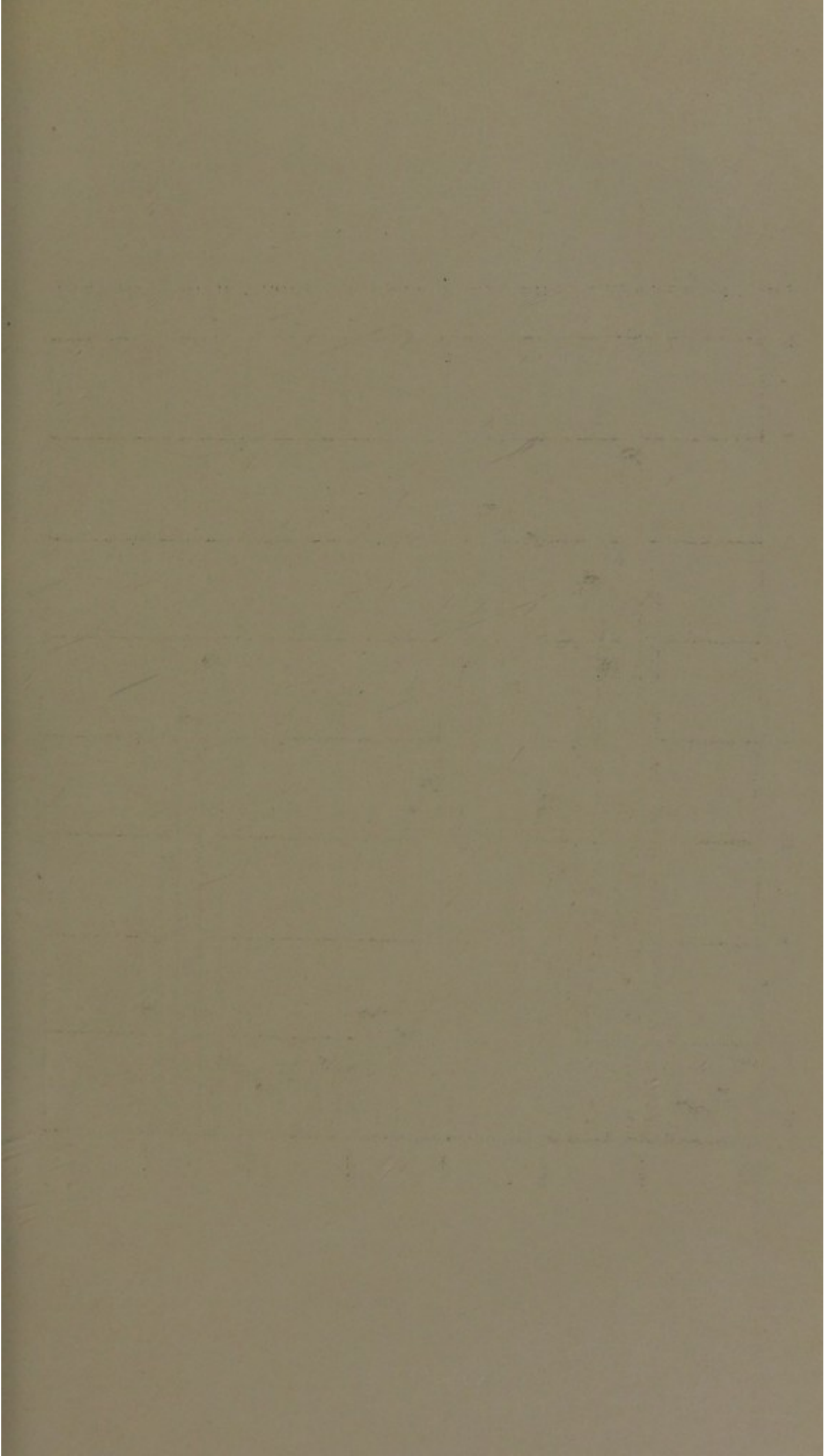
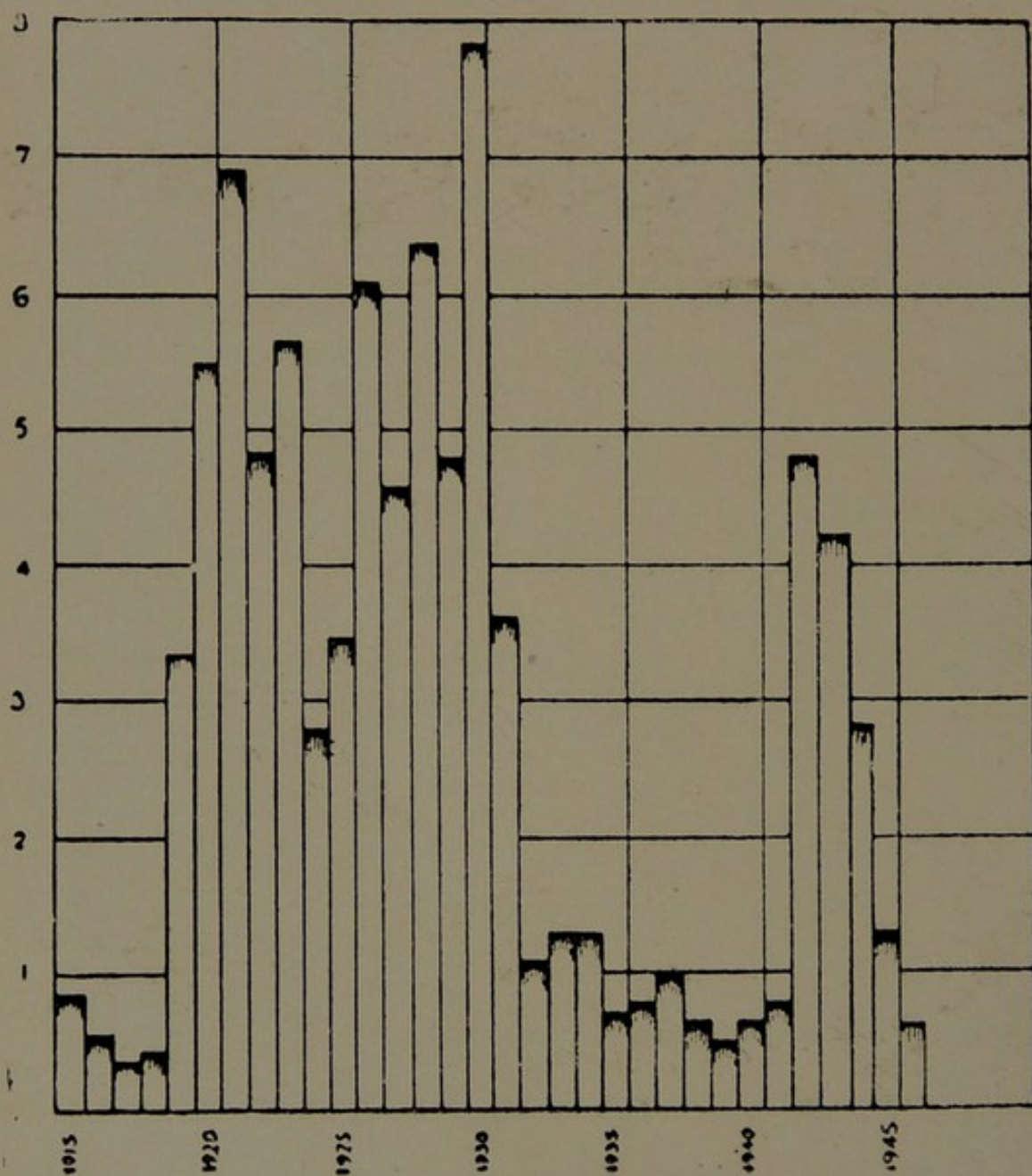




FIG. III.—DIPHTHERIA INCIDENCE (PER 1000 POPULATION) FROM 1915





The Public Health (Ireland) (Pneumonia, Malaria, Dysentery, etc.) Regulations, 1919 were revoked and are replaced by the "Public Health (Infectious Diseases) Regulations, 1929." Trench Fever, which was included in the 1919 Regulations, has been withdrawn in the new order.

*The Emergency Powers (No. 46) Order*, 1940 still remains in force. The provisions of this Order were fully reported on in the 1941 report.

**General.**  
The notifications of infectious disease received during the year amounted to a total of 918, which was slightly in excess of the figure for the previous year (800.) This increase is accounted for entirely by notifications of measles (of which 396 cases were notified. Diphtheria cases were reduced from 95 to 46; gastro-enteritis from 114 to 71; and scabies from 398 to 290. Increases were registered in scarlet fever (33 to 41); poliomyelitis (1 to 6) and also in the case of acute primary pneumonia (8 to 34). The increase in measles notifications was indicative of the periodic epidemic spread of that disease. Taking all circumstances into consideration, the incidence of infectious disease generally may be regarded as having been low and the improvement noted in last year's report was more than maintained. The infectious disease death-rate (0.3 per 1,000) was the second lowest ever recorded (in 1945 it was only 0.1 per 1,000). These figures may be regarded with some degree of satisfaction.

In last year's report reference was made to the fact that certain diseases which continue to appear in our statistical tables are now but of academic interest. They serve as a useful reminder of the debt which the community owes to sanitary science. In the field of preventive medicine one cannot point to dramatic results such as those achieved in individual cases by curative methods but taken over long periods of time the conquest of pestilence and disease has been no less impressive. Typhus fever, typhoid, smallpox, continued fever all took heavy toll of life in this community at one time. Now they are only memories. Trachoma is another disease which has disappeared completely while cholera has not been recorded within living memory.

### DIPHTHERIA.

Forty-six cases were recorded during the year. This is a substantial reduction on last year's figure (which was 96). Apart from the 25 cases reported in the year 1936 it is the lowest in the period of epidemic prevalence which began in 1919 and which has continued more or less intermittently ever since. There were only two deaths from the disease. Taking into consideration the very heavy toll of children's lives which diphtheria has exacted in the past this must be regarded as a very satisfactory figure. It is, in fact, the lowest achieved in our records (which go back to the year 1890). Nevertheless they are two needless deaths. Neither of these children was immunised. Once again I draw attention to the remarkable protection against death from diphtheria achieved under our immunisation scheme. 25,500 children have now been dealt with and so far *there has not been a single death from the disease recorded among them.* The number of deaths of non-immunised children which have occurred since our scheme began now amounts to the formidable total of 266. With the falling-off in the incidence of the disease there has been a corresponding diminution in the cases immunised. This is regrettable because, sooner or later, the disease is bound to assume epidemic proportions in the absence of a sufficiently large proportion of immunised children.



Table 11.—Analysis of cases and deaths

Age Groups	CASES		DEATHS
	Number	Proportion of Total	Number
0-2 years	2	4.4 per cent.	2
2-4 "	14	30.4 "	
4-6 "	7	15.2 "	
6-8 "	9	19.6 "	
8-10 "	3	6.5 "	
10-15 "	3	6.5 "	
15-25 "	5	10.9 "	
25 & over	3	6.5 "	
Total ...	46	100 per cent.	2

The incidence (per 1,000 of population) and the case-fatality rates of diphtheria from 1890 to the present year are set out in Table 12.

In a proportion of cases the reports received transpired not to be diphtheria. The actual number was 113 (approximately 71 per cent. of all notifications received). The age distribution of these was as follows :—

0-2 years	...	...	15 cases
2-4 "	...	...	12 "
4-6 "	...	...	13 "
6-8 "	...	...	6 "
8-10 "	...	...	8 "
10-15 "	...	...	12 "
15-20 "	...	...	10 "
Over 20 "	...	...	37 "
Total ...			113



Table 12.—Incidence and Case Fatality of Diphtheria from 1890.

Year	Cases	Rate per 1000 Population	Deaths	Fatality Rate
1890	20	0.26	8	40.0
1891	37	0.49	11	30.0
1892	11	0.14	3	27.3
1893	18	0.23	3	16.6
1894	14	0.18	4	28.6
1895	6	0.07	2	33.3
1896	7	0.09	1	14.3
1897	21	0.27	10	47.6
1898	18	0.23	4	22.2
1899	18	0.23	5	27.8
1900	23	0.30	2	0.8
1901	26	0.34	11	42.3
1902	8	0.10	4	50.0
1903	17	0.22	4	17.5
1904	29	0.38	6	20.6
1905	18	0.23	6	33.3
1906	37	0.48	11	29.7
1907	37	0.48	5	13.5
1908	40	0.56	9	22.5
1909	66	0.86	11	16.6
1910	51	0.65	11	19.3
1911	70	0.91	10	14.3
1912	52	0.67	6	11.5
1913	24	0.31	3	12.5
1914	54	0.70	13	24.1
1915	68	0.88	14	20.6
1916	43	0.55	9	20.9
1917	26	0.33	3	11.5
1918	34	0.43	6	17.6
1919	262	3.37	32	12.2
1920	428	5.50	60	14.0
1921	541	6.93	56	10.4
1922	379	4.86	42	11.1
1923	440	5.68	23	5.2
1924	217	2.85	12	5.4
1925	265	3.50	6	2.2
1926	469	6.10	18	3.7
1927	344	4.55	9	2.5
1928	385	6.37	19	4.7
1929	369	4.81	32	8.4
1930	627	7.86	59	10.0
1931	288	3.66	24	8.6
1932	85	1.08	17	20.0
1933	109	1.32	14	12.8
1934	109	1.32	25	22.1
1935	56	0.71	7	12.5
1936	25	0.31	8	32.0
1937	80	0.99	17	21.2
1938	54	0.66	7	12.8
1939	41	0.50	3	7.4
1940	52	0.67	5	9.6
1941	62	0.80	5	8.1
1942	372	4.84	21	5.6
1943	326	4.25	17	5.2
1944	172	2.27	5	2.9
1945	95	1.24	3	3.1
1946	46	0.61	2	4.3

Note :—The Infectious Disease (Notification) Act, 1889, was adopted on 7th February, 1890.



## DIPHThERIA IMMUNISATION.

The total number of children who completed the full course of treatment during the year was 521, of whom 67 were children who were negative to the primary Schick test.

Table 13.—Attendance of new cases at Diphtheria Prevention Clinic.

Year	Primary Schick Negative	Completed Full Course	Total	Not Completed Course
1929	—	1,802	1,802	—
1930	154	2,857	3,011	505*
1931	324	1,777	2,101	436
1932	91	422	513	208
1933	159	592	751	61
1934	826	1,716	2,542	432
1935	173	1,118	1,291	8
1936	458	1,741	2,199	22
1937	165	960	1,125	212
1938	106	708	814	205
1939	87	355	442	69
1940	87	552	639	90
1941	109	576	685	60
1942	367	3,795	4,162	891
1943	306	1,081	1,387	321
1944	80	654	734	99
1945	106	622	728	145
1946	67	454	521	103
Totals	3,665	21,782	25,447	3,867

\* Includes figures for *both* 1929 and 1930.

The figures for primary Schick tests in this table do not represent the *total* number of such tests performed but merely the number that proved *negative*. They are stated here for the purpose of estimating the number of children who have passed through our hands and who may be regarded as presumably immune. The number of primary tests has been reduced to a minimum. It is now confined to children over ten years. The great bulk of our cases is now under this age, so that the necessity for the primary test is comparatively rare.

Table 14.—Primary Schick Tests performed during the year.

Age Group	Number of Cases	Positive	Negative	Proportion Positive
0-5 years	2	1	1	50.0 %
5-10 "	21	6	15	28.5 %
10 and over	63	12	51	19.0 %
Totals ...	86	19	67	22.1 %



Table 15.—Primary Schick Tests. Analysis showing proportion positive in each year.

Year	Number Tested	Positive	Negative	Proportion Positive
1929-30	1170	916	254	78.2 per cent.
1931	598	274	324	45.8 "
1932	301	210	91	69.7 "
1933	435	276	159	63.4 "
1934	1474	648	826	44.0 "
1935	309	136	173	44.0 "
1936	626	168	458	26.8 "
1937	266	101	165	38.0 "
1938	152	46	106	30.2 "
1939	110	23	87	20.9 "
1940	131	34	87	25.9 "
1941	146	37	109	25.3 "
1942	686	319	367	46.5 "
1943	306	107	199	34.9 "
1944	108	28	80	25.9 "
1945	181	75	106	41.4 "
1946	86	19	67	22.1 "

Apart from record purposes this table is of little value as, obviously, the proportion of *positive* reactions will depend almost entirely on the age constitution of the groups of children tested and as this factor will fluctuate widely from year to year, so also will the results vary from one year to another. In this respect the next table is more informative as the results in the different years have been analysed in accordance with the age groups of the children.

Table 16.—Primary Schick Tests. Proportion positive in the age-groups :—

Period	Proportion POSITIVE (expressed as percentages)			
	0-5 years	5-10 years	10 and over	Whole Group
1929/30	—	—	—	78.2
1931	—	—	—	45.8
1932	88.4	60.1	37.7	69.6
1933	79.7	63.3	28.9	63.4
1934	65.8	44.2	27.5	44.0
1935	66.6	49.5	30.3	44.0
1936	66.6	41.5	15.5	25.2
1937	—	43.8	33.0	37.9
1938	—	25.0	35.7	30.2
1939	50.0	28.6	18.4	20.9
1940	25.0	20.4	32.9	25.9
1941	—	30.9	22.2	25.3
1942	25.0	45.2	47.6	46.5
1943	83.0	28.0	34.8	34.9
1944	—	12.0	29.2	25.9
1945	55.5	30.7	42.4	41.4
1946	50.0	28.5	19.0	22.1



Owing to the smallness in the number of cases tested, no results can be adduced for the figures for the year 1937 to date.

The *total number of cases* dealt with, according to age-groups is shewn in the following figures.

(1) Treatment Incomplete—

0-5 years	...	...	85
5-10 years	...	...	12
10 and over	...	...	6
			— 103

(2) Treatment Complete—

0-5 years	...	...	408
5-10 years	...	...	39
10 and over	...	...	7
			— 454

Total New Cases Treated	...	...	557
No. of Primary Schick Negatives	...	...	67
Old cases tested and treated	...	...	339
			—
		Total	936

Table 17.—Secondary Schick Tests.

Year	Total	Negative	Positive	Proportion Negative
1930	805	752	53	94.6 per cent.
1931	1166	991	175	85.2 "
1932	913	858	55	92.8 "
1933	893	801	92	89.0 "
1934	1105	1058	47	95.7 "
1935	1405	1388	17	98.8 "
1936	1272	1259	13	98.9 "
1937	732	722	10	98.6 "
1938	581	498	83	85.7 "
1939	215	205	10	95.3 "
1940	353	350	3	99.1 "
1941	488	464	24	95.0 "
1942	2,409	2,248	161	93.3 "
1943	1,232	1,178	54	97.2 "
1944	398	378	20	94.9 "
1945	484	—	—	98.9 "
1946	295	292	3	98.9 "
Totals ...	14,746	13,921	725	94.4 per cent.

Alum-precipitated toxoid (A.P.T.) and toxoid anti-toxin floccules (T.A.F.) were the prophylactics used. The former was administered by the two-dose method (0.2 c.c. followed by 0.5 c.c.) and the latter in three doses of 1 c.c. each at intervals of a fortnight or three weeks.



## SWAB EXAMINATIONS.

The following figures indicate the number of swabs examined in connection with the control of diphtheria since 1928.

Year	No. Examined	Year	No. Examined
1928	980	1938	1,124
1929	1,353	1939	714
1930	2,872	1940	747
1931	1,936	1941	711
1932	1,022	1942	3,509
1933	878	1943	3,237
1934	1,203	1944	1,546
1935	924	1945	1,363
1936	633	1946	856
1937	1,092		

## EPIDEMIC DIARRHOEA.

71 notifications were recorded during the year. Of this number, on investigation, Two were found not to be suffering from the disease thus leaving a balance of 69 confirmed cases.

The figures noted represent very substantial reductions on previous years. The number recorded in 1945 was 114 and in 1944 it was 179. Reference to table 18 shews that the average yearly figure for the past ten years was 201, so that that for the current year must be regarded as a most satisfactory one. Of the various factors concerned in the cause and spread of epidemic diarrhoea, the primary one is *artificial feeding* of infants. It has not yet been decided what organism is responsible but modern views lean strongly towards the theory that it is a virus. Whatever organism is responsible it is abundantly clear that breast-feeding affords an enormous protection against the disease. This is at once apparent from an examination of the relevant statistics. It may be seen in the next succeeding table from which it is apparent that in a grand total of 2,263 cases investigated here over a period of twelve years no less than 94 per cent of the affected infants were bottle-fed. It is apparent too from an examination of the figures in the section on infant mortality in which it is seen that the overwhelming majority of infants who died in the period between one month and one year of age was bottle-fed. This is particularly so in the case of infants who died from gastro-enteritis, broncho pneumonia and the infectious diseases generally.

It is apparent therefore that, whatever the exciting cause, the risk to the bottle-fed baby is enormously increased. Artificial feeding consequently may be regarded as the primary causative factor and until such time as there is a considerable increase in breast-feeding we can scarcely hope for a substantial reduction in cases of gastro-enteritis. There is, of course, no reason whatever to suppose that there has been a sudden and pronounced increase in the number of cases of breast-feeding between 1946 and the immediately preceding years to account for the reduction which we are now considering. Nor have we any reason to believe that there has been a sudden improvement in the hygienic standards of midwives and average mothers in the preparation of infants' feeds. Many factors contri-



bute to epidemic diarrhoea, but all result from the adoption of artificial feeding. Impure milk, imperfect sterilisation of vessels and teats, uncleanly habits on the part of the mother or nurse, insanitary surroundings, prevalence of flies, continued periods of warm, dry weather. The two last factors, flies and warm weather—the former being largely dependent on the latter, particularly predispose to epidemic diarrhoea and it is significant that the weather conditions in the latter summer and early autumn of 1946 were just such as to discourage the development and breeding of flies and therefore to predispose to a low incidence of diarrhoea. There were, in fact, very few flies to be seen at all in that year and it was the experience of everyone, from one end of the country to the other, that the weather conditions during the latter half of July and the whole of August and September were perhaps the worst within living memory. It is sufficient to recall the extreme difficulty in getting in the harvest at all in order to bring to mind the extraordinarily unfavourable weather conditions which prevailed. Through the courtesy of Messrs. John H. Bennett, Ltd., Charleston, Ballinacurra (in particular, of Mrs. Dorothy West) I am enabled to reproduce here the very interesting weather bulletins issued by them for this period. They speak for themselves:—

#### SUMMARY OF WEATHER OBSERVATIONS AT CHARLESTON, BALLINACURRA, 1946

##### JULY

##### *Barometer :*

Highest	.....	30.65 on the 7th
Lowest	.....	29.60 on the 4th
Mean for the Month	.....	30.15

##### *Thermometer :*

Highest	.....	69°F. on the 8th, 10th, 12th 22nd, 29th.
Lowest	.....	45°F. on the 3rd, 15th.
Mean for the Month	.....	57.1°F.

##### *Rainfall :*

2.13" which is .77" below average.

##### *Sunshine :*

175.1 hours which is 4.1. hours above average.

##### *Winds :*

Light to moderate and mainly from the west.

*Remarks :—*With the exception of heavy rain on the 3rd July, the first fortnight of the month was fine and warm, with bright sunshine and light winds. This pleasant spell of summer weather broke with heavy rain on the 15th, and conditions remained very unsettled with frequent showers, some thundery rain, high temperatures, and lack of sunshine. This broken period was unfortunate for corn crops trying to recover from lodging, and made the saving of hay very troublesome.



*Barometer :* AUGUST

Highest .....	30.25 on the 1st.
Lowest .....	28.95 on the 28th.
Mean for the Month .....	29.95.

*Thermometer :*

Highest .....	71°F. on the 22nd.
Lowest .....	42°F. on the 16th, 27th.
Mean for the Month .....	56.7°F.

*Rainfall :*

5.56" which is 2.43" above average.

*Sunshine :*

119.7 hours which is 37.3 hours below average.

*Winds :*

Mainly from the west, and light, but reaching gale force on the 11th, 12th, 27th, 28th.

*Remarks :—*August is usually the wettest of our summer months : 1946 brought us the wettest August for 18 years. There were only 3 days of consecutive fine weather during the whole month, so that there was little drying in the critical period when corn crops became fit for cutting. In 26 hours between the 11th—12th no less than 3.3" of rain were recorded: this terrific fall of rain, backed by a north-westerly gale, swept over the whole country, leaving a trail of damage and loss, overflowing of rivers, flooding of land, flattening of corn, and falling of trees. The remainder of the month made no amends, and another heavy fall of over one-inch of rain on the 27th, this time accompanied by a north-easterly gale, did extensive damage, lodging corn and throwing down apples, so that farm, garden, and orchard suffered severely.

Sunshine was the lowest since 1932, and the average temperature, the lowest for 34 years. This depressing catalogue seems to emphasise the serious situation on all farms, where harvesting, already difficult has now been unduly delayed.

## SEPTEMBER

*Barometer :*

Highest .....	30.30 on the 21st.
Lowest .....	29.25 on the 3rd.
Mean for the Month .....	29.90.

*Thermometer :*

Highest .....	67°F. on the 28th.
Lowest .....	41°F. on the 21st.
Mean for the Month .....	58.8°F.

*Rainfall :*

4.84" which is 2.202 above average.

*Sunshine :*

84.8 hours which is 48.2 hours below average.

*Winds :*

Mainly from the south and west throughout the month, strong and reaching gale force on the 20th, 21st and 22nd.

*Remarks :—*Continuing the bad weather so prevalent in August, September brought the worst conditions for harvesting in living memory. There were only five days without rain and it was the frequent recurrence of rain rather than the amount of it which was so damaging.



Between these two months 10.4 inches of rain were recorded, the greatest joint fall since records were begun here in 1905. Sunshine was the lowest ever recorded for September.

As if in an attempt to make some amends, winds were exceptionally strong and the drying between showers was far greater than usual at this time of the year.

Land everywhere became sodden, and in most cases it has been impossible to lift potatoes, or handle roots. The cutting of corn crops was greatly delayed and corn, once stooked could not be moved for weeks. Threshings have been held up everywhere and the situation caused by this extraordinary weather remains extremely grave.

What is particularly valuable in these interesting reports is the summary of the weather conditions included under the heading "remarks." They recall with particular vividness conditions which, with most people are now but a very unpleasant memory. They mean more than this in the field of epidemeology and act as a check on any undue optimism which might arise from the exceptionally low figures recorded in regard to epidemic diarrhoea for the year just past. In August we note that rainfall was 2.43 inches *above* the average and sunshine 37.3 hours *below* average, while in September rainfall is 2.2 inches *above* average and sunshine 48.2 hours *below* it. It is an ill wind that blows no good and so, while the great majority of the population had to suffer all the inconvenience and disappointment of such very adverse weather conditions we can at least comfort ourselves with the reflection that the infant section reaped considerable benefit.

The morbidity, mortality and fatality rates of epidemic diarrhoea are shewn in table 18. They emphasize the dangerous nature of this disease and the important influence which it exercises on our general mortality tables. The seasonal variation was not very pronounced—23 of the 71 cases occurred the 3rd quarter (the most usual period of prevalence) but 24 were recorded in the fourth quarter and, to emphasize the remarks above in regard to the influence of weather conditions, it is noted that much the greatest reduction in cases was recorded in the third quarter (23 as compared with 54 in 1945).

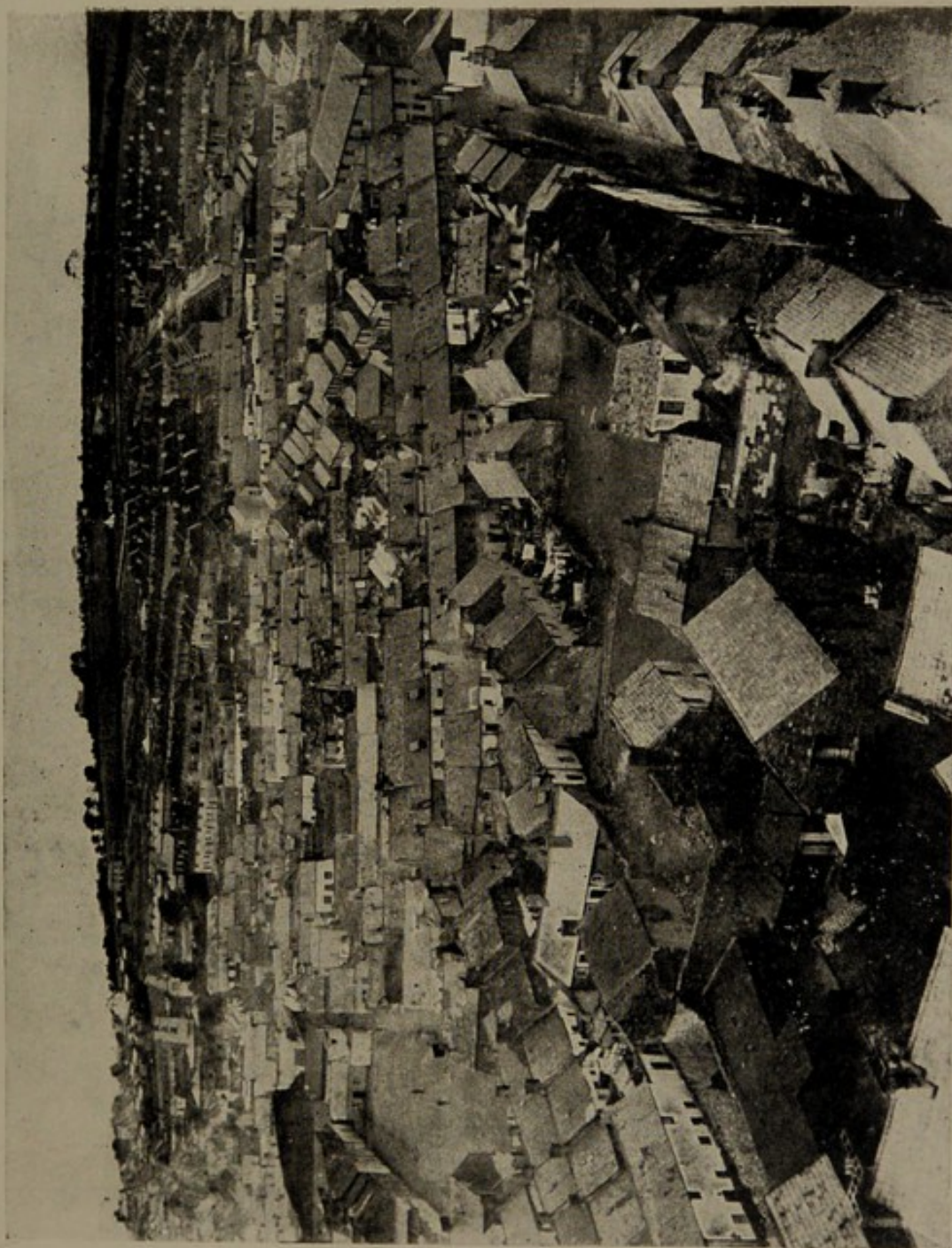
Many cases of gastro-enteritis are indeed not true cases of epidemic disease but arise from dietetic indiscretions on the part of those responsible for the feeding of the infant. Cow's milk, once more, has been associated in marked degree with the incidence of the disease. The seasonal distribution of the cases was in accordance with the following tabulations :—

Month	Cases	Deaths	Month	Cases	Deaths
Jan. ...	1 ...	4	July ...	4 ...	0
Feb. ...	3 ...	1	Aug. ...	5 ...	1
March ...	4 ...	1	Sept. ...	14 ...	2
April ...	4 ...	2	Oct. ...	12 ...	1
May ...	5 ...	2	Nov. ...	5 ...	2
June ...	5 ...	1	Dec. ...	7 ...	2

The distribution according to *quarters* was as follows :—

	Cases	Deaths
1st Quarter ...	8	6
2nd „ ...	14	5
3rd „ ...	23	3
4th „ ...	24	5





*PLATE I.*—1933. Clearance area lying to the South of Bailey's Lane (much of which has since been demolished). Gurrabraher housing scheme in early stage of development seen in background.



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It has already been stated that 71 notifications were received (of which two were cancelled) but of these we failed to trace 7 in the investigations which followed. This has been a constant feature, as alluded to in previous reports and is due to the mother tendering wrong particulars to the notifying doctor. This is the method adopted by such mothers to secure the attention of the doctor of their choice. Subtracting this number (plus the two cancelled) we were left with a residue of 62 cases traced and investigated. Of this 62 only 2 were breast-fed. These figures speak for themselves. In conjunction with the corresponding figures for each year since 1935 they are analysed in the next table.

Year	Number of Cases according to Manner of Feeding			Cases Untraced	Total
	Breast	Cow's Milk	Dried Milk		
1935	18	128	6	26	178
1936	7	198	5	16	261
1937	18	204	8	51	246
1938	14	108	5	15	142
1939	9	148	13	27	197
1940	13	202	9	62	286
1941	4	173	6	35	218
1942	11	168	24	24	227
1943	10	90	18	30	148
1944	5	128	17	29	179
1945	4	84	11	13	112
1946	2	56	4	7	69
Totals ...	115	1687	126	335	2263

During the twelve years covered by this table 1,928 cases have been investigated and in 94.06 per cent. *artificial feeding* was the method employed. It is to be noted that these figures do not pretend to complete accuracy and since we do not know the actual number of children at risk in each year we cannot postulate the relative danger of each method of feeding but taken together, the evidence is clear enough that any child subjected to artificial feeding is greatly imperilled thereby and further it can be stated that when artificial feeding is adopted the danger is very much greater when cow's milk is employed. This no doubt is due to faulty methods in preparing feeds and unhygienic conditions generally in the homes. There seems to be much greater risk from cow's milk than from dried milk. Considering the better nutritive value of the former this is unfortunate, but taking facts as we find them we are forced to the conclusion that, in the hands of the average mother, ordinary cow's milk is a highly dangerous article.

In Table 18 are shewn the numbers of cases and deaths from diarrhoea which have occurred in the City since 1907, the year in which the disease was first made notifiable here. The *morbidity* rate is based on the number of cases notified in proportion to the population, the *mortality* rate on the number of deaths per 1,000 of the population while the *case fatality* rate represents the deaths registered per 100 cases notified.



Table 18.—Epidemic Diarrhoea. Return of Cases notified and Deaths registered, together with the Mortality, Morbidity and Case-fatality Rates arising therefrom.

Year	No. of Cases	Rate per 1000 Population (Morbidity)	DEATHS		
			Number Recorded	Mortality Rate	Case Fatality Rate*
1907	413	5.42	48	0.63	11.1
1908	524	6.85	79	1.03	15.0
1909	514	6.72	54	0.71	10.3
1910	159	2.07	34	0.44	21.3
1911	352	4.56	78	1.01	22.1
1912	71	0.92	18	0.23	25.3
1913	320	4.13	114	1.48	35.6
1914	188	2.43	67	0.86	35.6
1915	177	2.29	49	0.63	27.6
1916	139	1.79	35	0.45	25.1
1917	83	1.07	34	0.43	40.9
1918	121	1.55	40	0.51	33.0
1919	85	1.09	40	0.51	47.0
1920	54	0.69	22	0.28	40.7
1921	105	1.35	1	0.01	0.94
1922	19	0.24	—	—	—
1923	35	0.44	24	0.30	68.5
1924	30	0.38	10	0.12	33.3
1925	142	1.81	45	0.58	31.6
1926	108	1.37	53	0.67	49.1
1927	76	0.96	24	0.30	31.5
1928	79	1.00	28	0.35	35.4
1929	78	0.98	25	0.31	32.0
1930	59	0.74	37	0.46	62.7
1931	85	1.06	34	0.42	40.0
1932	178	2.22	46	0.57	27.8
1933	189	2.35	45	0.56	23.8
1934	80	0.99	36	0.44	45.0
1935	178	2.21	56	0.69	31.4
1936	261	3.23	41	0.50	15.7
1937	246	3.04	52	0.64	21.1
1938	142	1.76	33	0.41	23.2
1939	197	2.44	39	0.48	19.8
1940	286	3.54	52	0.64	18.4
1941	218	2.85	36	0.46	16.5
1942	227	2.95	52	0.68	22.9
1943	148	2.00	52	0.68	35.1
1944	179	2.37	65	0.61	36.3
1945	114	1.45	50	0.50	43.8
1946	71	0.94	19	0.25	26.7

\* The *fatality rates* in this table must be read with extreme caution. The fluctuation from year to year is so extreme that it is apparent that notification must have been very defective in the years with abnormally high rates. It is obvious, nevertheless, that this is a most fatal disease of early childhood and the figures lend point to the remarks which have been made above in regard to the prime contributory cause.

#### TYPHOID FEVER.

No case of this disease occurred in the city during the year. This is the fourth occasion on which this satisfactory state of affairs has had to be referred to—the previous years being 1930, 1942 and 1943. Since 1930 there have been only three deaths from this disease and the general incidence shews a very marked reduction in comparison with former years. The features become apparent by an examination of table 19 in which the general trend of the disease is set out from the year 1881.



Table 19.—Incidence and Case Fatality of Enteric Fever in Cork City from 1881.

Year	Cases	Incidence per 1,000	Deaths	Fatality Rate
1881	66	0.82	4	6.5
1882	37	0.46	4	10.8
1883	45	0.56	11	24.4
1884	48	0.61	13	27.0
1885	43	0.55	9	20.9
1886	180	2.57	42	23.3
1887	100	1.30	20	20.0
1888	66	0.86	9	13.6
1889	37	0.48	9	24.3
1890	113	1.50	12	10.6
1891	165	2.33	17	10.3
1892	104	1.37	17	18.3
1893	78	1.03	14	17.9
1894	43	0.57	13	30.2
1895	132	1.74	16	12.1
1896	94	1.00	24	25.5
1897	51	0.70	9	17.6
1898	62	0.81	13	20.9
1899	47	0.62	8	17.0
1900	50	0.70	5	10.0
1901	51	0.67	5	9.8
1902	49	0.64	5	10.2
1903	27	0.35	5	18.5
1904	50	0.64	8	16.0
1905	58	0.76	8	13.8
1906	48	0.66	5	10.4
1907	44	0.57	4	9.1
1908	88	1.02	16	18.2
1909	74	0.95	15	20.2
1910	54	0.70	13	24.0
1911	32	0.41	5	15.6
1912	26	0.33	6	23.0
1913	29	0.38	6	20.7
1914	50	0.64	4	8.0
1915	32	0.41	5	15.6
1916	42	0.54	6	14.3
1917	43	0.55	3	6.9
1918	42	0.54	8	19.0
1919	12	0.15	1	8.3
1920	244	3.13	13	5.3
1921	21	0.26	4	19.0
1922	6	0.07	2	33.3
1923	7	0.09	1	14.2
1924	11	0.14	2	18.1
1925	27	0.34	5	18.5
1926	11	0.14	2	18.2
1927	10	0.12	2	20.0
1928	17	0.21	2	11.7
1929	6	0.08	1	16.6
1930	—	—	—	—
1931	1 (a)	0.01	1	100.0
1932	1 (a)	0.01	1	100.0
1933	2 (a)	0.02	—	(b)
1934	1	0.01	—	—
1935	3	0.03	—	—
1936	2	0.02	—	—
1937	1	0.01	—	—
1938	3 (a)	0.03	1	33.3
1939	7	0.08	—	—
1940	2	0.02	—	—
1941	12	0.15	—	—
1942	—	—	—	—
1943	—	—	—	—
1944	3	0.03	—	—
1945	3	0.03	—	—
1946	—	—	—	—

(a) Infection in all these cases was incurred outside the City.

(b) Two deaths were recorded in Cork Mental Hospital (Co. Area) of inmates who formerly resided in the City.



## SCARLET FEVER.

41 cases were reported. There was no death.

## TYPHUS.

For the seventeenth year in succession there has been no case. As a matter of interest the table relative to this disease, first published in 1935, is reproduced in this report.

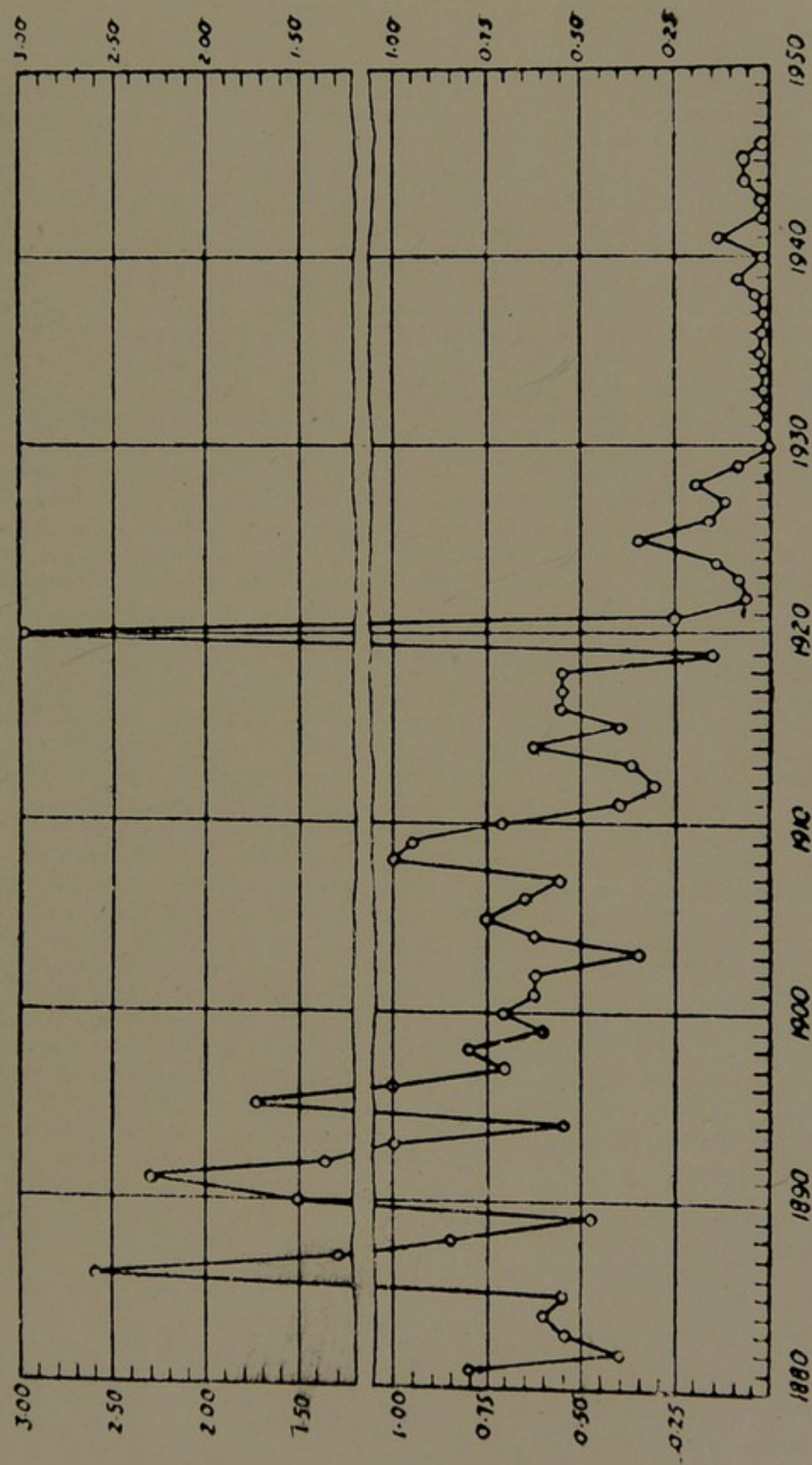
Table 20.—Incidence and Case Fatality of Typhus Fever in Cork City from 1881.

Year	Cases	Incidence per 1,000	Deaths	Fatality Rate
1881	1406	17.42	88	6.2
1882	683	8.57	54	7.9
1883	844	10.66	46	5.4
1884	456	5.65	37	8.1
1885	159	2.03	21	3.2
1886	83	1.06	17	18.0
1887	67	0.86	12	17.9
1888	72	0.93	21	27.7
1889	48	0.63	5	10.4
1890	54	0.71	7	12.9
1891	24	0.30	5	20.8
1892	162	2.28	23	14.1
1893	92	1.20	7	7.6
1894	25	0.33	2	8.0
1895	29	0.38	8	31.0
1896	22	0.29	7	31.8
1897	30	0.39	3	10.0
1898	61	0.80	11	18.0
1899	9	0.10	6	66.6
1900	28	0.36	4	14.3
1901	13	0.17	2	15.38
1902	6	0.07	—	—
1903	7	0.09	—	—
1904	11	0.14	1	9.1
1905	9	0.11	2	22.2
1906	6	0.07	4	66.6
1907	10	0.13	6	60.0
1908	23	0.30	6	26.1
1909	18	0.24	5	27.7
1910	8	0.10	3	37.5
1911	10	0.13	—	—
1912	1	0.01	—	—
1913	5	0.06	2	40.0
1914	1	0.01	1	100.0
1915	—	—	—	—
1916	1	0.01	1	100.0
1917	3	0.04	1	33.3
1918	1	0.01	1	100.0
1919	15	0.19	3	20.0
1920	2	0.03	—	—
1921	1	0.01	1	100.0
1922	—	—	—	—
1923	1	0.01	1	100.0
1924	1	0.01	—	—
1925	—	—	—	—
1926	3	0.04	1	33.3
1927	4	0.05	—	—
1928	1	0.01	—	—
1929	1	0.01	1	100.0

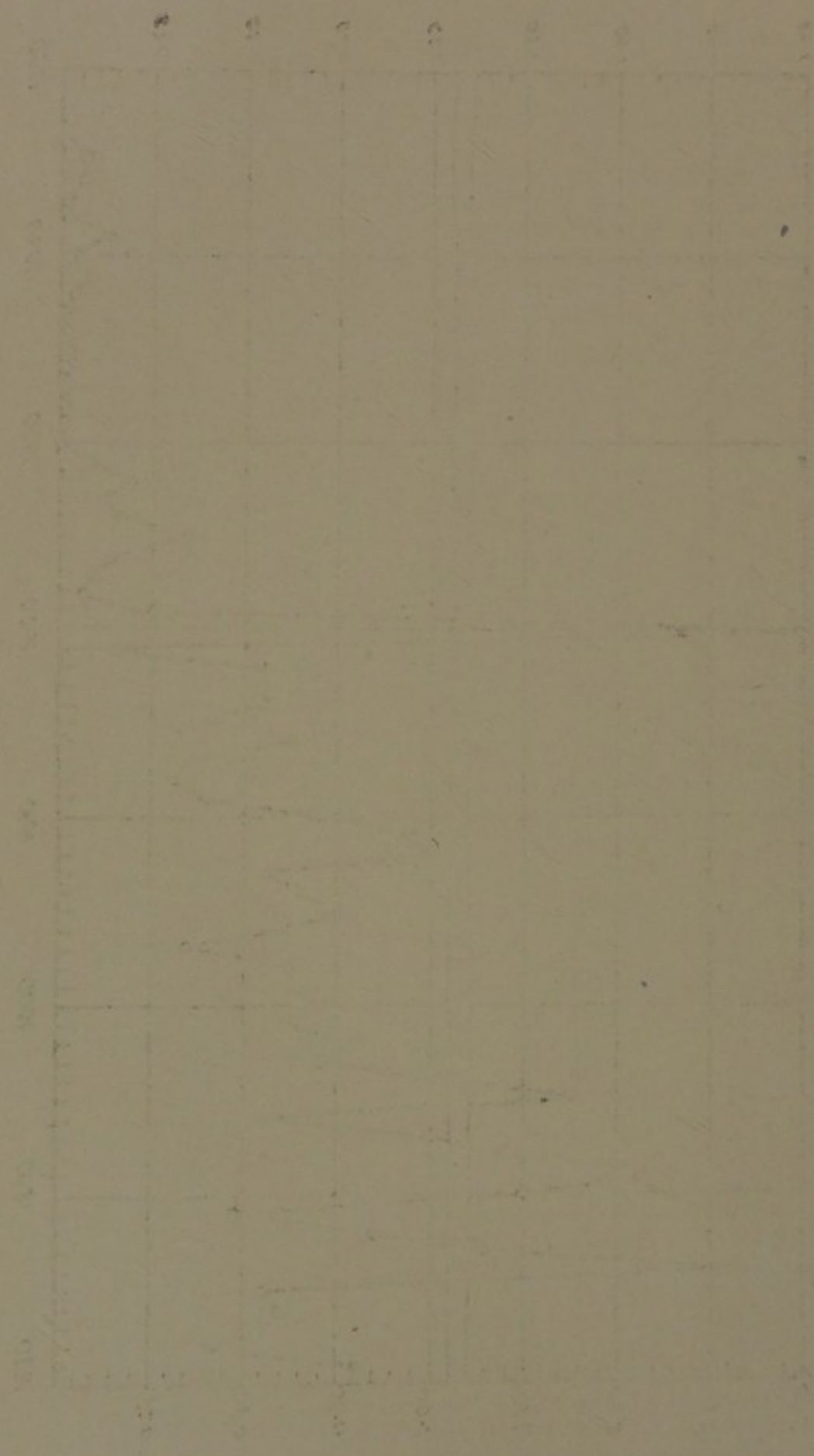
There has been no case since 1929.



FIG. IV.—ENTERIC FEVER. INCIDENCE (PER 1000 POPULATION) FROM 1880







100 90 80 70 60 50 40 30 20 10 0



## POLIOMYELITIS

Six cases were reported during the year. As will be noted from table 21 this is an exceptional number for this area. The *reported* cases hitherto have been few and far between, one in 1945, three in 1944 and only three for the whole previous period of the table. That these figures are misleading must be apparent when one takes into consideration the number of persons who can be observed in the city streets suffering from the late effects of poliomyelitis. It must be obvious that a considerable number of cases must have occurred from time to time without having been recorded. It is probable that such cases were not recognised at the time of onset and were not subsequently reported. Nevertheless this area escaped completely during the period in which the disease swept the country in epidemic form in 1942-43. The six cases now referred to must therefore be regarded as an unusual occurrence. With the exception of two cases occurring in the same household no definite contact could be traced between the various patients although an interesting (if somewhat complicated) connection became apparent between some of them at a later period. On 13th November a married woman (Mrs. A.) living in the north-eastern part of the city was notified to be suffering from the disease (subsequently confirmed). Her brother, who resided in the same house, worked in a certain factory. A short time before this another case (subsequently referred to the County Medical Officer of Health) was reported to us, the father of this case worked in the same factory. This man was the brother-in-law of another patient (who for simplicity we shall call John Murphy). John Murphy worked in a local office and it is somewhat significant that in the same office worked a man (whom we shall call John Brown) whose two children had previously contracted poliomyelitis. Inter-connection between these cases portulates a carrier condition which, I believe, has never been proved in the case of poliomyelitis. Assuming, for the moment, that there was a connection between these cases the chapter of events would appear to have been as follows: Michael Brown (the son of John Brown) developed the disease and a few days later his sister Ann. John Brown became a carrier (if he was not already one) and transmitted the disease to John Murphy in his place of work. The latter before developing the disease, or possibly in the early period, made contact with his brother-in-law who (we assume) acquired the organism without developing clinical signs of the disease. He continued at work and transmitted the organism to the brother of the female patient (Mrs. A.) whom we have been considering in the first instance. This man in his turn (and he had ample opportunity of doing so) transmitted the organism to his sister (Mrs. A.) who went down with the disease.

The argument is far-fetched and a fatal weakness in it has been the inability to trace actual contact between these two intermediaries (X and Y) who worked in the same factory. It was not denied that such contact *might* have occurred but the chance of its doing so was not very great and it is difficult to explain how X (if a carrier) did not distribute his organisms to his immediate associates rather than to Y with whom he may have had remote contact. Of course he may have done so but then the possibilities would appear to be endless. In fact the investigation of small number of cases of poliomyelitis such as were represented in this limited outbreak is fraught with the utmost difficulty and, indeed, even



in much bigger outbreaks adequate and highly skilled personnel is required to unravel the complicated problems which they present.

In all six cases were reported which on investigation were found to be in the early paralytic stage. In addition three were subsequently notified which came to light only as the result of paralyses developing—there was, apparently, no preliminary illness to indicate the seriousness of their condition. The first case was notified in the 9th August and the last on 23rd November. There was no subsequent cases (nor have any been reported in 1947 to date). There were no deaths.

### SCABIES.

The provisions of the Public Health (Infectious Diseases) Regulations, 1941 were made applicable to this condition by special regulations made by the Minister for Local Government and Public Health on 19th October, 1943, under title of Public Health (Infectious Diseases) (Amendment) (No. 2) Regulations, 1943, the effect of which was to make the condition notifiable. 290 such notifications were received during the past years (as compared with 1,889 in 1944 and 398 in 1945). It cannot be said that notification has subserved any useful function whatever in this disease. In the first place it has been far from accurate, the great majority of the cases never coming under the observation of medical practitioners and secondly it has been of very little help to the public health authorities. Resentment at visiting after receipt of notification has been openly expressed and has resulted in subsequent cases not seeking medical advice at all. The vast majority of the cases who attended the treatment centre since its inception did so by reason of propaganda and from advice passed from person to person. Relatively enormous sums of money must have passed over the chemists' counters in connection with this condition in many cases, unfortunately, for useless remedies. This has been forced in on us by the histories of many of the cases that attended the centre for treatment after incurring dermatitis and other unpleasant sequelae as the result of injudicious applications supplied by chemists. Notification, however, may have had one minor function which may, perhaps, be classified as useful, it has served as an *indicator* of the general prevalence of the disease. From this point of view it may be said that there has been a general decline in the incidence as evidenced by the figures cited above.

The attendances at the Treatment Centre began to diminish towards the end of 1945 and as this tendency continued the centre was eventually closed down on March 16th of 1946. Up to that date there had been 1,716 individual attendances from 1st January and a total of 2,874 attendances altogether. The difficulty of fuelling the boiler was a contributory factor in the decision to apply closure. It was a problem of a very harassing character. As a result of closing the centre cases gradually began to accumulate at the School Clinic and so hampered the treatment of ordinary minor ailments that it eventually became necessary to re-open the scabies centre on a part-time basis. This was done on 31st of January, 1947, and it is now functioning on two days weekly (instead of 5½ days formerly). So far this arrangement has worked satisfactorily and it should continue should the fuel situation not deteriorate further.



Table 21.—Yearly Summary of Infectious Diseases from 1879.

Year	Small Pox	Typhus	Enteric Fever	Simple Contd. Fever	Scarlatina	Puerperal Fever	Membranous Croup	Diphtheria	Erysipelas	Measles	Diarrhoea	Chicken Pox	Cerebro-Spinal Meningitis	Polio-myelitis	Pneu- monia	
															Acute Primary	Acute Influenza
1881	—	1406	66	364	103	—	—	—	31	240	5	—	—	—	—	—
1882	—	683	37	239	25	—	—	3	11	146	3	—	—	—	—	—
1883	—	844	45	164	105	—	—	6	—	109	1	—	—	—	—	—
1884	—	456	48	221	158	—	—	2	14	106	3	—	—	—	—	—
1885	1	159	43	94	143	—	—	2	17	35	—	—	—	—	—	—
1886	—	83	180	70	86	—	—	1	14	24	—	—	—	—	—	—
1887	—	67	100	46	17	—	—	4	25	182	1	—	—	—	—	—
1888	—	72	66	40	55	—	—	7	25	232	—	—	—	—	—	—
1889	—	48	37	24	90	—	—	9	12	—	—	—	—	—	—	—
1890	—	54	113	36	128	5	3	20	27	3	2	—	—	—	—	—
1891	1	24	165	46	64	3	3	37	27	2	—	—	—	—	—	—
1892	1	162	104	53	19	—	3	11	45	74	1	—	—	—	—	—
1893	—	92	78	26	91	3	—	18	70	4	2	—	—	—	—	—
1894	—	25	43	29	301	5	6	14	65	11	2	—	—	—	—	—
1895	—	29	132	23	53	3	1	6	45	2	—	—	—	—	—	—
1896	—	22	94	29	69	6	—	7	54	3	2	—	—	—	—	—
1897	—	30	51	23	34	7	4	21	35	9	—	—	—	—	—	—
1898	—	61	62	30	30	6	7	18	20	2	—	—	—	—	—	—
1899	—	9	47	14	22	2	10	18	60	23	—	—	—	—	—	—
1900	—	28	50	27	401	2	2	23	36	—	—	—	8	—	—	—
1901	—	13	51	29	288	3	12	26	38	—	—	—	8	—	—	—
1902	—	6	49	16	119	4	1	8	49	8	—	7	3	—	—	—
1903	3	7	27	16	51	2	6	17	58	5	—	49	1	—	—	—
1904	1	11	50	33	29	4	3	29	43	2	—	39	4	—	—	—
1905	1	9	58	47	35	7	8	18	50	7	—	33	4	—	—	—
1906	—	6	48	31	23	10	1	37	48	8	—	49	3	—	—	—
1907	—	10	44	44	50	6	4	37	42	4	413	63	8	—	—	—
1908	—	23	88	55	114	4	6	40	26	379	524	14	1	—	—	—
1909	—	18	74	42	119	10	4	66	25	44	514	21	—	—	—	—
1910	—	8	54	24	38	4	6	51	26	14	159	16	—	—	—	—
1911	—	10	32	22	39	4	13	70	31	433	352	1	1	—	—	—
1912	—	1	26	17	93	6	5	52	29	53	71	7	—	—	—	—
1913	—	5	29	13	81	4	10	24	28	254	320	2	—	—	—	—
1914	—	1	50	12	230	11	15	54	38	161	188	8	—	—	—	—
1915	—	—	32	4	245	2	8	68	44	160	177	10	6	—	—	—
1916	—	1	42	9	112	8	11	43	41	86	139	13	6	—	—	—
1917	—	3	43	6	46	1	9	26	24	28	83	8	3	—	—	—
1918	—	1	42	10	21	2	18	34	16	750	121	19	4	—	—	—
1919	—	15	12	3	16	4	21	262	18	3	85	26	2	—	—	37
1920	—	2	244	8	70	6	3	428	18	9	54	30	—	—	—	—
1921	—	—	21	1	14	4	8	541	17	2	105	28	—	—	—	—
1922	—	—	6	—	29	1	5	379	14	324	19	29	—	—	—	—
1923	—	1	7	1	44	1	4	440	45	10	35	30	—	—	—	—
1924	—	1	12	—	41	3	3	217	30	5	30	54	—	—	—	—
1925	—	—	27	—	81	4	9	265	35	94	142	117	—	—	—	5
1926	—	4	11	2	278	4	11	469	34	534	108	59	—	—	—	—
1927	—	4	10	1	205	14	11	344	25	7	76	76	1	1	—	—
1928	—	1	17	—	208	7	15	385	24	6	79	64	1	—	—	12
1929	—	1	6	—	216	6	4	369	24	226	78	80	—	—	—	7
1930	—	—	—	1	238	6	5	588	38	241	59	72	—	—	—	3
1931	—	—	1	—	98	1	1	288	19	3	85	71	1	—	49	41
1932	—	—	1	—	80	9	1	85	13	242	178	99	—	—	28	7
1933	—	—	2	—	181	9	—	109	24	49	189	79	—	—	3	2
1934	—	—	1	—	118	10	—	109	28	126	80	158	—	—	2	1
1935	—	—	3	—	52	11	1	56	24	300	178	53	—	—	5	2
1936	—	—	2	—	437	12	1	24	18	233	261	69	3	—	14	14
1937	—	—	1	—	454	6	—	79	26	88	246	218	5	1	21	45
1938	—	—	3	—	228	1	—	54	18	12	142	83	14	—	19	3
1939	—	—	7	—	158	4	—	41	31	3	197	28	1	—	14	1
1940	—	—	2	—	143	1	—	52	23	1613	286	52	2	1	27	1
1941	—	—	12	—	42	1	—	62	29	94	218	254	2	—	21	1
1942	—	—	—	—	50	—	—	372	38	1	227	65	2	—	32	2
1943	—	—	—	—	76	2	—	326	45	6	148	47	3	—	35	2
1944	—	—	3	—	85	—	—	172	57	370	179	*	5	3	37	—
1945	—	—	3	—	33	—	—	95	20	7	114	—	7	1	8	—
1946	—	—	—	—	41	2	—	46	26	396	71	—	1	6	34	—

\* No longer notifiable.



## OTHER INFECTIOUS DISEASES.

Notifications in regard to other infectious diseases during the year were as follows :—

Scabies	...	...	290	(398)
Whooping Cough	...	...	5	(12)
Cerebro Spinal Fever	...	...	1	(7)
Poliomyelitis	...	...	6	(1)
Puerperal Fever	...	...	2	(0)
Acute Primary Pneumonia	...	...	34	(8)

Figures in parenthesis indicate corresponding notifications in the previous year.

## Particulars of Articles Disinfected during the year.

	Bed Ticks	Mat- tresses	Articles of Bedding	Articles of Wearing Apparel	Miscel- laneous Articles	Total No. of Articles
January ...	3	38	309	53	36	437
February ...	2	16	165	54	42	279
March ...	6	27	196	88	31	318
April ...	3	26	242	17	23	308
May ...	6	24	182	23	20	257
June ...	1	21	134	13	14	186
July ...	4	28	179	69	15	288
August ...	6	27	138	8	20	200
September ...	3	39	237	60	27	301
October ...	3	23	234	23	27	326
November ...	2	32	127	109	44	422
December ...	—	17	184	11	38	143
	39	316	2,325	498	337	3,516

## VACCINATION.

The figures appended herewith, which are taken from the Annual Summaries of the Registrar General, relate to the number of persons vaccinated in each locality concerned.

Year	CORK			DUBLIN			LIMERICK			WATERFORD		
	Births	Vaccin- ations	Pro- portion	Births	Vaccin- ations	Pro- portion	Births	Vaccin- ations	Pro- portion	Births	Vaccin- ations	Pro- portion
1936	1,921	1,833	95%	11,582	3,903	34%	975	622	64%	661	54	8%
1937	1,706	1,898	110%	11,652	3,199	27%	1,006	672	67%	696	71	10%
1938	1,761	1,532	87%	11,534	4,076	35%	1,030	579	55%	626	27	4%
1939	1,632	1,591	97%	11,384	3,051	27%	1,073	596	55%	614	16	3%
1940	1,670	1,050	63%	11,064	2,700	24%	984	601	61%	677	43	6%
1941	1,753	1,138	65%	11,305	3,412	30%	1,007	558	55%	613	30	5%
1942	1,706	1,065	62%	12,528	3,517	28%	1,115	763	68%	807	47	6%
1943	1,781	1,233	69%	12,673	2,005	15%	1,075	748	69%	737	58	7%
1944	1,712	1,272	74%	12,074	1,525	12%	1,002	856	85%	644	34	5%
1945	1,690	1,238	73%	12,508	1,170	9%	1,051	893	85%	676	25	4%
1946	1,756	343	19%	13,159	350	2%	1,055	487	37%	718	5	0.7%



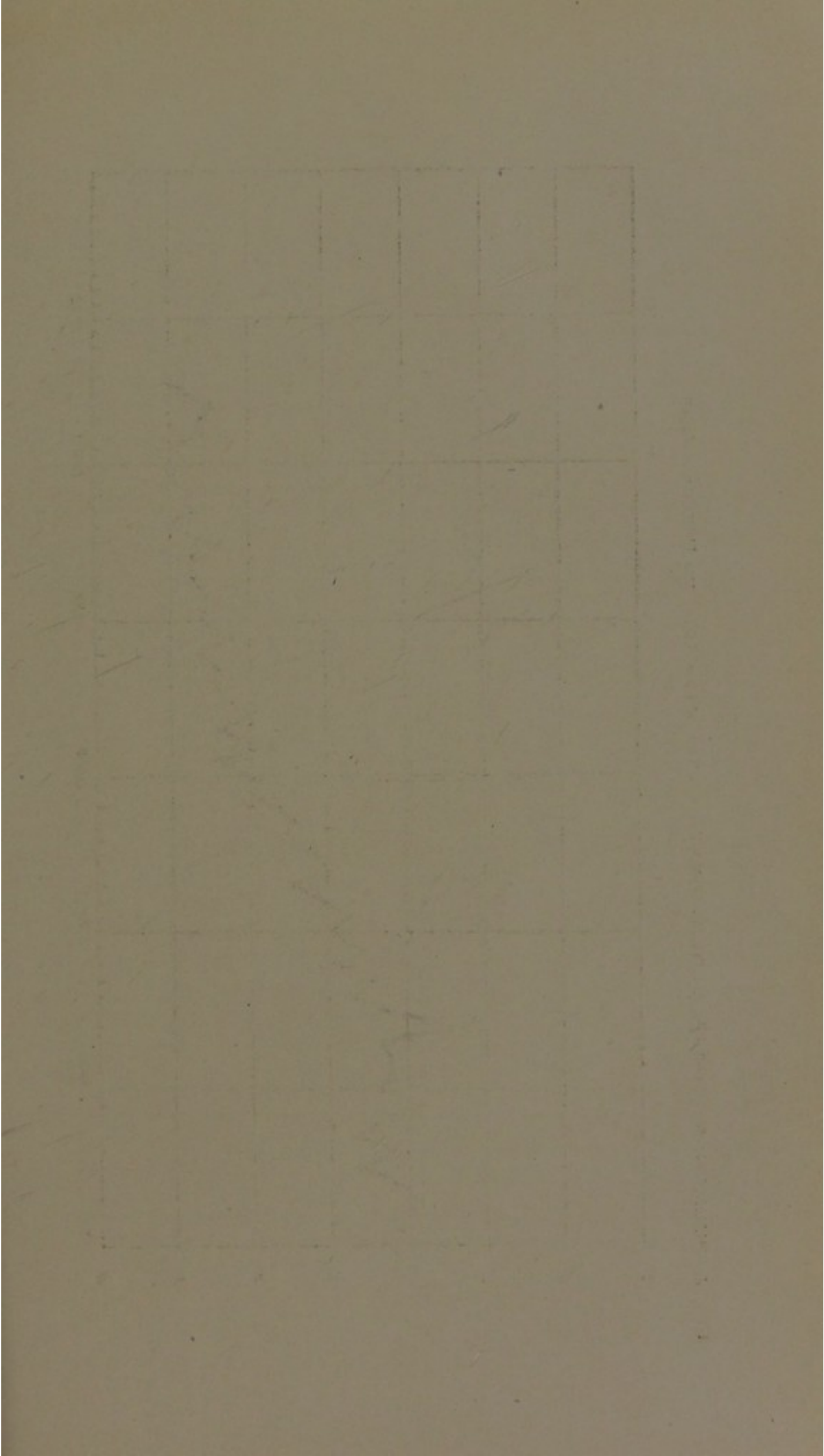
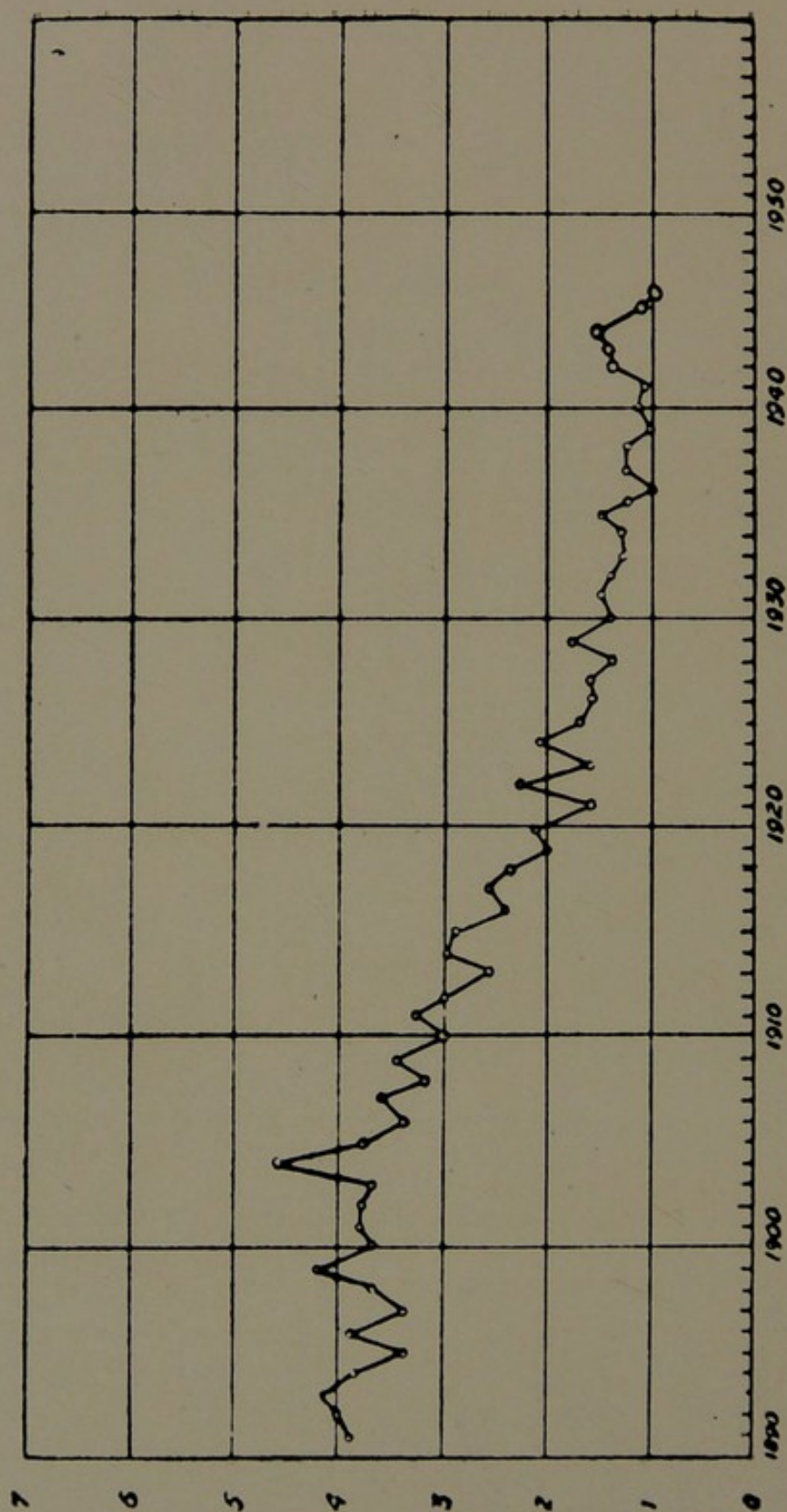




FIG. V.--PULMONARY TUBERCULOSIS. DEATH RATES FROM 1891 TO PRESENT YEAR





## Section III.—Tuberculosis

The tuberculosis death-rate for the year was 1.34 per 1,000 of the population. This rate comprises deaths from *all* forms of tuberculosis and the figure recorded shews, a further reduction on that of 1.54 for 1945 which, in its turn, represented a substantial reduction on that of the immediately preceding year. Figures of deaths from the *non-pulmonary* forms of the disease in this area are not available for periods further back than 1906. On the other hand those for the *pulmonary* form go very much further back and, accordingly, afford a better illustration of the general trend of the disease and it is principally for this reason that the following table takes precedence in this section.

Table 22.—Deaths and Death Rates *Pulmonary* Tuberculosis.

Year	No. of Deaths	Rate per 1,000 pop.	Year	No. of Deaths	Rate per 1,000 pop.
1891	295	3.93	1919	156	2.04
1892	303	4.04	1920	159	2.07
1893	314	4.18	1921	125	1.64
1894	296	3.94	1922	176	2.30
1895	261	3.48	1923	130	1.64
1896	299	3.98	1924	164	2.09
1897	260	3.46	1925	134	1.71
1898	283	3.77	1926	126	1.60
1899	320	4.26	1927	129	1.60
1900	281	3.74	1928	109	1.39
1901	289	3.80	1929	141	1.79
1902	287	3.79	1930	114	1.45
1903	279	3.67	1931	124	1.56
1904	352	4.63	1932	111	1.40
1905	294	3.86	1933	106	1.35
1906	261	3.43	1934	104	1.34
1907	278	3.65	1935	115	1.46
1908	245	3.22	1936	85	1.06
1909	264	3.47	1937	96	1.20
1910	233	3.06	1938	99	1.21
1911	252	3.29	1939	86	1.06
1912	231	3.01	1940	96	1.17
1913	202	2.62	1941	86	1.12
1914	231	3.01	1942	106	1.38
1915	211	2.88	1943	107	1.38
1916	189	2.46	1944	118	1.56
1917	202	2.63	1945	86	1.13
1918	187	2.43	1946	79	1.04

It will be noted that these are the lowest figures ever recorded. The nearest comparable record was achieved in 1936 and in 1939 after which there was, with minor fluctuations, a steady rise to 1.56 in 1944, since which year there has been an apparent tendency to fall. We may hope therefore that a permanent check has been placed upon the war-time rise characteristic of the past seven or eight years.

As already remarked, the figures above relate to *pulmonary* tuberculosis. In the case of non-pulmonary tuberculosis there was also a reduction in the number of deaths (22 as compared with 29 in 1945). The latter



figure represented an increase of two over the figure for 1944. There has therefore, been a total reduction from 115 in the combined figures to 101 a fairly substantial difference, more especially as the latter was considerably less than the figure for 1944 (145). The tuberculosis death-rate of 1.3 per 1,000 compares with the corresponding rates for other urban rates (according to the Annual Summary of the Registrar General) as follows: Dublin, 1.5; Limerick, 1.9; Waterford, 1.9.

The combined figures for pulmonary and non-pulmonary deaths, with the corresponding death-rates, are shewn in table 23. The actual number of deaths is the second lowest recorded and the rate the third lowest.

Table 23.—Combined Deaths and Death rates from Pulmonary and Non-pulmonary Tuberculosis.

Year	Pulmonary Deaths	Non-pulmonary Deaths	Total	Rate per 1,000 pop.
1906	261	81	342	4.49
1907	278	84	362	4.74
1908	245	93	338	4.42
1909	264	78	342	4.47
1910	233	75	308	4.01
1911	252	73	325	4.23
1912	231	71	302	3.92
1913	202	79	381	3.64
1914	231	79	310	4.02
1915	211	72	383	3.66
1916	189	69	258	3.33
1917	202	78	280	3.61
1918	187	75	262	3.37
1919	156	58	214	2.75
1920	159	46	205	2.64
1921	125	34	159	2.03
1922	176	39	215	2.75
1923	130	32	162	2.05
1924	164	32	196	2.50
1925	134	31	165	2.10
1926	126	46	172	2.18
1927	129	35	164	2.08
1928	108	29	138	1.74
1929	141	17	158	2.00
1930	117	25	142	1.78
1931	124	46	170	2.13
1932	111	45	156	1.95
1933	106	19	125	1.56
1934	107	21	128	1.59
1935	115	29	144	1.78
1936	85	20	105	1.29
1937	96	24	120	1.48
1938	99	13	112	1.38
1939	86	14	100	1.23
1940	96	29	125	1.54
1941	86	20	106	1.38
1942	106	18	124	1.57
1943	107	23	130	1.69
1944	118	27	145	1.92
1945	86	29	115	1.52
1946	79	22	101	1.34



Table 24.—Deaths and Death Rates from *non-pulmonary* Tuberculosis.

Year	No. of Deaths	Rate per 1,000 pop.	Year	No. of Deaths	Rate per 1,000 pop.
1906	81	1.06	1927	35	0.44
1907	84	1.10	1928	29	0.36
1908	93	1.08	1929	17	0.21
1909	78	1.02	1930	25	0.31
1910	75	0.97	1931	46	0.57
1911	73	0.95	1932	35	0.44
1912	71	0.92	1933	20	0.24
1913	79	1.02	1934	21	0.25
1914	79	1.02	1935	29	0.36
1915	72	0.93	1936	20	0.25
1916	69	0.89	1937	24	0.29
1917	78	1.00	1938	13	0.16
1918	75	0.96	1939	14	0.17
1918	58	0.74	1940	29	0.35
1920	46	0.59	1941	20	0.26
1921	34	0.43	1942	18	0.24
1922	39	0.50	1943	23	0.30
1923	32	0.40	1944	27	0.35
1924	32	0.40	1945	29	0.38
1925	31	0.39	1946	22	0.29
1926	46	0.58			

If we compare the figures in the appropriate tables we note that in the periods covered there has been what amounts to practically a four-fold reduction.

The selective effect of age on mortality from tuberculosis has been very marked. This factor was referred to in last year's (and previous) reports. In the following table the figures for a number of years have been analysed and sub-divided into age and sex groups :—



Table 25.—Deaths from *Pulmonary* Tuberculosis distributed according to sex and age groups.

Year	Sex	All Ages	Under 1 year	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65 and over
1926-30	M	299	2	6	7	61	71	80	47	17	8
	F	325	—	6	16	75	96	67	38	18	9
1931	M	62	—	1	—	12	16	11	13	8	1
	F	61	—	1	4	15	17	14	6	3	1
1932	M	58	—	—	1	7	22	15	8	4	1
	F	54	—	1	3	14	21	5	7	3	—
1933	M	52	—	—	—	8	17	14	11	1	1
	F	53	—	—	—	18	12	10	9	3	1
1934	M	53	—	—	2	6	13	16	12	3	1
	F	50	—	—	1	14	12	16	3	3	1
1935	M	58	1	1	—	10	9	20	13	4	—
	F	54	—	—	2	11	18	9	11	3	—
1936	M	48	—	—	2	7	11	15	8	5	—
	F	34	—	1	—	6	8	7	5	6	1
1937	M	56	—	—	—	9	10	14	13	8	2
	F	40	—	—	2	10	9	10	4	5	—
1938	M	61	—	—	—	12	12	13	17	4	3
	F	38	—	—	—	4	15	10	7	2	—
1939	M	53	—	—	1	10	6	13	16	6	1
	F	33	—	—	2	11	4	6	6	4	—
1940	M	48	—	—	—	12	9	10	9	8	—
	F	48	1	—	—	12	13	14	4	2	2
1941	M	46	—	—	—	8	11	12	9	6	—
	F	42	—	—	—	5	10	14	9	4	—
1942	M	61	—	—	1	9	13	12	16	5	5
	F	45	—	—	1	17	10	7	6	4	—
1943	M	61	—	1	—	4	15	14	14	9	4
	F	46	—	—	2	15	10	8	3	6	2
1944	M	61	—	1	—	12	9	16	11	7	5
	F	57	1	—	1	13	20	8	4	8	2
1945	M	45	—	1	1	7	9	8	8	7	4
	F	41	—	—	2	6	15	7	6	1	4
1946	M	44	—	—	2	1	4	12	15	6	4
	F	35	—	—	3	10	7	9	3	2	1
Totals	M	1166	3	11	17	195	257	295	240	108	40
	F	1056	2	9	37	256	297	221	131	77	24
Persons		2222	5	20	56	451	554	516	371	185	64



With regard to this table (25) it has to be remarked that there are certain discrepancies as compared with other tables in the report particularly tables 22 to 24 inclusive, which might conceivably attract the attention of those given to the discrimination of minutiae.

In table 25 the figures from 1926 to 1936 inclusive are taken from the Annual Reports of the Registrar-General for the appropriate years. Prior to 1929 the figures in tables 22 and 24 are taken from the records of this Department over a great number of years (see table 10). From 1937 onwards the figures are taken from the records of deaths compiled in the Department itself from the District Registrar's weekly returns. With the exception of one or two years the discrepancies are not very great and since the main object of such tables is to display the *trend* of deaths the conclusions which may be drawn from them are not vitiated to any material extent. Similar observations apply to table 27 in which deaths from non-pulmonary tuberculosis are arranged into age and sex groups except that in this case all are compiled from the District Registrar's returns and accordingly may be said to represent the facts with a reasonable degree of accuracy. In the case of *non-pulmonary* tuberculosis, however, it is necessary to advert to the fact that there is reason to doubt the accuracy of some of the returns. The principal factor in non-pulmonary deaths is meningitis and it has been the practice to classify deaths under this heading as due to tuberculosis only when the certifying physician specifies "tuberculosis meningitis." One feels reasonably sure that a good many deaths certified simply as meningitis are probably tuberculosis in origin; but here again the important fact is that it is the *trend* which matters most.

The causes of the increased deaths noted in previous years were again examined. So far as the figures for the current year are concerned little can be added to the remarks made in the appropriate reports. Once again the great bulk of deaths occur in the age group between 15 and 45 years. This tendency has been characteristic for many years as will be seen in table 25. The actual figures for the last ten years, are as follows. These figures refer to *pulmonary* deaths only.

	15 /25	25 /30	35 /45	45 /55	55 /65
1937	19	19	23	17	13
1938	16	27	23	24	6
1939	21	10	19	22	10
1940	24	22	24	13	10
1941	13	21	26	18	10
1942	26	22	19	21	9
1943	19	25	22	17	15
1944	24	30	24	15	15
1945	13	24	15	14	8
1946	11	11	21	18	8



The principal reductions were effected in the 25/35 (-13) and 35/45 (-6) groups. The other age-groups have remained more or less stationary. In the following table the age-groups have been further sub-divided into sexes :—

Year	15/25		25/35		35/45		45/55		55/65	
	M	F	M	F	M	F	M	F	M	F
1937	9	10	10	9	13	10	13	4	8	5
1938	12	4	12	5	13	10	17	7	4	2
1939	10	11	6	4	13	6	16	6	6	4
1940	12	12	9	13	10	14	9	4	8	2
1941	8	5	11	10	12	14	9	6	6	4
1942	9	17	13	9	12	7	15	6	5	4
1943	4	15	15	10	14	8	14	3	9	6
1944	11	13	9	21	16	8	11	4	7	8
1945	7	6	9	15	8	7	8	6	7	1
1946	1	10	4	7	12	9	15	3	6	2

In general, when studying this table and its larger counterpart (table 25) we are struck by the preponderance of female deaths in the younger age-groups. This is especially marked in the 15/25 group and it carries its impress on into the next (25/35 years). Thereafter the position is reversed and the male deaths greatly outnumber the females. The totals as computed in table 25 shew as that (in this area at least) there is very little difference between the two sexes, so far tuberculosis mortality is concerned, if the figures are taken to cover a sufficiently large number of years.

Table 26.—Proportion of Deaths from Tuberculosis (*all forms*) to Deaths from all causes in 1946.

Age Group	No. of Deaths (all causes)	Deaths from Tuberculosis	Proportion
0/1	109	2	1.8 per cent.
1/5	24	5	20.8 „ „
5/15	17	9	52.9 „ „
15/25	29	13	44.8 „ „
25/35	36	13	36.1 „ „
35/45	67	22	32.8 „ „
45/55	94	20	21.2 „ „
55/65	181	12	6.6 „ „
65 and over	478	5	1.0 „ „
Totals.....	1035	101	9.7 „ „

The figures in this table were computed for the first time in last year's report. The periods covered are too short to institute any very useful comparison, nevertheless some interesting points emerge. In the first place we note that the total proportion of tuberculosis deaths to all deaths has fallen from 10.4 per cent. to 9.7 per cent. This tendency has



maintained itself over a considerable period. In the quinquennium 1906-10 the ratio was over 20 per cent. and the proportion has fallen steadily, with the fall in tuberculosis deaths, from that time. Again, there is evident a very pronounced fluctuation in the age-groups. This is shewn in the following table which sets out the proportions in the two years :—

Age Group	Proportion of Tuberculosis Deaths to all Deaths	
	1945	1946
0/1 .....	1.9 per cent.	1.8 per cent.
1/5 .....	34.7 " "	20.8 " "
5/15 .....	46.1 " "	52.9 " "
15/25 .....	54.3 " "	44.8 " "
25/35 .....	62.5 " "	36.1 " "
35/45 .....	30.0 " "	32.8 " "
45/55 .....	14.1 " "	21.2 " "
55/65 .....	4.9 " "	6.6 " "
65 and over .....	2.4 " "	2.4 " "
Totals .....	10.4 " "	9.7 " "

The findings presented in these two tables represent the proportion of all deaths occurring which are due to tuberculosis, but they do not tell us the exact risk to which each age-group is exposed. Much, of course, depends on the number of persons in each group and it remains but to work out the actual death-rate in the individual groups by comparing the number of deaths with the number of persons in each group. This was done in last year's report, the various rates being computed in the population in the different age-groups as set out in the Register of Population, 1941. The figures for the 1946 Census have not yet been sub-divided into age- and sex-groups and so it is not possible to reproduce this feature in the current report. In general it may be said that the principal feature brought to light by the previous year's investigation was that while the preponderance of deaths was in 25/35 group, there was a very marked smoothening out of the discrepancies apparent for the various age groups as compared with the curve based solely on the proportion of deaths from tuberculosis to all deaths in the various groups.

Even a cursory examination of the mortality tables reveals not only a steadily dwindling number of deaths from tuberculosis but it also tells us that the ratio of these deaths to deaths from all causes is also a decreasing one. In 1893 the number of recorded deaths from *pulmonary* tuberculosis was 17 per cent of the total deaths and excepting the year 1904 when the ratio rose to 21.4 per cent., it fell more or less steadily to minima of 6.8 per cent. in 1937 and 6.9 per cent. in 1941. Apart from the year 1893, there were three occasions on which the ratio either reached or slightly exceeded 17 per cent. These were the years 1905-07 inclusive.



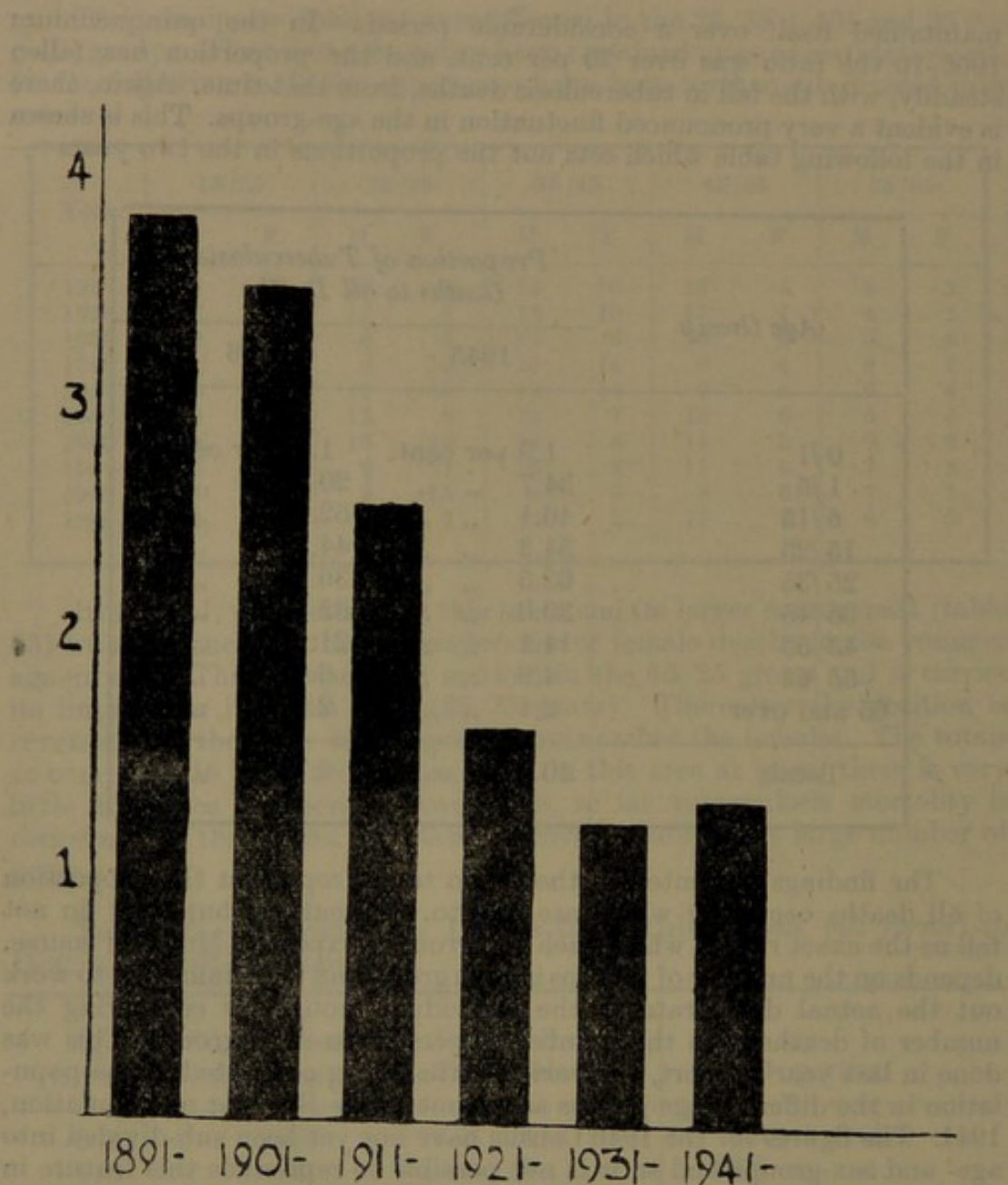


FIG. VI—PULMONARY TUBERCULOSIS. DEATH RATES EXPRESSED AS DECENNIAL AVERAGES

During 1938-40 the ratio was slightly over 8 per cent. and again in the war years from 1942 to 1944. When computing this ratio in the case of deaths from *all forms* of tuberculosis a picture was produced which differs only in detail from that of the *pulmonary* form of the disease. As mentioned above combined figures are available only from 1906 and in that year the highest ratio (25.3 per cent. was recorded) the lowest ratio (8.55 per cent.) was attained in 1937 and 1941. When one considers the fact that in the first decade of this century no less than a quarter of all the deaths were due to tuberculosis and that they now represent some 10 per cent. one is impressed by the important part played in the reduction of the general death-rate by reduced deaths from tuberculosis.



22 deaths from non-pulmonary tuberculosis were recorded during the year. This is seven less than the figure for the previous year (29). The distribution of these deaths in regard to age and sex groups is shewn in Table 27.

Table 27.—Deaths from non-pulmonary Tuberculosis arranged into sex and age groups.

Year	Sex	All Ages	Under 1 year	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65 and over
1932	M	22	5	5	2	5	1	2	2	—	—
	F	13	—	1	1	2	4	1	2	2	—
1933	M	11	1	4	1	2	1	1	—	1	—
	F	9	3	1	4	—	—	—	1	—	—
1934	M	8	—	4	—	1	—	2	1	—	—
	F	13	2	4	1	2	2	1	1	—	—
1935	M	14	1	4	2	2	1	3	1	—	—
	F	15	—	4	4	—	2	4	—	1	—
1936	M	13	1	4	2	—	2	2	—	2	—
	F	7	3	1	—	2	—	1	—	—	—
1937	M	13	2	3	1	2	1	1	—	2	1
	F	11	—	3	2	1	2	1	—	—	2
1938	M	5	—	1	1	1	1	—	1	—	—
	F	8	—	2	2	—	—	2	—	—	2
1939	M	9	—	5	—	1	1	—	2	—	—
	F	5	—	4	—	1	—	—	—	—	—
1940	M	14	—	6	3	1	2	—	2	—	—
	F	15	3	2	3	1	1	1	2	1	1
1941	M	11	1	1	3	2	3	1	—	—	—
	F	9	1	2	1	2	—	1	—	—	2
1942	M	8	1	3	1	—	1	—	1	—	1
	F	11	2	3	1	2	—	—	1	1	1
1943	M	13	3	4	1	4	1	—	—	—	—
	F	10	—	5	2	1	—	1	—	—	1
1944	M	10	2	6	1	—	—	—	—	—	1
	F	17	2	4	4	1	—	1	2	2	1
1945	M	19	2	5	6	3	1	—	—	1	1
	F	10	1	2	3	3	—	—	—	—	1
1946	M	12	2	3	3	—	—	1	—	3	—
	F	10	—	2	1	2	2	—	2	1	1
Total	M	182	21	58	27	24	16	13	10	9	4
	F	163	17	40	29	20	13	14	11	7	12
Persons		345	38	98	56	44	29	27	21	16	16



An examination of the causes of the 22 deaths attributed to non-pulmonary tuberculosis yields the following figures.

Tuberculous meningitis	...	...	7
Bones and joints	...	...	7
Abdominal disease	...	...	6
Miscellaneous	...	...	2

The preponderant role of meningitis is very obvious. A further examination of the figures brings out this feature in a very marked degree as is seen in the next table.

Table 28.—Classification of Deaths from non-pulmonary Tuberculosis.

Cause of Death	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	Totals
Meningitis...	9	10	10	12	10	12	8	6	15	9	10	16	11	15	7	160
Peritonitis	4	4	—	3	3	2	—	3	7	2	2	2	1	4	6	43
Bones and Joints	4	3	2	4	4	4	2	1	2	5	1	1	7	4	7	51
Genito-urinary	3	1	1	1	—	—	—	1	2	2	2	—	—	2	1	16
Abdominal	4	—	—	3	2	2	—	1	—	1	1	1	2	2	—	19
Generalised Tuberculosis	6	1	5	3	—	1	2	1	—	1	1	—	2	1	—	24
Glands ...	—	1	2	—	1	1	—	—	1	—	—	1	—	1	—	8
Addison's Disease	—	—	1	2	—	2	—	1	1	—	2	—	2	—	—	11
Skin ...	2	—	—	—	—	—	1	—	1	—	—	1	—	—	—	5
Miscellaneous	3	—	—	1	—	—	—	—	—	—	—	1	2	—	1	8
Totals	35	20	21	29	20	24	13	14	29	20	19	23	27	29	22	345



Tuberculous meningitis is almost invariably of human origin. With the exception of glandular disease and, possibly, abdominal tuberculosis most of the conditions listed in table 28 may be said to be of haematogenous origin and due, in the first instance, to pulmonary infection of human origin from which it would seem clear that the control of the human carrier or case must be the prime consideration in the attack on tuberculosis.

Table 29.—Non-pulmonary tuberculosis. Analysis of certified deaths, shewing same distributed into sex and age-groups, from 1932 to 1946 (inclusive).

Cause of Death	Sex	All Ages	Under 1 Yr.	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65 and over
Meningitis ...	M	82	11	38	14	12	3	2	1	—	—
	F	78	11	28	22	9	4	3	1	—	—
Peritonitis ...	M	25	4	10	4	2	1	3	—	1	—
	F	18	2	5	1	1	1	3	1	—	2
Bone and Joint ...	M	24	—	2	5	4	3	3	1	5	1
	F	27	—	—	6	5	4	2	2	3	5
Genito-urinary ...	M	12	—	—	—	1	4	3	3	1	—
	F	4	—	—	—	—	1	1	2	—	—
Abdominal ...	M	9	—	3	1	1	2	—	1	1	—
	F	10	3	3	—	—	1	1	—	1	1
Generalised Tuberculosis ...	M	16	2	4	2	3	2	2	—	—	1
	F	8	1	1	—	1	2	1	1	1	—
Supra-renal Gland	M	6	—	—	—	1	1	—	2	1	1
	F	6	—	—	—	—	—	1	2	1	2
Miscellaneous ...	M	8	3	1	1	—	—	—	2	—	1
	F	12	—	3	—	2	—	2	2	1	2
TOTALS	M	182	21	58	27	24	16	13	10	9	4
	F	163	17	40	29	20	13	14	11	8	12
PERSONS		345	38	98	56	44	29	27	21	16	16

The preponderant role of meningitis in deaths from non-pulmonary tuberculosis is again apparent in this aggregate table accounting for nearly half the deaths in the period of thirteen years covered. It will be noted that the earlier years are those most affected. The other forms of non-pulmonary tuberculosis are more evenly distributed.



Table 30.—Tuberculosis (all forms). Comparative Statement of annual death rates.

Year	Éire	Cork	Dublin	Limerick	Waterford
1936	1.17	1.29	1.59	1.40	1.57
1937	1.23	1.48	1.59	1.49	1.57
1938	1.09	1.38	1.47	1.10	1.32
1939	1.13	1.23	1.48	1.27	1.25
1940	1.25	1.54	1.63	2.05	1.43
1941	1.24	1.38	1.56	1.58	1.40
1942	1.47	1.57	1.90	2.12	1.65
1943	1.46	1.69	1.84	1.95	1.86
1944	1.34	1.92	1.60	2.10	1.40
1945	1.20*	1.52	1.70*	1.70*	1.90*
1946	1.10*	1.34	1.50*	1.90*	1.90*

\*These figures are taken from the *Annual Summary* of the Registrar General and are subject to correction.

#### NOTIFICATIONS.

The number of notifications received during the year was 169. Prior to 1930 such notifications were for the period from the 1st April to 31st March following. Notifications for previous years were as follows :

1925-26	...	...	110	1936	...	...	154
1926-27	...	...	108	1937	...	...	166
1927-28	...	...	73	1938	...	...	147
1928-29	...	...	116	1939	...	...	128
1929-30	...	...	179	1940	...	...	114
1930 (April-Dec.)	...	...	133	1941	...	...	173
1931	...	...	196	1942	...	...	159
1932	...	...	136	1943	...	...	173
1933	...	...	164	1944	...	...	161
1934	...	...	112	1945	...	...	169
1935	...	...	154	1946	...	...	183

In the following table notifications, from the year 1930, have been analysed as to age and sex distribution.



Table 31.—Notifications of Tuberculosis distributed according to Sex and Age.

Year	Total	Sex	All Ages	Under 5 yrs	5-15	15-45	45-60	60 and up
1930	133	M	77	4	11	50	11	1
		F	56	5	11	37	2	1
1931	196	M	114	9	24	64	15	2
		F	82	7	19	53	3	—
1932	136	M	71	5	11	42	11	2
		F	65	1	6	48	7	3
1933	159	M	89	5	10	59	14	1
		F	70	5	8	48	8	1
1934	112	M	43	1	6	26	9	1
		F	69	4	10	41	9	5
1935	154	M	83	7	14	43	14	5
		F	71	5	15	40	7	4
1936	154	M	76	9	10	33	16	8
		F	78	3	12	55	6	2
1937	166	M	91	5	10	47	25	4
		F	75	2	10	52	5	6
1938	147	M	78	4	6	52	15	1
		F	69	4	10	49	5	1
1939	128	M	60	5	9	33	10	3
		F	68	3	3	54	6	2
1940	114	M	56	1	6	35	14	—
		F	58	5	4	41	6	2
1941	173	M	90	8	13	48	19	2
		F	83	8	14	51	7	3
1942	159	M	80	8	13	43	16	—
		F	79	3	18	48	6	4
1943	173	M	83	1	14	45	14	9
		F	90	1	10	66	10	3
1944	161	M	76	2	10	83	16	10
		F	85	6	18	50	3	8
1945	169	M	78	6	15	38	16	3
		F	91	7	14	56	6	8
1946	183	M	89	3	18	46	13	9
		F	94	5	11	71	6	1

The number of home visits made by the Tuberculosis Nurse was 449.

#### SPUTUM EXAMINATIONS.

Examination of specimens of sputum is carried out in the laboratory attached to the Tuberculosis Clinic. 325 such specimens were examined during the past year, of which 116 were found to contain tubercle bacilli



while 209 were negative. Of the 325 specimens examined 69 were submitted by medical practitioners. The following table shows the number of specimens examined, and the results obtained since 1931.

Year	Total	Positive	Negative
1931	375	90	285
1932	440	94	346
1933	502	118	384
1934	519	121	398
1935	512	94	418
1936	467	93	374
1937	511	73	438
1938	336	49	287
1939	228	51	177
1940	336	88	248
1941	276	68	208
1942	295	81	214
1943	277	61	216
1944	325	67	258
1945	321	87	234
1946	325	116	209
Totals ...	6045	1381	4664

Where tubercle bacilli exist in very small numbers the usual direct examination of specimens may not be sufficient to demonstrate their presence and a more elaborate technique becomes necessary. This technique consists of digestion of the specimen (with caustic soda) in an incubator at body temperature, centrifugalisation, neutralisation of the deposit and culture on a selective growth medium. The medium we are using at present is Lowenstein's. A typical culture appears in three to four weeks. Cultural methods, with other lines of investigation, are demanded when we wish to find out that arrest of disease has taken place and this method along with animal inoculation must be regarded as the supreme test of active tuberculous infection. All the examinations recorded in the above table were examined by the ordinary routine Ziehl-Nielson staining method. The newer method of examining for tubercle bacilli was used by us for the first time in 1945, and 53 specimens were dealt with during the past year of which 14 were positive.

#### CLASSIFICATION OF NEW CASES.

As in former years the new cases dealt with at the Tuberculosis Dispensary who presented signs of advanced disease was disproportionately high. 47 per cent. of such were found to be in Stage III. and 40 per cent. in Stage II.; in other words, no less than 87 per cent. of the new cases were suffering from definitely established disease recognisable by ordinary clinical methods. These figures are similar to those of former years and must be regarded with considerable dissatisfaction, as little or nothing can be done in regard to the treatment of such advanced cases apart from palliative methods. The main factor in the production of this state of affairs appears to be the failure of patients to seek treatment sufficiently early.



At a conference of Tuberculosis officers held in Dublin in November 1944, a new method of classification was adopted according to which cases were graded, in the first instance, into those in which tubercle bacilli could not be detected in the sputum and those who had positive sputum. The latter are further subdivided into grades corresponding to those previously recognised. According to the new classification the stages found on the examination of new cases were as follows:—

		1946	1945	1944	
Sputum Negative	...	10	13	20	per cent.
Sputum Positive—Stage I.	...	3	4	4	„ „
„ „ Stage II.	...	40	34	12	„ „
„ „ Stage III.	...	47	49	64	„ „

The fact that 10% of the new cases were classified as sputum negative does not necessarily mean that all these were good cases for treatment or that the disease was of little extent. While specimens from some were examined and found negative others had no sputum for investigation. Treatment is not withheld from patients who come under this category for the diagnosis can usually be clearly established by other methods of approach. The examination of the sputum remains, however, the most valuable aid we possess in the diagnosis of the disease, the estimation of risks to which contacts are exposed and the assessment of progress of the patient.

The cases reported as sputum negative were made up of:—

- (a) Cases of tuberculous pleural effusion.
- (b) Cases who came on transfer under our scheme after treatment elsewhere.
- (c) Cases who had X-Ray evidence of infiltration in which there was doubt whether complete arrest had taken place, and
- (d) Cases of advanced disease of a miliary type.

In all these categories but the last the probable behaviour of the disease is regarded at the outset as favourable. (a) Tuberculous pleural effusion needs the rigorous care that all cases of pulmonary tuberculosis require. (b) Cases who come under treatment to us with a negative sputum and a history of treatment elsewhere are regarded as quiescent and if treatment is persevered in there is every prospect of final arrest of the disease. These cases have shewn a favourable response to treatment and immunity to the disease is becoming established. (c) The third category requires careful review. They represent the type of case that may be uncovered by the mass radiological survey of healthy groups and it is the business of the tuberculosis officer to decide whether these cases are active or not. (d) The miliary group represents a condition of widespread disease in the body. The lungs are involved with other organs in a blood borne dissemination which arises as a result of an escape of a lethal dose of bacilli into the blood stream. These cases may die of intense toxæmia before the lung lesions break down to excrete the organisms.



The following table, which is introduced for comparative purposes, gives the corresponding proportions for previous years.

Table 32.—Showing the proportion of early, moderately advanced and advanced cases attending the Tuberculosis Clinic for the first time (1930 to 1943).

TYPE	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
Stage I. (Early)	15%	8%	9%	6%	14%	13%	6%	9%	5%	8%	6%	3%	4%	9%
Stage II. (Moderately Advanced)	36%	50%	38%	39%	28%	30%	43%	38%	33%	32%	44%	46%	34%	44%
Stage III. (Advanced)	49%	42%	53%	55%	58%	57%	51%	53%	62%	60%	50%	51%	62%	47%

### Artificial Pneumothorax.

9 new cases received artificial pneumothorax during the year. These cases had their induction carried out at Heatherside Sanatorium by the R.M.S. 5 cases are having refills and management at the Tuberculosis Clinic. The number of cases treated during the year was 14. 252 refills were given and 52 X-Ray examinations were made in connection with the treatment.

### X-Ray Examination.

X-Ray examination is essential for diagnosis and assessment of progress in all cases of pulmonary and bone and joint tuberculosis. Very many of the cases reaching us are accompanied by films. All the cases that come for chest examination are screened. 98 films for cases attending the dispensary were obtained on the recommendation of the tuberculosis officer.

In 1943 an X-Ray Screen was added to the equipment of the clinic. This apparatus, which enables the Tuberculosis Officer to visualise the lung fields has been a very great help.

Screen examinations of the lungs are made :—

- (1) To define the extent of lung involvement by disease.
- (2) To observe the progress of cases undergoing artificial pneumothorax treatment.
- (3) To help in the examination of those who have been in contact with tuberculous patients.

It is scarcely necessary to add that the approach to diseases of the chest cannot be regarded as competent unless an X-Ray examination is made. The methods of examination of the lungs at our disposal other than X-Rays are not sufficiently sensitive to define the extent of the tuberculous disease. In many cases they are not sufficient to detect the disease at all.

*The number of screen examinations made during the year was 881.*



### ADMINISTRATION.

The routine administrative work of the Tuberculosis Dispensary is summarised in the following paragraphs.

The number of new patients examined at the Tuberculosis Dispensary during the year amounted to 326, of whom 185 were adults and 141 children. 104 of the adults and 36 of the children were found to be suffering from tuberculosis in one form or another and appropriate treatment was afforded.

The number of cases admitted to sanatorium during the year was as follows :—

		Males	Females	Total
Insured ...	...	23	16	39
Uninsured	...	4	17	21
Children ...	...	—	—	—
Total ...	...	27	33	60

The number of patients discharged from sanatorium during the year was as follows :

		Males	Females	Total
Insured ...	...	27	12	39
Uninsured	...	2	18	20
Children ...	...	—	—	—
Total ...	...	29	30	59

Advanced cases who are not likely to derive benefit from sanatorium treatment who cannot receive adequate treatment in their own homes are admitted to St. Patrick's Hospital and St. Joseph's Hospital. This following cases were admitted during the year :—

		Males	Females	Total
Insured ...	...	38	12	50
Uninsured	...	11	24	35
Total ...	...	49	36	85

The following cases died or were discharged from these Institutions.

		Males	Females	Total
Insured ...	...	30	12	42
Uninsured	...	14	18	32
Total ...	...	44	30	74

### INSTITUTIONAL TREATMENT.

In the tables which follow statistical details are given of the various institutions which have been utilised for the treatment of our cases during the past year. Early and moderately early cases of pulmonary disease have, almost all, been referred to the Cork Sanatorium at Heatherside.



Table 33.—Particulars of patients who received sanatorium treatment during the year.

	Under treatment on 1st. Jan. 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec. 1946	No. of Cases treated during the year
Insured Males ...	16	23	27	12	39
„ Females ...	5	16	12	9	21
Uninsured Males ...	2	4	2	4	6
„ Females ...	7	17	18	6	24
Ex-Service men ...	1	—	—	1	1
Male Children ...	—	—	—	—	—
Female Children ...	—	—	—	—	—
Totals ...	31	60	59	32	91

Table 34.—Particulars of cases treated at Cork District Hospital.

	Under treatment on 1st. Jan. 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec., 1946	No. of Cases treated during the year
Male Adults ...	5	41	38	8	46
Female Adults ...	4	16	14	6	20
Male Children ...	—	2	2	—	2
Female Children ...	4	8	11	1	12
Totals ...	13	67	65	15	80

Table 35.—Particulars of patients treated in St. Patrick's Hospital during 1946.

	Under treatment on 1st. Jan. 1945	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st. Dec. 1945	No. of Cases treated during the year
Insured Males ...	8	25	20	13	33
„ Females ...	2	6	6	2	8
Uninsured Males ...	7	9	11	5	16
„ Females ...	4	14	9	9	18
Ex-Servicemen ...	—	1	—	1	1
Male Children ...	—	—	—	—	—
Female children ...	2	1	3	—	3
Totals ...	23	56	49	30	79



Table 36.—Particulars of cases treated in the North Infirmary during 1946.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Male children ...	—	—	—	—	—
„ adults ...	—	—	—	—	—
Female children ...	—	2	2	—	2
„ adults ...	—	—	—	—	—
Totals ...	—	2	2	—	2

Table 37.—Particulars of cases treated in the South Infirmary during 1946.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Male children ...	—	4	3	1	4
„ adults ...	1	4	3	1	4
Female children ...	—	9	5	4	9
„ adults ...	—	1	—	1	1
Totals ...	1	18	11	7	18

Table 38.—Particulars of cases treated in St. Mary's Open-Air Hospital, Cappagh, Co. Dublin.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Female children ...	—	1	—	1	1
Male children ...	—	1	1	—	1
Totals ...	—	2	1	1	2



Table 39.—Particulars of cases treated at St. Joseph's Hospital, Mount Desert, during 1946.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Insured Males ...	5	13	10	8	18
" Females ...	5	6	6	5	11
Uninsured Males ...	6	2	3	5	8
" Females ...	3	10	9	4	13
Male children ...	1	1	1	1	2
Female children ...	1	—	—	1	1
Totals ...	21	32	29	24	53

Table 40.—Particulars of cases treated at Coole Open-Air Hospital Co. Westmeath.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Male children ...	8	1	3	6	9
Total ...	8	1	3	6	9

Table 41.—Particulars of cases treated at Mercy Hospital.

	Under treatment on 1st Jan., 1946	New cases admitted during the year	Cases discharged during the year	Under treatment on 31st Dec., 1946	No. of Cases treated during the year
Male Adults ...	—	2	2	—	2
" Children ...	—	—	—	—	—
Female Adults ...	—	—	—	—	—
" Children ...	—	1	1	—	1
Totals ...	—	3	3	—	3



Table 42.—Return of number of patients treated under the Tuberculosis Scheme, during the year ended 31st December, 1946.

	Pulmonary Tuberculosis			Non-Pulmonary Tuberculosis			Total
	Children under 15 years	Other Persons		Children under 15 years	Other Persons		
		Males	Females		Males	Females	
<b>1.—Insured Patients :</b>							
(i) No. remaining under treatment							
(a) On 1st Jan., 1946 ...	—	65	31	—	3	1	100
(b) On 31 Dec., 1946 ...	—	74	40	—	5	2	121
(ii) No. of new patients treated during year ...	—	38	21	—	3	1	63
(iii) No. of cases under observation at close of year 1946 ...	—	2	2	—	—	—	4
<b>2.—Other Patients :</b>							
(i) No. remaining under treatment							
(a) On 1st Jan., 1946 ...	6	25	52	26	4	9	122
(b) on 31st Dec., 1946 ...	7	36	58	27	1	7	136
(ii) No. of new patients treated during year ...	8	19	41	36	3	5	112
(iii) No. of cases under observation at close of year 1946 ...	—	2	1	—	—	—	3

#### PROVISION OF EXTRA NOURISHMENT, CLOTHING, Etc.

In a Departmental letter (P.H. circular 53/43) dated 31st March, 1943, the principal provisions of which are outlined below, the Minister approved for recoupment from the National Tuberculosis Grant of:—

- (a) Free allowance of extra nourishment in the form of eggs, butter and milk to patients while they are awaiting admission to institutions or following discharge after an approved term of institutional treatment. Allowance per patient not to exceed :  $3\frac{1}{2}$  pints of milk,  $\frac{1}{2}$ -lb. of butter, 7 eggs per week.



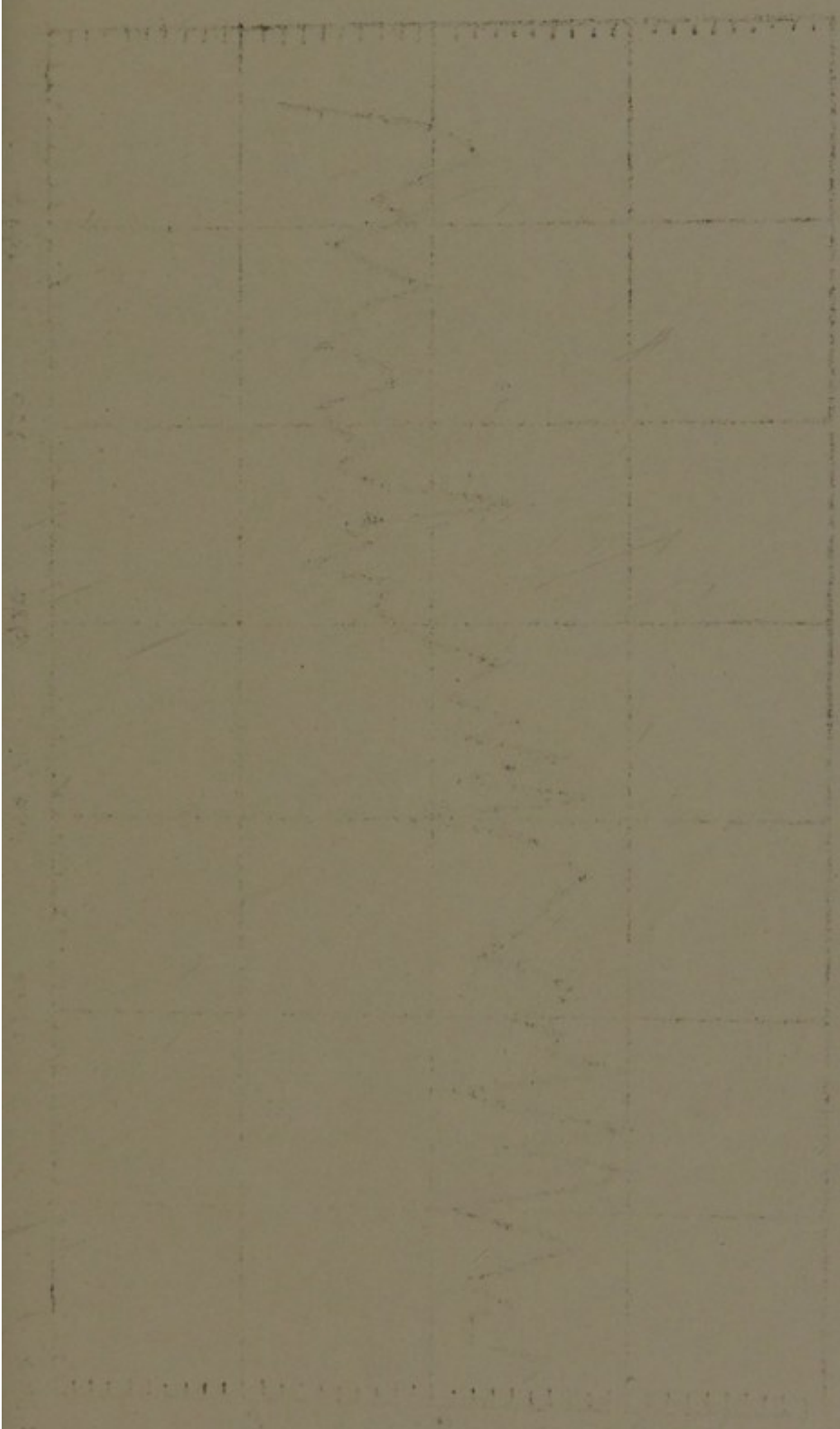
- (b) A separate bed and, where necessary, bedding for infective patients receiving domiciliary or dispensary treatment. Expenditure by the L.A. should not exceed £4 in any one case (this amount was subsequently raised to £15).
- (c) In the case of necessitous patients undergoing treatment in institutions, suitable clothing if such be necessary to derive the full benefit of treatment.

The following particulars relate to the number of persons who benefitted under the scheme during the year :

Number of Recipients	Amount Spent
<i>Extra Nourishment</i> —102	£560 6 5
<i>Clothing</i> —140	£441 19 9
<i>Beds and Bedding</i> —17	£206 19 10

Expenditure under this heading amounted to £1,209 6s. 0d. as compared with £1,134 14s. 0d. in the previous year.

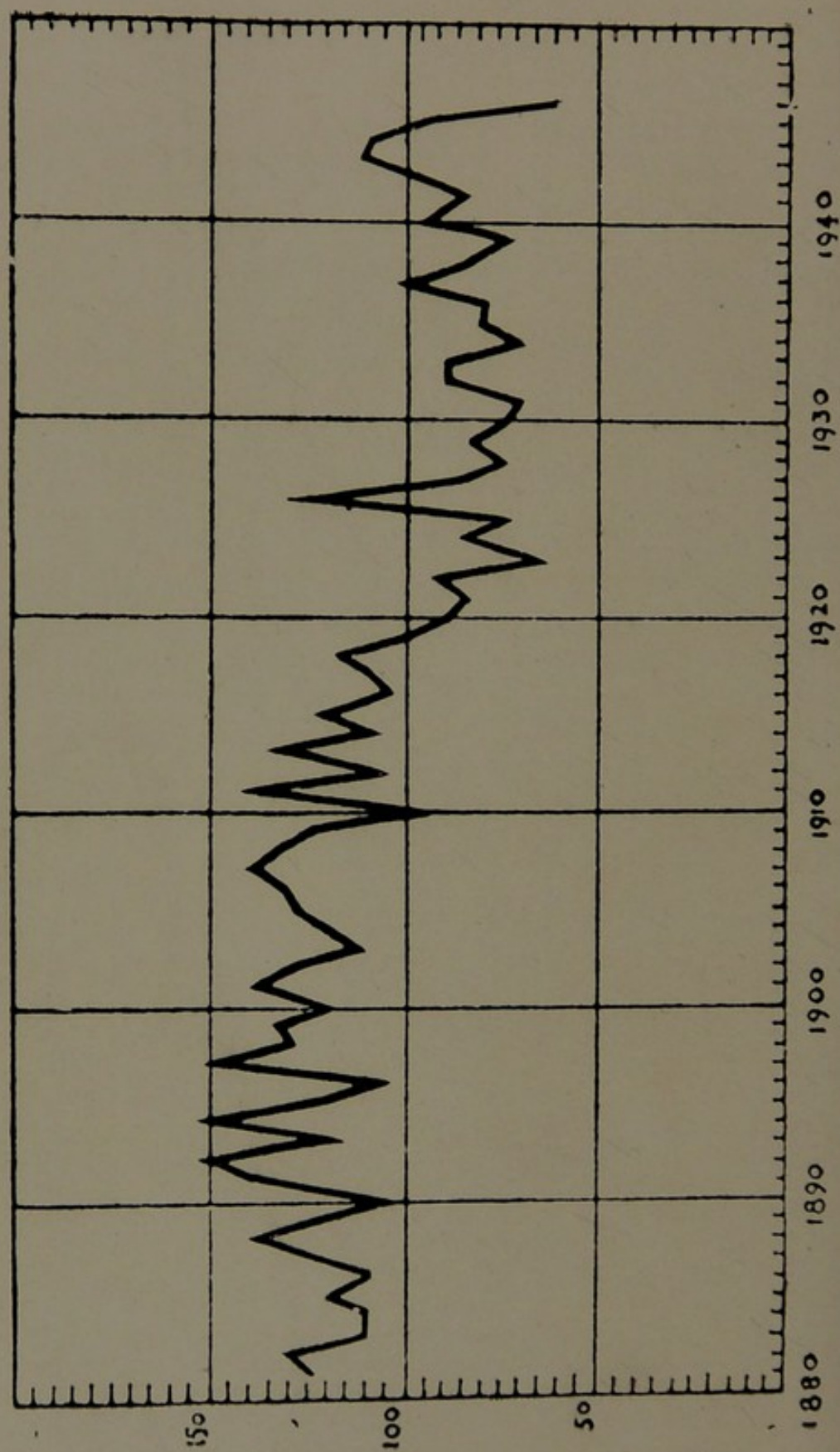




U.S. DEPARTMENT OF COMMERCE, BUREAU OF COAST AND GEODETIC SURVEY



FIG. VII.—INFANT MORTALITY FROM 1880 TO PRESENT YEAR





## Section IV.

### Maternity and Child Welfare.

#### (A) INFANT MORTALITY.

The number of deaths of children under one year of age amounted to 109. This is equivalent to an infant mortality rate of 62 per 1,000 and is the lowest ever recorded in this area. The figures for last year were 156 and 89 per 1,000 respectively. The corresponding figure for the whole country (Registrar-General's Annual *Summary*—subject to correction) was 63. The principal contributory factors were as follows :—

Premature birth and congenital debility .....	49
Diarrhoea and Enteritis .....	17
Broncho-pneumonia .....	11
Convulsions .....	6
Marasmus .....	5
Intra-cranial haemorrhage .....	2
Congenital Syphilis .....	2
Tuberculosis .....	2

The principal reduction (in comparison with 1945) was in the case of gastro-enteritis (from 48 to 17). Broncho-pneumonia was down from 16 to 11 and intra-cranial haemorrhage from 7 to 2. Figures for other causes remain more or less stationary. The probable factors concerned in the reduction under gastro-enteritis are discussed under the appropriate heading in the section on infectious diseases. While one would naturally like to be able to point to administrative action as the probable deciding factor, circumstances do not justify such a conclusion. The weather conditions during the late summer season of 1946 were exceedingly bad—incessant rain and low average temperature, conditions unfavourable to fly-breeding and the formation of dust. There were in fact little or no flies during the months of July, August and September and in such circumstances it would be imprudent to claim that the recorded reduction was mainly the result of the activities of the child welfare services. No doubt these services played their part but their effect would be more accurately reflected in a maintained and steady rate of reduction over a number of years. Nevertheless, it is gratifying to be able to record such a reduction and to note that it has been the lowest figure ever attained in our records.



It is of interest to compare the relevant figures for different areas. We have noted above that the figure for Cork (62) is slightly lower than that of the country as a whole (63). The latest figure for England and Wales at my disposal (1945) places the infant mortality rate at 46 while that of Scotland for the same year was 69. It will be seen then that there is considerable leeway to be made up before we can claim comparison with the former country. In making comparisons of this character it is, however, of prime importance to take birth-rates into consideration, because high birth-rates are inevitably associated with high infant mortality rates and we have a much higher birth-rate than England and Wales. In the report of the Chief Medical Officer of the Ministry of Health the birth-rate in England and Wales in 1944 was 17.7, the rate for Eire in 1946 was 22.6 and that of Cork City 23.2 per 1,000. In the ultimate analysis the question of birth and infant mortality rates resolves itself into the problem of the maintenance of man-power and there is in Great Britain at present very great concern indeed among statisticians as to the eventual outcome of the falling birth-rate. From this point of view it would appear that a high birth-rate is more important than a low infant mortality rate. This is not, to say, of course, that there is any justification for equanimity on our part as to the position in regard to infant mortality. Unremitting effort is still called for to overcome the factors which militate against the preservation of infant life. This is, of course, very largely financial in nature and while we can scarcely hope to attain to the administrative standards of our wealthier neighbours much can still be done by way of education to reduce our rates to a comparable level.

It is my settled conviction that any such educational campaign should bend its energies towards the encouragement of breast-feeding. The figures at our disposal leave no doubt on this score. In table 50 in this section it will be noted that infant deaths over a period of years have been analysed in regard to this question. Neo-natal deaths have been excluded since such deaths have little if any relationship to feeding. The total number involved is 370 and of this number there was a history of no less than 348 cases in which artificial feeding had been resorted to (more than 94 per cent.). These figures do not refer to deaths from gastro-intestinal disease alone, they cover the whole range of deaths during this period so that it seems, apart from the digestive disturbance occasioned by artificial feeding, the bottle-fed baby is deprived of something which promotes resistance to disease. It is apparent therefore that whole problem of infant mortality revolves around the question of breast-feeding.



Table 43.—Infant Mortality, Cork City, Éire, and England and Wales from 1891.

Year	Cork	Éire	E. & W.	Year	Cork	Eire	E. & W.É
1881	124	89.4	139	1914	119	81.0	105
1882	127	94.9		1915	132	85.2	110
1883	109	95.0		1916	105	81.3	91
1884	110	91.9		1917	108	84.0	96
1885	120	91.3	145	1918	118	80.2	97
1886	110	93.9		1919	100	84.4	89
1887	123	93.6		1920	79	77.5	80
1888	139	96.0		1921	76	72.6	83
1889	125	92.0	144	1922	93	68.9	77
1890	106	91.6	151	1923	66	66.4	69
1891	138	91.4	149	1924	87	71.6	75
1892	150	99.9	148	1925	74	67.9	75
1893	132	99.8	159	1926	130	74.4	70
1894	150	97.4	137	1927	87	70.8	70
1895	131	98.0	161	1928	76	67.9	65
1896	106	91.0	148	1929	81	70.4	74
1897	152	104.0	156	1930	77	68	60
1898	131	105.2	160	1931	71	69	66
1899	133	103.2	163	1932	89	71	65
1900	120	105.3	154	1933	89	65	64
1901	139	95.5	151	1934	72	63	59
1902	127	95.2	133	1935	84	67	57
1903	112	92.2	132	1936	80	74	59
1904	118	95.8	145	1937	103	73	58
1905	131	90.2	128	1938	75	66	53
1906	133	88.0	132	1939	73	65	50
1907	139	88.5	118	1940	92	66	56
1908	134	91.2	120	1941	85	73	59
1909	125	87.3	109	1942	100	68	49
1910	96	89.1	105	1943	113	83	49
1911	139	91.3	130	1944	108	79	46
1912	107	82.1	95	1945	89	69	—
1913	136	93.1	108	1946	62	63	—

In Table 44 is set out a comparative statement of infant mortality in Cork, Dublin, Belfast, Limerick and Water'ord from 1920.



Table 44.—Infant mortality in Cork and other Irish Cities from 1920.

Year	Cork	Dublin*	Belfast†	Limerick*	Waterford*
1920	79	152	132	109	96
1921	76	143	115	113	102
1922	93	120	94	108	94
1923	66	117	101	128	78
1924	87	119	107	90	93
1925	74	117	104	91	106
1926	130	127	112	146	114
1927	87	123	101	102	83
1928	76	102	103	117	105
1929	81	106	112	118	110
1930	77	97	78	114	91
1931	71	94	90	120	92
1932	89	100	111	91	132
1933	89	83	102	126	103
1934	72	80	80	76	92
1935	84	94	112	106	126
1936	80	114	102	95	90
1937	102	102	94	68	97
1938	75	96	96	70	99
1939	73	90	86	59	73
1940	95	91	122	70	111
1941	85	118	91	95	88
1942	100	98	90	77	91
1943	113	126	111	76	100
1944	108	125	89	136	84
1945	89	114	84	96	77
1946	62	96	61	75	67

\* Figures for current year obtained from Annual Summary of Registrar-General. Those for previous years have been corrected from figures in the Annual Reports of the Registrar-General for the appropriate years. (Table 10).

† Figures obtained from Superintendent Medical Officer of Health.

*Neo-natal Mortality.* The role of neo-natal mortality (i.e., deaths of infants under one month old) in the production of infant mortality is shewn in the following table.

Table 45.—Deaths of infants *under one month* in Cork City and the ratio of same to the total number of infant deaths (i.e., under one year), together with the comparative figures for the whole country.

Year	CORK CITY		ÉIRE. Relation of deaths under one month to all infant deaths
	Deaths under one month	Proportion to all infant deaths	
1931	41	30.1 per cent	38.4 per cent.
1932	47	29.6 " "	35.9 " "
1933	56	33.3 " "	39.7 " "
1934	43	29.9 " "	38.7 " "
1935	39	26.2 " "	39.9 " "
1936	56	36.8 " "	40.5 " "
1937	58	31.4 " "	41.7 " "
1938	34	27.2 " "	42.4 " "
1939	47	39.8 " "	44.1 " "
1940	45	29.4 " "	42.0 " "
1941	52	30.9 " "	41.2 " "
1942	52	32.9 " "	39.5 " "
1943	91	46.4 " "	40.2 " "
1944	58	31.0 " "	41.9 " "
1945	61	39.3 " "	—
1946	59	54.1 " "	—



Table 46.—Cork City—Deaths of Infants under one year from conditions which constitute the principal causes of Infant Mortality.

Year	Number of Births Registered	DEATHS OF INFANTS UNDER ONE YEAR FROM												Rate per 1000 Births	Whooping Cough	Rate per 1000 Births	Bronchitis	Rate per 1000 Births	Convulsions	Rate per 1000 Births	Pneumonia	Rate per 1000 Births	Diarrhoea and Enteritis	Rate per 1000 Births	Congenital Malformations	Rate per 1000 Births	Prematurity	Rate per 1000 Births	Congenital Debility	Rate per 1000 Births
1931	1,963	18	9.1	20	10.2	9	4.5	28	14.2	8	4.1	16	8.1	5	2.5	3	1.5													
1932	1,820	28	15.4	13	7.1	6	3.3	39	21.4	13	7.1	19	10.4	8	4.4	8	4.4													
1933	1,884	19	10.1	27	14.3	7	3.7	38	20.1	17	9.0	13	6.9	13	6.9	2	1.0													
1934	1,846	17	9.2	24	13.0	6	3.2	32	17.3	12	6.5	9	4.8	8	4.3	8	4.3													
1935	1,915	18	9.4	19	9.9	5	2.6	50	26.1	23	12.0	6	3.1	5	2.6	—	—													
1936	1,913	12	6.2	28	14.6	5	2.6	36	18.8	27	14.1	10	5.2	6	3.1	—	—													
1937	1,799	18	10.0	13	16.7	7	3.9	45	25.0	27	15.0	18	10.0	4	2.2	5	2.8													
1938	1,761	13	7.4	19	10.8	7	3.9	31	17.6	21	11.9	9	5.1	3	1.7	3	1.7													
1939	1,632	24	14.1	16	9.8	8	4.9	34	20.8	9	5.5	10	6.1	3	1.8	2	1.2													
1940	1,670	17	10.2	25	14.9	4	2.4	45	26.9	15	8.9	8	4.8	5	2.9	—	—													
1941	1,680	15	8.9	25	14.9	10	5.9	33	19.6	16	9.5	11	6.5	6	3.5	1	0.6													
1942	1,842	14	7.6	18	9.7	17	9.2	49	26.6	16	8.7	10	5.4	5	3.2	1	0.5													
1943	1,781	12	6.2	46	25.8	11	6.1	52	29.2	25	14.0	8	4.5	4	2.2	2	1.1													
1944	1,721	5	2.9	29	16.8	9	5.2	63	36.0	28	16.2	7	4.0	3	1.7	13	7.5													
1945	1,690	6	3.5	32	18.9	10	5.9	50	29.5	16	9.4	6	3.5	3	1.7	—	—													
1946	1,756	8	4.5	37	21.0	4	2.4	17	9.6	8	4.5	6	3.4	3	1.7	—	—													

\* Including broncho pneumonia.

Note :—Figures in this table are based on returns of the Registrar-General. They do not correspond to the figures in table 47 which have been readjusted by transfers as explained in text.



Table 47.—Deaths of infants under 1 year, shewn as neo-natal and other deaths.

Cause of Death	Neo-Natal	Others	Total
Prematurity ...	34	3	37
Congenital Debility ...	5	3	8
Congenital Malformations†	3	1	4
Diarrhoea and Enteritis ...	3	14	17
Broncho-pneumonia*	—	11	11
Marasmus ...	2	3	5
Congenital Syphilis ...	—	2	2
Tuberculosis ...	—	2	2
Convulsions ...	3	3	6
Icterus ...	1	—	1
Intra-cranial Haemorrhage	2	—	2
Miscellaneous ...	6	8	14
Totals ...	59	50	109

† Including congenital cardiac disease.

\* Including pneumonia and bronchitis.

(Note—The figures in this table do not necessarily agree with the corresponding figures in table 4. This is due to the fact that, on investigation, transfers from one disease to another have been found to be necessary. Figures in table 4 are based entirely in District Registrar's returns of registered causes of death).

The findings of the enquiry (referred to above) into the factors concerned with infant mortality are enumerated in the two succeeding tables. The first concerns neo-natal deaths (i.e., deaths occurring in the first month of life) and the second all other infant deaths. In the case of neo-natal deaths enquiry has not been made into the manner of feeding as this can scarcely be regarded as influencing the outcome since the great bulk of such deaths come under prematurity and its cognate headings. In the present instance 42 out of the total 59 deaths are accounted for under these designations. The general design of the undertaking was outlined in the report for 1943 and, accordingly, need not be detailed further.

The investigation was pursued along lines similar to those of previous years and was based on personal enquiries made by experienced health visitors. It is to be noted that the deaths have been divided into two categories—those occurring in the first month of extra-uterine life (neo-natal deaths) and those occurring between this period and 1 year. There were 59 neo-natal deaths out of a total of 109 (54 per cent.), of these 59 deaths 42 came under the headings of prematurity, congenital debility and malformations. Deaths from these causes shew little or no variation over a number of years and certainly no settled tendency towards reduction. Nutrition of the mother and social environment are believed to play an active part in the causation of such deaths. The chances of foetal survival are greatly influenced by these factors. The general findings of the enquiry as they relate to the current year as set out in the two next succeeding tables. The first of these (Table 48) relates to neo-natal deaths.



Table 48.—Neo-natal deaths. Analysis of factors concerned.

Cause of Death	Number of Deaths	Efficiency of Mother			Previous Health of Mother		Economic Circumstances			Pre-natal Supervision	
		Good	Avg.	Bad	Good	Poor*	Good	Avg.	Bad	+	—
Prematurity ...	34	3	24	7	15	19	4	25	5	2	32
Congenital Debility	5	1	4	—	3	2	2	1	2	2	3
Congenital Malformations ...	3	—	3	—	3	—	—	3	—	2	1
Gastro-enteritis ...	3	1	2	—	2	1	—	2	1	1	2
Icterus ...	1	—	1	—	—	1	—	1	—	—	1
Convulsions ...	3	1	2	—	2	1	1	2	—	1	2
Intra-cranial Haemorrhage	2	1	1	—	2	—	—	2	—	—	2
Marasmus ...	2	1	1	—	2	—	1	1	—	1	1
Miscellaneous ...	6	1	3	2	5	1	1	3	2	3	3
Total ...	59	9	41	9	34	25	9	40	10	12	47

\* Included under this heading are cases in which there has been a history of falls. This occurred in six instances. Health otherwise may have been good.

In the next table deaths at the later period are analysed. We note here once more the preponderant rôle of gastro-enteritis and broncho-pneumonia and the evil influence of artificial feeding.

Table 49.—Main factors concerned in deaths occurring at ages over 1 month and under 12 months.

Cause of Death	No. of Deaths	Feeding		Efficiency of Mother			Economic Circumstances			Legitimacy	
		Breast	Artificial	Good	Avg.	Bad	Good	Avg.	Bad	Legit.	Illegit.
Gastro-Enteritis ...	14	—	14	—	8	6	1	7	6	12	2
Broncho-pneumonia ...	11	2	9	—	11	—	—	8	3	11	—
Marasmus ...	3	—	3	—	2	1	—	2	1	2	1
Congenital Syphilis ...	2	—	2	—	—	2	—	—	2	—	2
Tuberculosis ...	2	—	2	—	2	—	—	2	—	2	—
Prematurity, Congen. Malformation etc.	7	—	7	4	3	—	—	6	1	7	1
Convulsions ...	3	—	3	—	1	2	—	1	2	2	—
Miscellaneous ...	8	1	7	1	7	—	1	6	1	8	—
Totals ...	50	3	47	5	34	11	2	32	16	44	6

It was remarked in last year's report that the findings for any one particular year are too restricted to justify general conclusions. This enquiry has now gone on for some years and the figures for the past four years are available and in the following table the cumulative effect of one aspect of the problem (manner of feeding) becomes apparent.



Table 50.—Relationship between the *mode of feeding* and infant deaths occurring between ages 1 month and 12 months (computed for the years 1943 to 1946 inclusive).

Cause of Death	No of Deaths	Feeding	
		Breast	Artificial
Gastro enteritis .....	160	2	158
Broncho-pneumonia .....	64	6	58
Whooping Cough .....	19	1	18
Marasmus .....	20	2	18
Congen-Syphilis .....	12	—	12
Tuberculosis .....	9	—	9
Prematurity, etc.* .....	35	3	32
Meningitis .....	6	3	3
Infect. Diseases .....	5	—	5
Convulsions .....	11	—	11
Septic Infection .....	3	1	2
Miscellaneous .....	26	4	22
Total .....	370	22	348

\* Including congenital debility and congenital malformations.

In last year's report I adverted to the findings of the Medical Research Council into the relationship between gastro-enteritis and artificial feeding and to the findings of one Dublin hospital which lead to the conclusion that *breast milk contains some active principle which prevents neo-natal infection*. This conclusion has been amply confirmed in connection with the outbreaks of neo-natal diarrhoea which occurred in institutions during the past year. These outbreaks were almost entirely confined to bottle-fed babies. It will be remarked from the above table that the protection afforded by breast-feeding is not confined to gastro-enteritis alone. It is markedly present in the case of broncho-pneumonia also. It will be noted that of 64 babies who died from this condition in no less than 58 instances the victims were bottle-fed. The problem therefore resolves itself into the question why mothers cannot or will not nurse their babies. We see, therefore, the importance of an educational campaign to foster the adoption of natural methods of feeding on a much wider scale. Such a campaign should by no means be confined to the mothers themselves. There is only too good a reason to conclude that many medical practitioners and nurses do not realise the fundamental importance of this question.



Table 51.—**Éire.** Principal causes of Infant Deaths (ratio per 1,000 Births). The corresponding figures for Cork City are shewn in Table 50.

Year	Congen- ital Debility	Prema- turity	Diarr- hoea and enteritis	Pneu- monia	Convul- sions	Congen- ital Malfor- mations	Bron- chitis	Whoop- ing Cough
1931	16.00	8.58	8.27	7.72	6.78	3.38	3.17	1.16
1932	16.46	8.53	9.33	8.44	6.54	3.40	3.96	2.60
1933	14.38	9.59	8.92	6.99	5.61	3.59	2.79	2.54
1934	13.78	8.05	7.50	6.72	5.41	3.54	3.26	2.97
1935	14.19	9.76	10.65	8.08	4.50	3.90	3.40	1.05
1936	14.44	11.31	10.38	8.96	5.32	4.44	2.96	2.20
1937	13.65	12.16	9.95	8.34	4.99	4.39	2.92	2.46
1938	12.79	10.96	9.12	8.43	4.43	4.38	2.71	1.74
1939	12.68	11.02	9.33	7.67	4.48	4.82	2.35	1.37
1940	13.25	10.67	9.67	7.70	3.55	4.59	2.62	1.77
1941	14.14	11.57	14.18	7.93	4.23	5.57	2.34	1.46
1942	13.66	9.24	14.32	7.11	4.05	5.13	2.51	1.18
1943	15.20	11.58	18.26	8.91	3.99	5.85	2.93	2.87
1944	14.55	11.72	15.82	8.60	4.40	5.30	2.16	2.19

The figures for 1945/1946 not yet available.

#### (B) NOTIFICATIONS OF BIRTHS.

The Acts bearing on this subject are the Notification of Birth Acts, 1907, which was adopted by the Corporation in September, 1922, and the Notification of Births (Extension) Act, 1915. These Acts place an obligation on certain individuals to notify to the Medical Officer of Health within thirty-six hours, births which have occurred in the area. The object of the Acts is to enable the Local Authority to afford advice and assistance to parents on the care and upbringing of children.

The general procedure in connection with the notification of births was outlined in my Report for the year 1942. The total number of such notifications received during the year amounted to 1,797. This figure includes still-births. The number of *live* births *registered* during the same period, according to the Annual Summary of the Registrar-General was 1,815.



## (C) MATERNAL MORTALITY.

There were 2 deaths under this heading during the year.

Table 52.—The number of deaths of women directly attributable to or associated with pregnancy or childbirth during each of the years from 1924, together with the rate per 1,000 births during each of these years, for the City of Cork. (Corrected for Births and Deaths in public institutions).

Year	Deaths from Puerperal Septic Diseases		Deaths from accidents of Pregnancy or Childbirth		Total Deaths from Puerperal Septic Diseases and accidents of Pregnancy or Childbirth		Deaths from causes associated with Pregnancy or Childbirth (not included in foregoing)		Total Deaths caused by, or associated with Pregnancy or Childbirth	
	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births	No.	Rate per 1000 Births
1924	5	2.55	6	3.05	11	5.60	1	0.51	12	6.11
1925	5	2.54	5	2.54	10	5.08	1	0.51	11	5.59
1926	3	1.66	8	4.42	11	6.08	—	—	11	6.08
1927	5	2.74	6	3.28	11	6.02	—	—	11	6.02
1928	3	1.64	9	4.92	12	6.56	1	0.55	13	7.11
1929	—	—	4	2.24	4	2.24	—	—	4	2.24
1930	1	0.46	3	1.37	4	1.83	—	—	4	1.83
1931	1	0.52	7	3.63	8	4.10	—	—	8	4.10
1932	1	0.55	8	4.28	9	4.95	—	—	9	4.95
1933	1	0.54	8	4.32	9	4.85	1	0.54	10	5.40
1934	5	2.60	2	0.52	7	3.60	—	—	7	3.60
1935	1	0.51	5	2.56	6	3.08	—	—	6	3.08
1936	1	0.52	4	2.08	5	2.60	—	—	5	2.60
1937	—	—	—	—	—	—	—	—	—	—
1938	—	—	6	3.51	6	3.51	—	—	6	3.51
1939	1	0.58	3	1.75	4	2.3	—	—	4	2.3
1940	—	—	8	4.6	8	4.6	—	—	8	4.6
1941	—	—	5	2.9	5	2.9	—	—	5	2.9
1942	—	—	3	1.7	3	1.7	—	—	3	1.7
1943	1	0.56	2	1.12	3	1.6	—	—	3	1.6
1944	2	1.14	6	3.42	8	4.56	—	—	8	4.56
1945	—	—	4	2.36	4	2.36	—	—	4	2.36
1946	—	—	2	1.10	2	1.10	—	—	2	1.10

In Table 53 is set out the comparative maternal mortality for Cork, Dublin, Belfast, Limerick and Waterford County Boroughs, and for the whole country.



Table 53.—Maternal Mortality in different areas from 1920.

Year	Whole Country		Cork City		City of Dublin		Belfast		Limerick County Borough		Waterford County Borough	
	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births	No. of deaths	Rate per 1000 births
1920	326	4.8	13	5.8	55	6.0	95	7.7	3	2.9	2	2.7
1921	336	5.5	8	4.0	53	6.5	53	4.7	1	1.0	3	5.1
1922	370	6.3	7	3.6	61	7.1	55	5.1	12	11.8	—	—
1923	328	5.3	4	1.9	46	5.5	58	5.3	16	5.6	3	4.9
1924	330	5.2	12	6.1	46	5.0	46	4.4	1	0.9	4	5.9
1925	312	5.0	11	5.6	42	4.9	29	2.8	3	2.8	4	6.4
1926	329	5.4	11	6.1	31	3.5	57	5.5	5	4.8	—	—
1927	291	4.8	11	6.0	23	2.8	36	3.7	5	4.8	3	4.7
1928	318	5.4	13	7.1	31	3.5	43	4.6	5	4.5	2	3.0
1929	283	4.9	4	2.2	30	3.4	43	4.8	7	6.2	1	1.6
1930	294	5.0	4	1.8	43	4.1	44	4.6	4	3.7	3	4.6
1931	272	4.7	8	4.1	29	2.1	54	5.7	4	3.5	3	4.5
1932	235	4.9	9	4.9	33	3.1	49	5.5	8	4.0	6	8.6
1933	255	4.4	10	5.4	22	2.1	42	5.2	7	7.1	2	2.8
1934	304	5.2	7	3.6	41	3.7	57	6.3	2	1.9	—	—
1935	272	4.6	6	3.0	38	3.3	54	6.0	6	5.5	4	4.0
1936	273	4.7	5	2.6	42	3.5	57	6.2	2	2.0	3	4.5
1937	204	3.3	—	—	33	2.8	56	6.1	3	2.9	4	5.8
1938	204	3.6	6	3.5	29	2.5	48	5.2	4	4.0	3	4.8
1939	150	2.7	4	2.3	23	2.0	—	4.4	1	1.0	1	1.6
1940	227	4.0	8	4.6	21	1.9	37	4.2	3	3.0	7	10.3
1941	209	3.7	5	2.9	21	1.8	31	3.6	3	3.0	1	1.6
1942	163	2.4	3	1.7	20	1.6	31	3.2	1	0.9	2	2.5
1943	162	2.5	3	1.6	15	1.2	32	2.9	1	0.9	—	—
1944	176	2.7	7	3.8	18	1.4	24	2.3	1	0.9	2	2.8
1945	147	2.2	4	2.4	14	1.1	18	1.8	4	3.8	—	—
1946	119	1.8	2	1.1	12	0.9	23	2.2	1	0.9	—	—

The above figures were obtained from the *Annual Reports* of the Registrar-General with the exception of those for the year 1946 (which were taken from the *Annual Summary* for that year) and those for Belfast, from 1922 onwards, which were kindly supplied by the Superintendent Medical Officer of Health. All figures include deaths from sepsis arising from abortion and miscarriage.



## (D) SUPERVISION OF MIDWIVES.

1. Number of Midwives in Practice :—				
Certificate of C.M.B. ....	...	...	...	70
Other recognised certificates ...	...	...	...	17
	Total	...	...	87
2. Number of Midwives according to type of practice :—				
Attached to public institutions ...	...	...	...	6
Conducting only private maternity or nursing homes ...	...	...	...	11
Dealing with less than five cases per year ...	...	...	...	9
Monthly nurses ...	...	...	...	29
Others ...	...	...	...	32
	Total	...	...	87
3. Number of visits of inspection of midwives ...	...	...	...	330
4. Disinfection of appliances ...	...	...	...	2
5. Reasons for summoning Medical help :—				
Abnormal presentation ...	...	...	...	13
Obstructed and delayed Labour ...	...	...	...	17
Post partum haemorrhage ...	...	...	...	4
Ante partum haemorrhage ...	...	...	...	12
Rise of Temperature ...	...	...	...	1
Ruptured perineum ...	...	...	...	9
Thrombosis ...	...	...	...	2
Retained (&c.) Placenta ...	...	...	...	4
Miscellaneous ...	...	...	...	15
6. Notifications of still births ...	...	...	...	72
7. Notifications of artificial feeding ...	...	...	...	125
8. Notifications of having laid-out dead bodies ...	...	...	...	1
9. Suspensions for twenty-four hours on account of contact with cases of infectious disease ...	...	...	...	2
10. Notifications of liability to be a source of infection ...	...	...	...	2
11. Notifications of deaths ...	...	...	...	100
12. Puerperal Pyrexia ...	...	...	...	—

It was unnecessary to undertake any legal proceedings against midwives during the year.

## ARTIFICIAL FEEDING.

Cracked or inverted nipples ...	...	...	...	45
Health would not permit ...	...	...	...	25
Insufficient ...	...	...	...	31
Refusals (no cause assigned) ...	...	...	...	24
Illegitimate births ...	...	...	...	—
				125

The above figures refer to all notifications received during the year and include County cases treated in City Nursing Homes.



(E) WORK OF THE MATERNITY AND CHILD WELFARE  
SCHEME.

The following is a summary of the work carried out during the year by the staff of the Centre.

Attendances of children under one year :—

(a) New Cases	...	...	2856
(b) Old Cases	...	...	3700

Attendances of Mothers with Children	...	8839
--------------------------------------	-----	------

Cases seen by the Medical Officer :—

(A) Under one year			
(1) New Cases	...	...	926
(2) Old Cases	...	...	2069
(B) One to two years			
(1) New Cases	...	...	293
(2) Old Cases	...	...	420
(C) Two to five years			
(1) New Cases	...	...	267
(2) Old Cases	...	...	439
(D) Expectant Mothers			
(1) New Cases	...	...	405
(2) Old Cases	...	...	381

Analysis of cases dealt with by the Medical Officer :—

Consultations on infant feeding	902
Diseases of respiratory system	142
" new born	1
" reproductive system	—
" urinary system	5
" nervous system	1
" circulatory system	4
" alimentary system	295
" skin	56
" ears	25
" eyes	15
Exanthemata	11
Mental defects	2
Congenital defects	—
Orthopoedic defects	3
Rickets	14
Avitaminosis	10
Number of cases dealt with	1486
Number of attendances	4414

Ante-natal work—

Number of cases dealt with	...	405
Number of attendances	...	786



## Return of Health Visitors' work—

(A) Under one year		
(1) Primary visits	...	1684
(2) Secondary visits	...	3942
(B) One to two years		
(1) Primary visits	...	1703
(2) Secondary visits	...	1472
(C) Two to five years		
(1) Primary visits	...	744
(2) Secondary visits	...	2008
(D) Expectant Mothers		
(1) Primary visits	...	770
(2) Secondary visits	...	561

The following cases were dealt with at the artificial sunlight clinic during the year :—

Avitaminosis	...	...	10
Debility	...	...	42
Rickets	...	...	14
Anaemia	...	...	8
Number of cases treated	...	...	74
Number of Exposures	...	...	1061



## Section—V. Control of Food Supplies

*The following report has been compiled by Mr. S. R. J. Cussen,  
Chief Veterinary Officer :—*

### (A) SUPERVISION OF MILK.

860 samples of milk were examined in our laboratory during the year. These samples may be roughly divided into two groups :

1. Detailed bacteriological examination	...	476 samples
2. Dirt test only	... ..	384 „
Total	...	860

1. The first group *i. e.*, those submitted to full examination comprised samples collected as follows (according to designation) with the addition of 13 samples of pasteurised milk.

Standard	...	33
New Milk	...	419
Pasteurised	...	12
*Pre-pasteurised	...	12
Total	...	476

The following tests were applied to these samples :—

#### (a) Sedimentation (or Dirt) Test.

The procedure was identical with that outlined in previous reports and the results obtained in the various grades were :—

	Standard	New Milk	Pasteurised	Pre-Past.
Very Clean	17	33	—	—
Clean ...	16	288	12	—
Fairly Clean	—	233	—	12
Dirty ...	—	135	—	—
Very Dirty	—	14	—	—
	33	803	12	12

(Note—Col. 2, New Milk, comprises *all* samples submitted to the sedimentation test. This includes samples of ordinary market milk which were submitted to this test *only* as well as samples submitted to full bacteriological examination. Hence the discrepancy between the total for this column and the group above).

The Sediment (or Dirt) test is a simple and reasonably reliable one. It does not pretend to absolute scientific accuracy, but as a rough and ready index of general trends in the direction of cleanliness it maintains

\* The term *pre-pasteurised* denotes raw milk that has been collected at a pasteurising station and which is intended for pasteurisation.



its position in the armamentarium of the dairy bacteriologist. Since its chief value is that of an indicator of general tendencies the results obtained over a number of years are set out below.

Table 54.—Result of Dirt Test.

Year	No. of Samples	Very Clean	Clean	Fairly Clean	Dirty	Very Dirty
1930	412	8	72	118	156	58
1931	408	23	61	82	139	103
1932	630	4	27	108	265	226
1933	485	3	27	105	221	129
1934	339	—	19	51	148	121
1935	223	—	7	21	103	92
1936	227	3	21	43	106	54
1937	206	5	31	80	70	20
1938	174	3	36	83	49	3
1939	714	61	184	224	193	52
1940	736	163	251	176	115	31
1941	440	120	162	82	59	17
1942	516	119	223	88	67	19
1943	534	138	248	87	53	8
1944	540	159	235	80	54	12
1945	839	45	292	331	143	28
1946	860	50	416	245	135	14
Totals	8283	904	2312	2004	2076	986

In order to test the general tendency in regard to cleanliness the last two columns of this table have been taken together and further analysed. The results are shown in the next table.

Table 55.—Proportion of Samples classified as "Dirty,"

Year	No. of Samples	Dirty	Proportion
1930	412	214	51.9 per cent.
1931	408	242	59.3 "
1932	630	491	77.9 "
1933	485	350	72.2 "
1934	339	269	79.3 "
1935	223	195	87.4 "
1936	227	160	70.9 "
1937	206	90	43.6 "
1938	174	52	29.8 "
1939	714	245	33.9 "
1940	736	146	19.8 "
1941	440	76	17.2 "
1942	516	86	16.6 "
1943	534	61	11.3 "
1944	540	66	12.2 "
1945	839	171	20.3 "
1946	860	149	17.3 "



**(b) Microscopic Test.**

476 samples were submitted to routine microscopic examination. Acid-fast organisms were detected in 1 of those samples, streptococci were present in 4 and pus cells in 9, and blood in 6. In 456 instances the samples were free from suspicious organisms.

**(c) Bacteria of Faecal Origin.**

Determination of organisms of this character has been a routine for a number of years. Included in this group is *B. Coli*, the presence of which may be regarded as proving carelessness in the production and handling of milk. A full account of the test has been given in previous reports. The findings for the year were as follows :—

Table 56.—Results of Tests for presence of *B. Coli* in Milk.

Designation	No. of Samples Examined	<i>B. Coli</i> Present	Proportion Free from <i>B. Coli</i>
Standard ...	33	6	81.8 „

**(d) Pathogenic Bacteria.**

Under this heading our principal concern is the presence of the *tubercle bacillus* in milk. Other organisms (*e.g.*, streptococci) are also concerned in a minor role and have been alluded to under the heading of microscopic examination. The biological test (involving the use of guinea pigs) is the only reliable test for tubercle bacillus and the results obtained over a number of years are set out in columnar form as follows :—

Table 57.—Tubercle Bacilli in Milk—Results of Biological Tests.

Year	No. of Tests	Positive	Proportion Positive
1931	2	—	—
1932	14	1	7.1 per cent.
1933	63	—	—
1934	10	—	—
1935	25	4	16.0 „
1936	201	13	6.4 „
1937	23	—	—
1938	90	7	7.7 „
1939	71	5	7.0 „
1940	94	4	4.2 „
1941	96	4	4.1 „
1942	105	2	1.9 „
1943	75	6	8.0 „
1944	68	4	5.8 „
1945	99	4	4.0 „
1946	101	4	3.9 „
Total	1135	58	5.1 „



The figures for individual years are, on the whole, on the small side so far as reliable information is concerned. The sum total, however, of some 1135 tests yielding an approximate proportion of 5.1 per cent. positive may be regarded as a fairly accurate index of the amount of tubercle infection in the local milk supply. This is one aspect of the milk problem which recent legislation has done nothing to solve.

(e) **The Reductase Test.**

The modified method of Wilson has been used. As in the case of other tests mentioned, this method has been fully described in previous reports. Briefly, by means of a colour index which takes into account the rate of decolourisation of a standard solution of methylene blue added to given quantities of milk maintained at a standard temperature, the bacterial content (in numbers) can be estimated. The results obtained are set out below and in order to assist in the interpretation of these results it seems desirable to specify the values attached to the various grades :

Grade I	...	Less than 500,000 bacteria per c.c.
Grade II	...	500,000 to 4 million bacteria per c.c.
Grade III	...	4 million to 20 million bacteria per c.c.
Grade IV	...	Over 20 million per c.c.

Particulars of the various samples and the results obtained are set out below :

Standard Milk—

Grade I	...	22
Grade II	...	6
Grade III	...	4
Grade IV	...	1
		—
		33

Ordinary Milk—

Grade I	...	348
Grade II	...	46
Grade III	...	18
Grade IV	...	7
		—
		419



For *pasteurised* milk and *pre-pasteurised\** milk plating on nutrient media with direct colony counts was substituted for the Reductase test and by this method the following results were obtained :

Pasteurised		Pre-pastuerised*	
Sample Number	Bacteria per c.c.	Sample Number	Bacteria per c.c.
1	79,000	1	121,000
2	300,000	2	940,000
3	11,000	3	550,000
4	98,000	4	672,000
5	28,000	5	92,000
6	41,000	6	1,400,000
7	25,000	7	484,000
8	11,000	8	65,000
9	68,000	9	850,000
10	4,500	10	9,000
11	11,000	11	74,000
12	7,000	12	25,000

\*See footnote on page 66.

### Bacteriological Examinations.

125 Samples of milk collected in Creameries and examined in our laboratory on behalf of the Local Govt. Department were submitted as follows :—

By the Kerry Co. M.O.H. .... 7 samples  
 „ Cork Co. M.O.H. .... 119 „

On behalf of the Local Govt. Dept. 45 samples of designated milk and 12 samples of pre-pasteurised milk were collected in the urban area and examined in our laboratory.

### Prosecutions.

#### (A) MILK AND DAIRIES ACT, 1935.

38 persons were prosecuted for non-observance of the above Act.

37 convictions were obtained and fines amounting to £19 16s. 0d. imposed. Once case was marked proved.

With reference to the successful prosecutions—

2	summonses	were	brought	under	Section	24
33	„	„	„	„	„	59
3	„	„	„	„	„	60



## PROSECUTIONS UNDER MILK AND DAIRIES ACT, 1935 :

Section	Number Prosecuted	Number Convicted	Fines Imposed	Marked Proved	Withdrawn
24	2	1	5/- with Costs	1 With Costs	—
59	33	33	£18 11s. „ „	—	—
60	3	3	£1 0s. „ „	—	—
Totals	38	37	£19 16s. 0d. „	1 „ „	—

Maximum fine imposed was 40/- and costs.

Minimum „ „ „ 1/- „ „

Section 24 : Relates to the prohibition of the sale of milk by un-registered dairymen.

„ 59 : Relates to the prohibition of the sale of dirty milk.

„ 60 : Relates to the sale of milk in public places and prescribes for the conspicuous inscription of the dairyman's name and address on the vehicle, car or receptacle and the words *Bainne ar diol*, *Uachtar ar diol* or *Blathach ar diol*.

## (B)—THE MILK AND DAIRIES REGULATIONS, 1936 :

Twenty-four persons were prosecuted for non-observance of the above Regulations.

Fifteen convictions were obtained and fines amounting to £5 0s. 0d. and costs imposed.

Nine cases were marked Proved with payment of costs.

With reference to the successful prosecutions, particulars are appended herewith of the enactments concerned with the summonses which were undertaken :—

## (a)—THE MILK AND DAIRIES REGULATIONS, 1936 :

8 under Article 22(3)	1 under Article 40
4 „ „ 22(5)	1 „ „ 39 (2A)
1 „ „ 22(2)	1 „ „ 39 (2B)
1 „ „ 23	1 „ „ 42 (1)
5 „ „ 28	1 „ „ 43



## NOTICES SERVED

The number of notices sent out under the Milk and Dairies Act and Regulations was 82.

Table 58.—Prosecutions under Milk and Dairies Regulations, 1936.

Article	Number Prosecuted	Number Convicted	Fines Imposed	Marked Proved	Withdrawn
22(2)	1	—	—	1 with costs	—
22(3)	8	7	55/- and costs	1 „ „	—
22(5)	4	—	—	4 „ „	—
23	1	—	—	1 „ „	—
28	5	5	30/- „ „	—	—
40	1	—	—	1 „ „	—
39(A2)	1	1	5/- „ „	—	—
39(2B)	1	1	5/- „ „	—	—
42(1)	1	—	—	1 „ „	—
43	1	1	5/- „ „	—	—
Totals	24	15	£5 0s. 0d. „	9 „ „	—

Maximum fine imposed was 10/- with costs.

Minimum „ „ „ 5/- „ „

Article 22(2) : Relates to vessels and appliances used in connection with the sale of milk which are incapable of being easily cleaned.

„ 22(3) : Relates to the cleansing of milk vessels and appliances.

„ 22(5) : Relates to the storing of vessels and appliances.

„ 23 : Provides that every tap in a milk vessel or milk container shall be capable of being easily removed from such vessel or container for the purpose of cleansing and sterilization.

„ 28 : Relates to the cleanliness of persons having access to milk.

„ 40 : Relates to vehicles used for the conveyance of milk.

„ 39(2A) : Provides that milk receptacles shall be clearly marked with the name and address of the dairyman by whom it was filled and the day of the week on which the milk was produced.



- Article 39(2B) : Provides that milk receptacles shall be securely closed and either sealed or locked.
- „ 42(1) : Provides that every sale receptacle be provided with a tap.
- „ 43 : Provides that no person except a person authorized by statute so to do shall open any closed receptacle containing milk in any place which is not a part of a registered dairy.

Article 28 :—Relates to the Cleanliness of Persons having access to milk.

Article 39(2) :—Relates to the conveyance of milk churns by a common carrier, having the name and address of the dairyman by whom they were so filled clearly marked on such churns and the day of the week on which the milk therein was produced.

Article 40 :—Relates to vehicles used for conveyance of milk.

Article 42 :—Provides that every sale receptacle be provided with a Tap.

Article 42(2) :—Relates to the taking of milk from a sale receptacle otherwise than by means of a Tap in such sale receptacle.

Mr. Cussen has sub-joined the following remarks, (referring to conditions in regard to the milk supply) to this part of his report.

“I would like to end this section of my report with a brief survey of the trend of events in connection with the milk supply during the years 1939-1945.

Under an enactment known as the Milk (Regulation of Supply and Price) Act, 1936, the Minister for Agriculture is empowered to regulate the supply and price of milk for human consumption in areas where the Act is in operation. In the Cork area the Act came into force in 1937 and under it a Board was established—The Cork District Milk Board—whose function is to administer the Act in this area. The Board consists of persons elected by producers, wholesalers, and retailers and presided over by a chairman appointed by the Minister. The area of supply, which is at the moment a radius of four miles from the G.P.O., was fixed by the Minister after consultation with the different trade interests. All persons engaged in the production and sale of milk are required to register with the Board. No person outside the four mile radius is entitled to register unless he had supplied milk in the area during the fifteen months prior to the establishment of the Board.

*The Local Authority has no powers under this Act.* The Act does not confer any powers regarding the quality of the milk supplied on the Minister for Agriculture. If the milk supply to the city runs short at any period of the year permission is given by the Board to wholesalers and retailers to supplement their supplies by milk purchased from un-registered persons anywhere outside the scheduled area. As soon as the supply within the area becomes normal this permission is withdrawn. The principal source of supply when shortage occurs is the outlying creameries. The milk from this source is not everything to be desired. Firstly it is not from creameries licensed by the Department of Local Government and Public Health to pasteurise milk and secondly there is no supervision whatever over the production and handling of the milk at the source, where such supervision is necessary to ensure a pure, clean



and wholesome milk supply. It must be understood that suppliers to creameries are not required to be registered under the Milk and Dairies Act, 1935. It is not to be wondered at, therefore, that when this milk reaches the city it is often sour or on the turning point. Milk from this source is produced on some farmers premises under very primitive conditions, from dirty cows, housed in dark, badly ventilated, insanitary cowhouses. The only supervision exercised over these suppliers is an inspection of their churns for slime deposit, and their milk for visible dirt, on the way to or at the creamery by an inspector appointed for the purpose under the Dairy Produce Act. This Act provides for the inspection of all premises where dairy produce is manufactured, handled and stored for sale, with a view to maintaining cleanliness and good order, but the farmers' premises where the milk is produced and where inspection is desirable are not included.

The quality of the milk produced in the Cork Milk Board area was reasonably well maintained during the year under review. I am sorry to say that the two suppliers of Highest Grade Milk went out of business in 1943. It is no easy matter to maintain a tubercle free herd. High production costs, coupled with the difficulty of procuring suitable labour, are hard to overcome. It seems to me that there is a lack of appreciation of the value of High Grade Milk in Cork. The housewife, who could afford to pay, is more concerned with quantity rather than quality.

The handling of milk in the course of delivery to the consumer was not up to the desired standard, evidently the fines imposed on persons for infringements of the Act and Regulations are not having the desired effect. The chief infringements were by persons using milk utensils which were not properly cleansed, as shown by deposits of slime on the inside of churns, delivery cans and measures; persons using dirty vans and vans that had gone into a state of disrepair; the delivery of milk by individuals whose person and clothing were not clean; the sale of milk in bottles that were not marked with the name and address of the dairyman by whom they were filled, and the day of the week on which the milk was produced. There is a number of retailers of milk, who supply a little of their milk in bottles; I don't believe that these retailers have installed the necessary plant for handling bottled milk. To my mind no person should be allowed to use bottles unless he had installed all the necessary machinery for washing, sterilizing, filling and capping of same and, furthermore, he should have a milk cooling plant. A person who sells Highest Grade Milk, Standard Milk or Pasteurised Milk in bottles is required to have a Milk Bottlers Licence, which is issued by the Minister for Local Government and Public Health, but there is no such licence required by a person who sells ordinary milk in bottles.

The price of milk increased during the war years, not a great deal considering the cost of production and handling.



The following was the average price per gallon for loose milk from Producer to Wholesaler :—

	s.	d.	
1939	0	11 $\frac{1}{8}$	per gallon
1940	0	11 $\frac{1}{8}$	" "
1941	1	1 $\frac{1}{3}$	" "
1942	1	1 $\frac{1}{3}$	" "
1943	1	3	" "
1944	1	5 $\frac{1}{8}$	" "
1945	1	6.83	" "

The Retail price of milk was fixed in September 1940. The price varied according to supplies available, being higher during the scarce period which occurred between the months of November and March.

The range of prices from 1940 to 1946 is as follows :—

	d.	d.	
1940	2 $\frac{1}{2}$	to 3	per pint loose
1941	2 $\frac{1}{4}$	" 3	" " "
1942	2 $\frac{1}{2}$	" 3 $\frac{1}{4}$	" " "
1943	2 $\frac{1}{2}$	" 3 $\frac{1}{2}$	" " "
1944	2 $\frac{3}{4}$	" 3 $\frac{1}{2}$	" " "
1945	2 $\frac{3}{4}$	" 3 $\frac{1}{2}$	" " "
1946	2 $\frac{3}{4}$	" 3 $\frac{3}{4}$	" " "

Table 59.—The consumption of milk increased during the period under review. The average daily consumption in gallons from 1939 to 1946 was as follows :—

Month	1939	1940	1941	1942	1943	1944	1945	1946
January	8,400	8,184	7,731	8,416	8,547	8,714	8,799	9,082
February	8,604	8,443	8,130	8,615	8,796	8,917	9,074	9,296
March	8,661	8,260	8,090	8,696	8,929	8,936	9,143	9,360
April	8,602	8,916	8,442	8,582	9,037	8,986	9,279	9,457
May	8,933	8,642	8,309	9,004	9,342	9,266	9,623	9,806
June	9,119	8,836	8,938	9,232	9,633	9,422	9,879	9,866
July	8,616	8,381	8,485	9,042	9,473	8,975	9,555	9,704
August	8,437	8,367	8,660	9,678	8,903	8,881	9,194	9,443
September	8,586	8,371	8,926	9,079	9,232	9,178	9,649	9,717
October	8,456	8,673	8,900	9,054	8,949	9,113	9,639	9,640
November	8,407	8,015	8,552	8,728	8,912	9,074	9,418	9,340
December	8,180	8,178	8,793	8,563	8,691	8,869	9,021	9,015
Average	8,582	8,444	8,497	8,808	9,037	9,028	9,356	9,477

These figures apply to the Cork Milk Board Area. There are no figures regarding the amount of milk consumed available for Cork County Borough. I am indebted to the Secretary of the Cork Milk Board for the information.



## (B) MEAT INSPECTION.

**Meat Inspection Depot :—** 4,221 bovine carcasses were examined. Of this number 931 (22.0 %) were found to be affected with varying degrees of tuberculosis. It was found necessary that 10 such carcasses (0.23%) should be totally destroyed as unfit for consumption, while 921 (21.8%) were partially condemned. In addition to the 4,221 bovine carcasses above referred to 2,732 sheep carcasses were also examined and of this number 1 carcass (0.03%) was totally condemned and 2 carcasses (0.07%) were partially condemned for diseases other than tuberculosis. 429 veal carcasses were examined and of this number 1 carcass was totally condemned and 35 carcasses partially condemned as being affected with tuberculosis. 750 pork carcasses were also examined and of this number no carcass was totally condemned but 86 carcasses (11.4%) were partially condemned as being affected with tuberculosis. For diseases other than tuberculosis 1 bovine carcass was wholly condemned and none partially condemned. For similar reasons 1 veal carcass was totally condemned.

Table 60.—The amount (by weight) of meat examined and condemned at the Depot was as follows :—

Variety	Quantity Examined	Tuberculosis		Other Diseases	
		Quantity Condemned	Pro-portion	Quantity Condemned	Pro-portion
	lbs.	lbs.		lbs.	
Beef ...	2,110,500	9,382	0.44%	420	0.02%
Mutton ...	136,600	—	—	45	0.03%
Veal ...	85,800	190	0.22%	40	0.04%
Pork ...	150,000	1,710	1.1 %	—	—

The amount of offals condemned at the Depot for Tuberculosis and other conditions was as follows :—

Part	Tuberculosis	Other Diseases	Total
Lungs ...	1,474	8	1,482
Heart ...	732	4	736
Livers ...	243	403	646
Kidneys ...	28	—	28
Head and Tongues ...	337	2	339
Total	2,814	417	3,231

Meat seized in shops and voluntarily surrendered during the year :—

	Seized	Surrendered
Beef ...	1,523 lbs.	54,874 lbs.
Pork ...	—	37,559 „
Bacon ...	—	— „
Veal ...	—	2,560 „
Fish ...	—	184 „
Fruit ...	—	4,070 „
Poultry ...	—	9,331 „
Rabbits ...	—	88,480 „



### Slaughterhouses and Bacon Factories.

Table 61.—**Tuberculosis.** Particulars of animals killed in local slaughterhouses and the incidence of tuberculosis therein :—

Species	Number	Affected	Totally Condemned	Partially Condemned
Cattle .....	2,805	946 (33.7%)	16 (0.57%)	930 (33.1%)
Sheep .....	9,449	—	—	—
Calves .....	1,297	464 (35.7%)	8 (1.7%)	456 (35.1%)

35,451 lbs. of Beef (representing 2.5%) of the quantity examined were condemned on account of tuberculosis.

*Bacon Factories* :—Particulars of pigs slaughtered in bacon factories and reserved for local consumption in the form of pork and sausages were supplied to us by the Veterinary Inspectors of the Department of Agriculture. The number of pigs was 1,949 of which 611 (31.3%) were found to be affected with tuberculosis. 16 of these (0.82%) were totally condemned and 595 (30.5%) partially condemned.

23,707 lbs. (6.0%) of pork were condemned on account of tuberculosis.

Table 62.—**Diseases other than Tuberculosis.**— Particulars of incidence found in slaughterhouse killings :—

Species	Number	Affected	Totally Condemned	Partially Condemned
Cattle .....	2,805	3 (0.10%)	3 (0.10%)	—
Sheep .....	9,449	4 (0.04%)	4 (0.04%)	—
Calves .....	1,297	27 (2.1%)	27 (2.1%)	—

1,520 lbs. of beef (representing 0.10%) of the quantity examined were condemned on account of diseases other than tuberculosis.

*Bacon Factories* :—Less than 0.05% of pork was condemned on account of diseases other than tuberculosis.

Table 63.—Inspections carried out in *slaughterhouses* by our Veterinary Staff were as follows :—

Species	Carcases Examined	Condemned		
		Wholly	Partially	Meat & Offals
Cattle .....	2,805	19	930	41,879 lbs.
Sheep .....	9,449	4	—	235 „
Calves .....	1,297	35	456	1,851 „



## THE SLAUGHTER OF ANIMALS ACT, 1935.

The provisions of this Act were outlined in the 1937 Annual Report, it is not proposed to make further reference to them here.

The provisions of the Act were reasonably observed by occupiers of slaughterhouses and slaughtermen, consequently there were only two prosecutions under the Act during the period under review.

The Sections under which summonses were effected were :—

1 under Section 15 :—Failure to use an Approved Instrument.

1 under Section 19 :—Not being licensed to use an Approved Instrument.

Fines amounting to £1 10s. 0d. and costs were imposed in these two cases which brings the total amount of persons convicted under the Act since its inception to 55 and the total amount of fines to £23 4s. 0d. There are at present 46 persons licensed to use the humane slaughter instrument, a reduction of 14 from the previous year. This number is offset by the number of persons who are now slaughtering outside the Borough and come under the supervision of the South Cork Board of Health.

The number of premises within the Cork Urban Sanitary District where meat and meat products are prepared for human consumption is as follows :—

### Slaughter Houses—

Licenced (under the Public Health Act, 1878)	15
Registered (being in use before the 1878 Act)	3
Registered (under the Fresh Meat Act)	5

### Bacon Factories—

Where Pigs are slaughtered for Production of Bacon	4
Where Pigs are slaughtered for Bacon and Pork	4
Where Cattle are slaughtered in addition to Pigs	4

### Sausage Factories

Triperies	6
-----------	---

Number of inspections made of premises where meat is prepared and sold :—

Slaughter Houses	3,120
Sausage Factories	904
Triperies	886
Meat Markets	1,042
Butcher Shops	5,850
Pork Shops	864

In addition to the above the following inspections were made :—

Provision Shops	1,750
Fish Shops	455
Fruit Shops	168
Hawkers' Stands	1,620

### Prosecutions :

For the sale or exposure for sale of tuberculosis meat seven persons were prosecuted and fines amounting to £7 5s. 0d. and costs imposed.

For the unseemly conveyance of meat six persons were prosecuted under the Bye-Laws and fines amounting to 40/- and costs imposed.

The number of Notices served to abate nuisances and remedy defects in Slaughterhouses and Triperies, 47.



### Meat Inspection.

For a number of years a system of voluntary meat inspection has been carried out at the Inspection Depot. There are a number of butchers in the city who still do not bring their meat for inspection. The following are now availing of the service :—

Buckley, Daniel J., 19, George's Quay.  
 Barrett, John V., 59/60, Grand Parade Market.  
 Barrett, Michael, 64/65, Grand Parade Market.  
 Barry, Joseph, 38, Dublin Street.  
 Carroll, Michael J., 85, Oliver Plunkett Street.  
 Connery, Michael, 71, Grand Parade Market.  
 Coughlan, John, 3, Thomas Davis Street.  
 Delicacies Ltd., 55, Oliver Plunkett Street.  
 Desmond, Denis, 1/2, Grand Parade Market.  
 Desmond, William, 347, Blarney Street.  
 Dillon, Edward, 14A, Castle Street.  
 Dineen, William, 74B, Oliver Plunkett Street.  
 Economy Shop, Anglesea Street.  
 Economy Shop, 33, Patrick Street.  
 Fitzgerald, Michael, 2, Parliament Street.  
 Griffin, Leo, 55, Grand Parade Market.  
 Harris, Mrs. Mary, 101, North Main Street.  
 Long, Mrs. Mary, 82, Shandon Street.  
 Long, Peter P., 11, Douglas Street.  
 Mackey, John, 86, Oliver Plunkett Street.  
 Milliard, Cornelius, 4, Coburg Street.  
 Murphy, John, 19, North Main Street.  
 Murphy Bros., Metropole Buildings.  
 McNamara, Mrs. Nora, 73, Grand Parade Market.  
 Nagle, John, 3, Market Lane.  
 Nagle, Michael, 18/19, Grand Parade Market.  
 Nagle, Mrs. Helena, 38, Oliver Plunkett Street.  
 Nolan, Frank, 22 and 23, Shandon Street.  
 O'Callaghan, Daniel, 16, McCurtain Street.  
 O'Flynn, Benjamin, 70, Grand Parade Market.  
 O'Neill, John J., 25, Grand Parade Market.  
 O'Leary, Daniel, 17, Gerald Griffin Street.  
 O'Flynn & Sons, 61, Oliver Plunkett Street.  
 O'Hare, Edmund, Coburg Street.  
 O'Reilly, John J., Dillon's Cross.  
 O'Hare, James, 44, Princes Street.  
 Ryan, Joseph, 36, Washington Street.  
 Sheehan, John, 100, Douglas Street.  
 Spillane, James, 11/12, Grand Parade Market.  
 Tracey, John, 7, Castle Street.  
 Walsh Bros., Gurranabraher Road.  
 Waugh, John J., Grand Parade Market.



**(C) SALE OF FOOD AND DRUGS ACTS.**  
**MILK.**

Appended herewith is the Report of the City Analyst (Mr. D. J. O'Sullivan, M.Sc., F.I.C.).

Table 64.—Showing the number of samples of Milk submitted for Analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1946 ...	139	136	3
June 30th, 1946 ...	113	109	4
Sept. 30th, 1946 ...	126	119	7
Dec. 31st, 1946 ...	133	129	4
Totals ...	511	493	18

**BUTTER.**

Table 65.—Showing number of Samples of Butter submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1946 ...	10	10	—
June 30th, 1946 ...	10	10	—
Sept. 30th, 1946 ...	15	13	2
Dec. 31st 1946 ...	—	—	—
Totals ...	35	33	2

**SPIRITS.**

Table 66.—Showing the number of samples of Spirits submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1946 ...	5	3	2
June 30th, 1946 ...	5	5	—
Sept. 30th, 1946 ...	3	3	—
Dec. 31st, 1946 ...	18	17	1
Totals ...	31	28	3

Table 67.—Showing the number of miscellaneous samples submitted for analysis during the year and the results thereof.

Quarter ended	No. of Samples	Genuine	Adul- terated
March 31st, 1946 ...	143	141	2
June 30th, 1946 ...	118	114	4
Sept. 30th, 1946 ...	125	122	3
Dec., 31st 1949 ...	129	127	2
Totals ...	515	504	11



Table 68.—Showing details in regard to miscellaneous samples examined during the year.

Articles	No. of Samples	Articles	No. of Samples
Margarine .....	19	Patent Food .....	1
Confectionery .....	36	Raisins .....	1
Custard Powder .....	46	Groats .....	2
Pearl Barley .....	16	Cooked Meat .....	6
Sausages .....	23	Coffee Essence .....	1
Drugs .....	10	Sponge Mixture .....	1
Cheese .....	25	Pepper .....	6
Cocoa .....	40	Condensed Milk .....	5
Beer .....	50	Lard .....	2
Flour .....	52	Sausage Roll .....	1
Cornflour .....	14	Cider .....	2
Coffee .....	12	Milk pudding mixture .....	4
Vinegar .....	8	Gravy Powder .....	2
Oatmeal .....	23	Fig Paste .....	1
Cream .....	12	Flour, Pastry .....	1
Black Pudding .....	9	Mustard .....	1
Prepared Barley .....	3	Sweets .....	2
Mineral Waters .....	18	Dripping .....	2
Jam .....	8	Spice .....	2
Jelly Cream .....	5	Yeast Extract .....	1
Jelly Crystals .....	1	Ice Cream .....	1
Tapioca .....	8	Tinned Meat .....	3
Wine .....	1	Grapefruit (tinned)....	1
Soup .....	6	Malted Bran .....	1
Bread .....	1	Salt .....	1
Semolina .....	1	Sardines .....	4
Sauce .....	8	Suet .....	1
Rice .....	1	Chocolate Pudding .....	1
Sugar .....	1	Aperta .....	1
		TOTAL .....	515



Table 69. Return of Offences detected by the Foods and Drugs Inspectors during the year.

Particulars of Offence					Results of Proceedings	
Milk deficient in fat	6%	....	....	....	Fine 5/-	Costs 15/9
"	10%	....	....	....	" 5/-	" 19/10
"	10%	....	....	....	" 15/-	" 16/9
"	10%	....	....	....	" 20/-	" 20/9
"	10%	....	....	....	" 3/6	" 15/9
"	10%	....	....	....	" 5/-	" 15/9
"	10%	....	....	....	" 5/-	" 15/10
"	11%	....	....	....	" 5/-	" 15/9
"	13%	....	....	....	" 5/-	" 15/9
"	13%	....	....	....	" 3/6	" 15/10
"	15%	....	....	....	" 7/6	" 15/9
"	18%	....	....	....	" 7/6	" 15/10
"	23%	....	....	....	" 20/-	" 15/9
"	36%	....	....	....	" 10/-	" 15/9
"	50%	....	....	....	" 10/-	" 15/10
In Solids, not Fat	6%	....	....	....	" 5/-	" 15/10
"	12%	....	....	....	" 20/-	" 15/10
"	13%	....	....	....	" 40/-	" 15/10
Pearl barley infested with cereal mites		....	....	....	" 7/6	" 16/6
do.		....	....	....	" 7/6	" 16/1
do.		....	....	....	" 10/-	" 16/2
do.		....	....	....	" 2/6	" 16/4
do.		....	....	....	" 7/6	" 18/8
Flour infested with cereal mites		....	....	....	" 5/-	" 15/10
Milk pudding infested with cereal mites		....	....	....	" 5/-	" 17/8
Flake oat meal infested with cereal mites		....	....	....	" 20/-	" 17/-
Butter containing 24.7% water		....	....	....	" 5/-	" 16/7
Sale of chocolate sweets to the prejudice of the purchaser		....	....	....	" Proved "	



## Section VI.—Water Supply.

### BACTERIOLOGICAL EXAMINATIONS.

In the report for 1931 I outlined the procedure adopted in connection with the examination of the supply at the bacteriological laboratories of University College, Cork, by Prof. W. J. O'Donovan. In the year 1928 Dr. O'Donovan undertook a detailed and systematic examination in which a very large number of samples were studied. Our subsequent procedure has been based on his findings of that year and his recommendations have resulted in a supply of a consistently high degree of purity. In 1946, as in former years, samples were collected and examined on five days during each week. The procedure included an estimate of the number of bacteria growing at 37° C. in 48 hours. The total number of samples examined amounted to 254. The average number of bacteria in 1 c.c. was 2.43 and the number of samples sterile in 1 c.c. was 37.

The routine procedure in connection with these examinations is that samples are collected by the staff of the Public Health Department in special sterilised bottles. These samples are transmitted to the Laboratory for examination. A report is sent to the Medical Officer of Health who, in turn, sends a copy to the Water Engineer. In the event of an unsatisfactory sample coming to light in the laboratory the subsequent cycle of events is speeded up by telephonic communications between the various departments pending receipt of a subsequent formal report. In this manner there is exercised a triple check in the purification and distribution of the supply.

In the following tables are summarised the results of the various examinations carried out during the year (and previous years) at the Bacteriological Laboratories, U.C.C., by Prof. O'Donovan and his staff.

Table 70.—Summary of results of routine examinations of water

Total Routine Samples of Tap Water	Bacillus Coli Test					Average daily No. of Bacteria per c.c.	No. of Samples sterile in 1 c.c.
	100 c.c's —ive	100 c.c's +ive	50 c.c's +ive	10 c.c's +ive	1 c.c's +ive		
254	252	—	1	1	—	2.43	37

As stated above, the examinations carried out during the year included an estimation of the numbers of bacteria growing at 37° C. in 48 hours. The findings are set out in the following table and compared with those of the previous fourteen years.



Table 71.—Average number of bacteria per cubic centimetre growing at 37° C. from daily sample for each month.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1932	14.0	0.8	1.6	4.6	4.5	5.4	44.1	20.3	2.2	4.6	4.7	2.2
1933	1.8	1.0	1.1	1.5	1.8	4.1	19.2	14.6	2.7	2.1	1.3	3.9
1934	1.1	1.6	1.3	1.4	3.4	21.2	18.4	7.4	1.7	4.0	4.2	4.0
1935	2.9	2.7	1.6	1.0	2.7	2.1	2.9	5.2	8.9	7.9	4.4	1.2
1936	1.2	1.2	0.9	1.6	1.9	1.9	5.0	1.8	3.4	1.4	2.7	3.9
1937	4.1	2.8	1.4	1.2	0.7	0.2	3.7	1.0	2.8	6.4	2.8	5.4
1938	1.8	2.2	1.9	1.5	0.9	1.4	2.0	1.4	2.2	2.0	2.6	2.2
1939	1.7	1.4	2.9	2.6	1.7	21.5	6.6	6.7	3.0	30.8	9.4	3.5
1940	1.8	5.3	1.8	1.0	1.3	4.4	11.8	4.2	4.5	4.5	4.5	2.8
1941	2.2	0.7	2.8	1.6	10.1	7.3	4.6	4.1	1.4	1.6	7.2	1.4
1942	3.4	2.7	7.0	2.6	2.5	3.9	5.8	4.9	6.4	2.1	4.8	3.0
1943	2.3	1.2	1.3	1.7	2.4	6.0	5.1	1.2	4.7	2.3	1.9	2.5
1944	2.6	2.0	2.2	2.2	1.3	1.4	2.5	4.3	3.1	1.9	1.8	2.9
1945	2.2	2.3	2.4	2.3	1.8	2.1	3.7	3.7	2.7	3.2	2.4	2.1
1946	2.6	3.1	1.6	2.3	2.1	2.9	2.1	1.2	1.2	5.3	2.9	1.7

Table 72.—Showing average consumption of Water per Head, per Day (in gallons).

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1934	39.6	40.0	39.1	39.9	39.2	42.1	42.8	40.6	41.4	38.6	39.0	40.2
1935	38.5	40.2	40.1	41.2	41.2	43.6	46.8	48.1	46.5	43.5	43.4	35.2
1936	47.6	44.1	44.0	44.4	46.5	47.1	47.1	46.4	44.5	44.8	44.1	43.8
1937	42.7	43.1	41.8	41.6	45.1	45.9	45.9	46.3	45.7	45.0	43.1	42.7
1938	41.5	40.3	39.5	41.4	40.5	40.5	40.9	39.8	41.3	40.6	39.7	41.8
1939	45.6	40.9	39.9	40.1	40.0	44.2	42.8	41.6	41.8	39.5	37.5	37.2
1940	44.7	43.1	39.8	39.3	40.2	44.0	44.9	42.6	41.9	38.6	36.7	39.3
1941	38.5	39.1	39.2	37.9	38.9	40.8	43.1	42.6	42.0	40.4	38.8	37.5
1942	36.7	36.5	36.3	37.4	37.7	38.5	41.1	39.6	39.7	37.7	37.6	36.4
1943	35.5	35.6	36.4	38.0	37.7	39.3	43.3	40.4	42.1	40.2	35.7	37.8
1944	35.2	36.8	38.1	37.6	38.8	38.5	35.0	36.3	40.8	36.7	35.9	36.8
1945	38.8	50.0	40.3	41.0	41.2	43.2	44.2	42.6	44.0	41.3	39.0	40.0
1946	38.8	38.9	39.8	40.3	40.5	40.7	42.4	41.2	42.3	42.6	40.9	40.5



Table 73.—Comparative results of examinations of tap water made during each of the years from 1928 to 1946.

Year	Total number of samples examined	BACILLUS COLI TEST				
		100 c.c.'s —ive	100 c.c.'s +ive	50 c.c.'s +ive	10 c.c.'s +ive	1 c.c. +ive
1928	245	187 (76.3%)	10 (4.0%)	32 (13.1%)	14 (5.7%)	2 (0.8%)
1929	251	153 (60.9%)	44 (17.5%)	40 (15.9%)	9 (3.6%)	5 (2.0%)
1930	268	216 (80.6%)	15 (5.6%)	14 (5.6%)	13 (4.5%)	10 (3.7%)
1931	260	242 (93.0%)	9 (3.5%)	9 (3.5%)	—	—
1932	260	245 (94.2%)	3 (1.2%)	12 (4.6%)	—	—
1933	253	244 (96.4%)	4 (1.6%)	4 (1.6%)	1 (0.4%)	—
1934	261	249 (95.4%)	4 (1.5%)	6 (2.3%)	2 (0.8%)	—
1935	252	235 (93.2%)	3 (1.2%)	7 (2.8%)	5 (2%)	2 (0.8%)
1936	252	244 (96.8%)	2 (0.8%)	5 (2%)	1 (0.4%)	—
1937	253	235 (92.9%)	11 (4.3%)	6 (2.4%)	0 —	1 (0.4%)
1938	254	251 (98.8%)	1 (0.4%)	0 —	1 (0.4%)	1 (0.4%)
1939	259	254 (98.0%)	1 (0.4%)	3 (1.2%)	1 (0.4%)	—
1940	261	244 (92.7%)	2 (0.8%)	10 (3.8%)	5 (1.9%)	2 (0.8%)
1941	266	255 (92.1%)	10 (3.7%)	8 (3%)	1 (0.4%)	2 (0.8%)
1942	254	244 (96.1%)	3 (1.2%)	2 (0.8%)	5 (1.9%)	—
1943	255	253 (99.2%)	—	—	2 (0.8%)	—
1944	255	239 (93.7%)	—	6 (2.4%)	7 (2.7%)	3 (1.2%)
1945	255	246 (96.5%)	—	3 (1.2%)	4 (1.5%)	2 (0.8%)
1946	254	252 (99.0%)	—	1 (0.4%)	1 (0.4%)	—

The bacteriological results indicate that a high degree of purity was maintained during the year, indicating a corresponding degree of efficiency in the purification plant. The positive B.Coli findings occurred in two tests during the months of July and August. The types isolated were :—Faecal type I—1, Type II—1.



## Section VII.—Sanitary Department.

Table 74—Return of work performed by Sanitary Inspectors.

District	INSPECTION OF											SERVED	
	Houses and Yards	Tenement Houses	Tenement Rooms	Infected Dwellings	Common Lodging Houses	Milk Shops	Bakeries	Work Shops	Slaughter Houses	Factories	Out-workers	Justices Orders	Notices to abate nuisance
No. 1 ...	8186	224	696	6	—	58	2	83	—	—	—	2	510
No. 2 ...	4570	1742	8791	53	9	—	—	—	—	—	—	12	198
No. 4 ...	7156	690	2061	79	5	—	6	170	61	—	—	7	226
No. 5 ...	4495	3550	148	29	60	—	2	10	—	—	—	2	230
No. 6 ...	3107	1837	8205	12	60	—	2	15	—	—	—	25	323
No. 7 ...	6137	1499	9351	25	—	—	2	15	10	—	—	16	353
Female Inspector	—	—	—	—	—	—	352	2362	—	1323	127	—	127
Totals ...	33651	9542	29252	204	134	58	366	2655	71	1323	127	64	1967

District No. 3 is divided for purposes of supervision between Districts No. 2 and 4.  
The number of inspections carried out by the Corporation Drain Tester was 3,422



Table 75.—Summary of Inspections, etc.

	No. of Inspections		
Houses, yards, etc.	...	...	33,651
Tenement Houses	...	...	9,542
Tenement Rooms	...	...	29,252
Infected Dwellings	...	...	204
Common Lodging Houses	...	...	134
Bakeries	...	...	366
Workshops	...	...	2,655
Outworkers	...	...	127
Factories	...	...	1,323
Milk Shops	...	...	58
Slaughter Houses	...	...	71
Drains and W.C.'s Tested	...	...	3,422
Number of Notices to abate nuisances	...	...	1,967
Number of Justices' Orders	...	...	64
Amount of fines imposed in respect of same	£9	3	0

Table 76.—Return of Work carried out by **Veterinary Staff** during the year :—

Slaughter Houses	...	...	3,120
Butcher Shops	...	...	5,850
Tripe Houses	...	...	886
Meat Markets	...	...	1,042
Milk Shops	...	...	5,850
Milk Vans	...	...	3,814
Cowsheds	...	...	72
Sausage Factories	...	...	904
Hawkers' Stands	...	...	1,620
Provision Shops	...	...	1,750
Pork Shops	...	...	864
Fish Shops	...	...	455
Fruit Shops	...	...	168
Cold Stores	...	...	66
No of Prosecutions	} See Section V., Prosecutions		
Amount of Fines imposed			



TABLE 77.—PARTICULARS OF DISINFESTATION SCHEME, 1946.

Month	HOUSES TREATED				Rooms	PERSONS TREATED			
	Tenement	Lodging	Private	Total		Male	Female	Children	Total
January ....	48	2	17	67	379	22	134	88	244
February	51	7	42	100	498	17	84	94	195
March ....	25	—	36	61	301	6	36	46	88
April ....	78	1	74	153	790	9	37	44	90
May ....	90	4	113	207	1054	47	151	163	361
June ....	56	—	365	421	1450	1	55	93	149
July ....	12	—	275	287	962	—	30	57	87
August ....	4	1	404	409	1749	—	29	81	110
September	83	—	239	322	1331	10	16	69	95
October ....	43	1	319	363	1378	10	6	57	73
November	43	—	424	467	1850	1	18	91	110
December	1	—	248	249	1001	—	1	12	13
TOTAL ....	534	16	2,556	3,106	12,743	123	597	895	1,615



## Section VIII.—Housing

Houses erected and let	...	...	...	3054
Houses erected and bought out	...	...	...	132
Houses erected and still repaying mortgage	...	...	...	190
Houses under construction	...	...	...	88

### Assistance to private persons and Public Utility Societies :—

(a) Under Section 6 of the Housing Acts, 1925–28...	£4,685	0	0
(b) Under the Housing Acts	£10,405	0	0

### Assistance under Small Dwellings Acquisition Acts :—

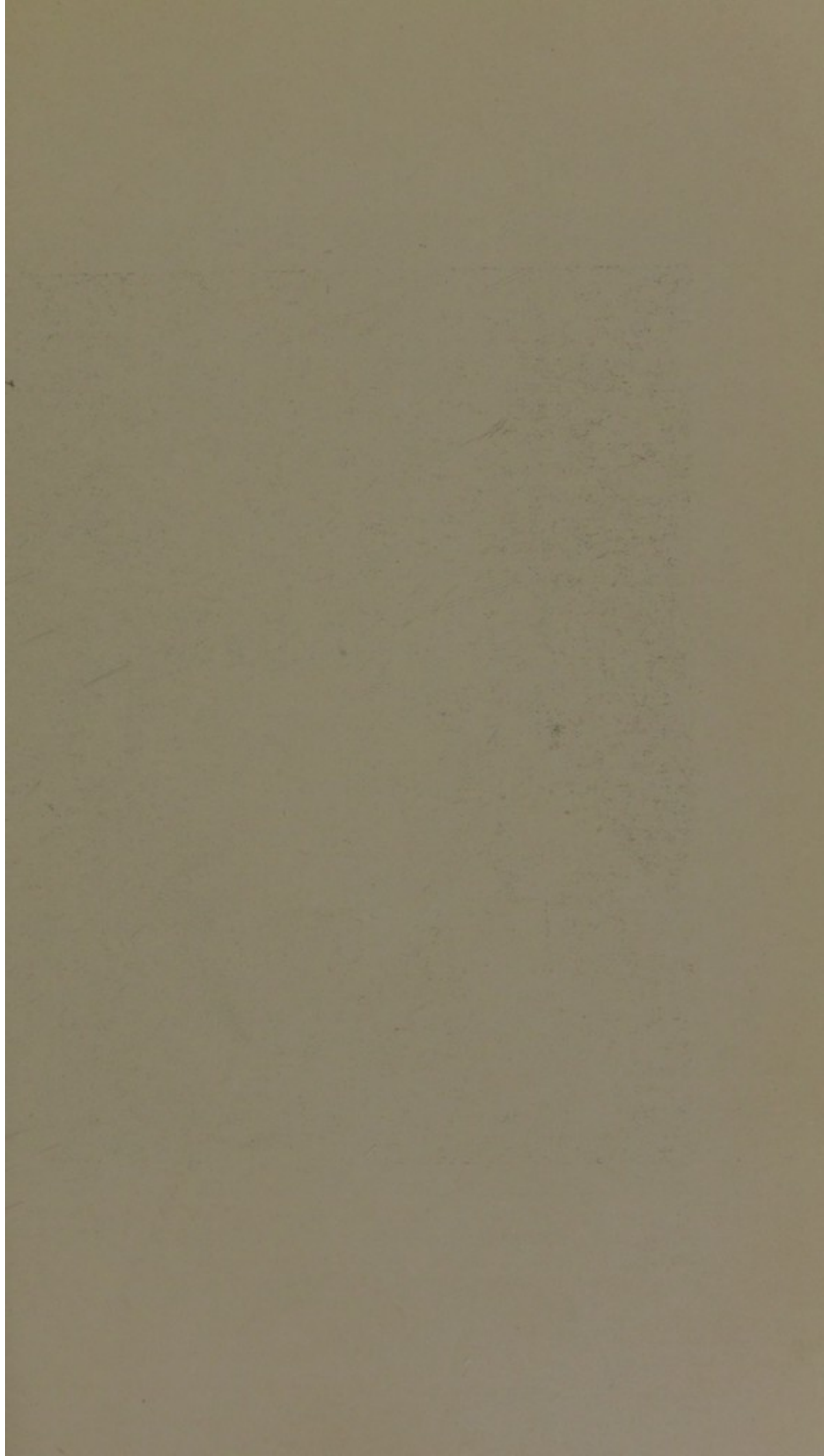
(a) To houses built by Public Utility Societies	£103,125	0	0
(b) To houses built by Private Individuals	£58,347	10	0

Amount expended by Corporation on Working Class Dwellings,  
£1,150,264 0s. 0d.

Table 78.—The number and rents of the various houses built by the Corporation to date.

Location	No. of Houses	Year Built	Weekly Rents (Including Rates)
Madden's Buildings	76	1886	4/4 to 6/6
Ryan's	16	1886	2/4 to 5/-
Horgan's	126	1891	2/8 to 6/5
Roche's	128	1892	2/11 to 6/8
Corporation	33	1900	5/-
Sutton's	46	1905	5/9 to 6/7
Kelleher's	50	1906	5/7 to 7/5
Barrett's	89	1906	4/3 to 6/7
MacCurtain Villas	76	1922	11/4 to 11/10
McSwiney	40	1923	11/-
French's	30	1923	10/- and 10/8
Capwell	148	1928	* 8/6, 10/6 and 14/-
Turner's Cross	152	1930	* 8/-, 10/- and 13/-
Turner's Cross Extension	168	1932	11/6 and 12/6
Gurranabraher 1	252	1934	† 2/6 to 12/6
" 2	108	1935	† 2/6 to 12/6
" 3	78	1936	† 2/6 to 12/6
" 4	82	1936	† 3/6 to 18/-
Commons Road 1	170	1936	† 3/6 to 18/-
" 2	106	1937	† 3/6 to 18/-
Bandon Road	86	1936	† 3/- to 12/6
Baker's Lane 1	266	1938	† 3/6 to 18/-
" 2	242	1940/1	† 3/6 to 18/-
Farranferris 1	206	1939	† 3/6 to 18/-
Assumption Road	70	1941	16/-
Greenmount	210	1941/2	† 3/6 to 18/-
Cathedral Road	90	1946	20/- and 23/6
Total	3144		*Exclusive of Rates. †Differential Rents



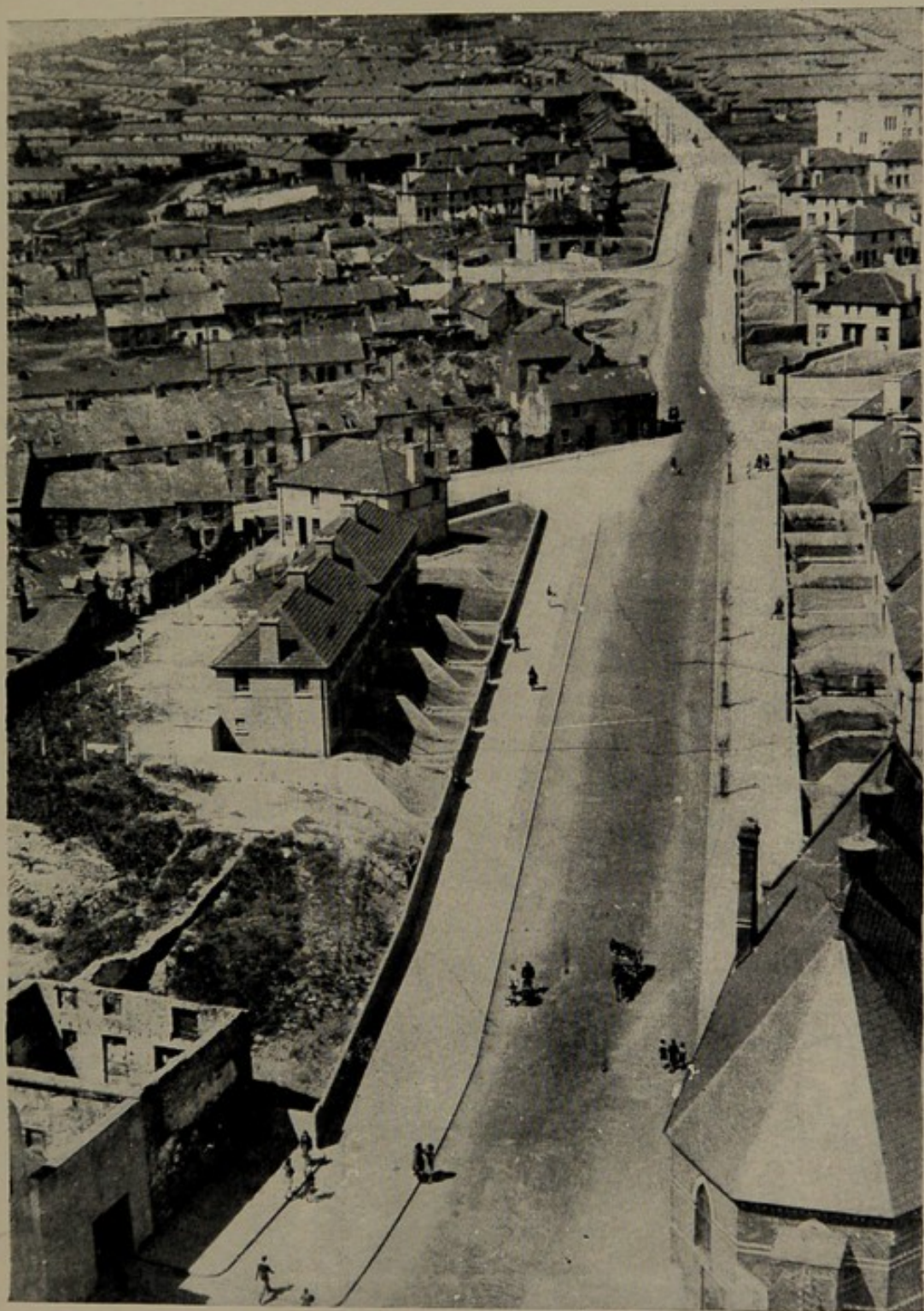






*PLATE II.*—1932. Housing and slum clearance. Bailey's Lane and adjoining property. Note narrowness of laneway and consequent lack of sunlight and ventilation.





*PLATE III.*—Gurrabraher Road.—The foreground was formerly Bailey's Lane. Contrast with corresponding picture and note effect of demolition of derelict houses. A bright airy thoroughfare has been substituted for the previous dark, airless laneway. A portion of Gurrabraher housing scheme in background.







## Section IX.—Port Sanitary Administration

### Constitution of the Port Sanitary Authority.

The port was constituted a port sanitary district by the Local Government Board (Ireland) on 27th April, 1903. The Authority consists of twenty members chosen by the respective riparian authorities who elect representatives to the joint board as follows :—

By the Lord Mayor, Aldermen and Councillors of the County Borough of Cork	...	...	12
By the Cork County Council	...	...	6
By the Urban District of Cobh	...	...	2

The South Cork Board of Public Health was dissolved by virtue of Section 36 of the County Management Act of 1940 and its powers, functions and duties transferred to and vested in the Cork County Council.

### *Apportionment of Expenses.*

Cork County Borough contributes	...	62½ per cent. of the total
Cork County Council	...	27½           "
Cobh Urban District Council	...	10           "

### *Limits of Jurisdiction.*

These are defined in Act 18 of the Cork Port Sanitary Order No. 3 as follows :—"The jurisdiction of the said Port Sanitary Authority shall extend to the whole of that part of the customs port of Cork that lies between Power Head and Cork Head in the County of Cork, together with the waters of the said port of Cork within such limits and all docks, basins, harbours, creeks, rivers, channels, bays and streams within the aforesaid limits and the places for the time being appointed as the customs boarding station or stations for such part of the said port and the places for the time being appointed for the mooring or anchoring of ships for such part of the said port under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf."

### *Issue of Deratisation and Deratisation-exemption Certificates.*

By letter dated 12th Dec., 1942, the Minister for Local Government and Public Health authorised the issue of the above certificates in pursuance of the Public Health (Deratisation of Ships) Regulations, 1930. This is, therefore, now an approved port for the issue of such certificates. During the year 5 Deratization Exemption Certificates were issued.



In connection with this matter the following of the October Session of the International Permanent Committee, International Office of Health, is of interest :—

The Quarantine Commission met on the morning of the 25th and again in a combined Plenary Session on the 29th-30th October.

Owing to pressure of administrative work during the Session, only a few questions were referred to the Commission.

In connection with the working of Article 28 of the International Sanitary Convention, 1926, a note was presented by the British Delegate.

This note emphasised the gradual replacement of sulphur fumigation by hydrogen cyanide. In 1938, the last complete year before the war, out of 865 vessels fumigated in ports in England and Wales before the issue of an International Certificate of Deratization, only 391 were fumigated with hydrogen cyanide, whilst in 1945, out of 1,109 fumigations, 1,048 were carried out with hydrogen cyanide and only 39 with sulphur dioxide.

The Commission noted that after an interval of 6 years, some of the old troubles had arisen again. One difficulty had been the apparent issue of deratization exemption certificates to loaded vessels, a question which has previously been before the Commission on several occasions. The view then taken was that deratization exemption certificates would only be issued when the port health authority concerned was satisfied that the ship was sufficiently free from rats, which can hardly be verified on a loaded ship. The Commission wish to reaffirm their previous decision and to stress the fact that deratization exemption certificates should only be issued when the cargo has been sufficiently unloaded for a thorough investigation to be made. There are many difficulties in estimating the rat population of a vessel, especially if loaded, and the Commission discussed once more the possibility of laying down an "index," which would be a basis for the estimation of the rat population. Dr. Morgan, at the request of the Commission, has very kindly undertaken to make the necessary investigations in the port of London, with a view to devising such an "index." The Commission feel that the result of these investigations will be of great practical interest.

Another difficulty reported was that in certain ports excessive demands had been made for further deratization when ships were already in possession of valid deratization certificates. In this connection, the case of the S.S. "Nela" was mentioned. No delegate from Brazil was present, but the Committee reaffirmed their previous views, viz. : that under the Conventions, if ships possess valid deratization certificates, port authorities cannot insist on further deratization unless there is definite evidence of plague infection or the ship has come from a plague infected port.

A further difficulty which has arisen, has been the demand by certain countries, of consular visas on deratization and deratization exemption certificates. That such visas are not required, has previously been affirmed by the Commission and they now express the hope that the practice will cease. At the same time, they see every advantage in these documents bearing an official stamp, which would indicate their authenticity. The whole question of the abolition of bills of health and consular visas, was also briefly discussed and the Commission felt that, with a view to their total abolition, as envisaged by the Convention of 1944, the whole question should be referred to the Interim Commission of the new World Health Organization.

The following measures would be adopted in this port in the event of a vessel being found affected with human or rodent plague to prevent egress from ship to shore :—

#### *Cuskinny Intercepting Hospital.*

The intercepting hospital is situated about two miles east of the town of Cobh and about half-a-mile from Cuskinny Strand on the northern shore of the harbour. The hospital was built in the year 1880 by the old Cork Board of Guardians and was acquired by the Port Sanitary Authority in the year 1902 from the Commissioners of Public Works (Ireland) and since has been kept in good repair and condition. The function of the



hospital is to deal with the more serious types of infectious disease (e.g., small pox, plague, cholera, typhus, etc.) should any such cases arrive in the port necessitating hospital treatment or isolation. Infected vessels would moor at the quarantine anchorage, the patient being removed by motor launch and landed at Cuskinny Strand or some suitable slipway and transferred to the Authorities' ambulance for transport to the hospital.

#### *Procedure for granting Pratique.*

Deepladen vessels arriving in the lower harbour and bound for Cork may be detained there for tide. Such vessels are boarded by an officer of the Customs and Excise, who puts the usual questions to the master in regard to the prevalence of illness on board and especially in relation to cholera, plague and yellow fever or as to the prevalence of same at any ports of call en route. If the answers are in the *negative*, free pratique is granted and the vessels allowed to proceed to her moorings. If any answers are in the affirmative, pratique is not granted until the vessel has been visited by the Port Medical Officer. Vessels of light draught able to proceed to the City at any state of the tide are hailed while passing Cobh and if the answers are satisfactory are allowed to proceed to Cork where they are boarded by the Customs Officer and the usual questions are put. In addition, instructions have been sent to all shipping agents for companies using the port of Cork that masters of vessels approaching the port with cases of infectious disease on board are to notify the Authority by wireless.

#### *Measures against Rodents.*

All vessels from foreign ports are boarded immediately on arrival by the Port Sanitary Officer who, after satisfying himself as the documents relative to health and deratisation certificates proceeds to the examination of the vessel in regard to rat infestation, particular attention being paid to cargo surfaces as soon as the holds have been opened up. The various cargo compartments are searched for sick or dead rats, which, if found, are submitted at once for bacteriological examination. So far a positive result has not been obtained, but such a result would necessitate suspension of discharge of cargo. In addition, traps are laid in various parts of the ship and rats caught are submitted to examination. Precautions adopted to prevent migration of rodents ashore, comprise the placing of rat guards on all mooring ropes and wires of all except cross-channel vessels. In addition, vessels from plague infected areas have to keep their gangways lime-washed daily and well lighted at night whilst alongside the quays.

The following measures would be adopted in this port in the event of a vessel being found effected with human or rodent plague to prevent egress from ship to shore :—

- (1) Vessel would be breasted off at least six feet from the quayside by placing wood floats between it and the quay wall.
- (2) Besides the adjusting of rat guards, moorings would be parcelled with old canvas on shore side of rat guards and same smeared with Stockholm tar.
- (3) Gangway would be required to be lifted from sunset to sunrise.



- (4) Intensive trapping and examination of rodents caught in the immediate neighbourhood of the ship's berth.

Of all diseases liable to be introduced by shipping, *plague* is without doubt the most to be feared, hence the necessity for the stringent precautions in regard to its prevention. Several of the ports from which shipping arrives in Cork are situated in countries in which plague is endemic, even though the ports themselves may not actually be infected at the time of departure. There is, however, the ever present danger of the importation of *plague infected rats* from such ports and it is in consequence of this danger that so much importance is attached to the systematic trapping and examination of rats taken on vessels coming into this port. As there is always a certain amount of migration of rats from ships to the shore while vessels are tied up at their moorings it is also necessary to maintain a constant sampling and examination of the shore rats taken in warehouses adjacent to the quays. It will be noted from the appropriate tables that of 52 rats taken during the past year, 25 were submitted to post-mortem examination and that all gave negative results. In the previous year 42 were trapped, of which 28 were examined, also with negative results. The rats are examined in the first instance by the Inspector, under the supervision of the Chief Veterinary Officer. In the event of a suspicious finding, the carcass would be referred to the Bacteriological Department of University College for a further examination.

The fact that so many rats have been examined and found negative is not by any means an indication for relaxation in the measures which have been adopted in connection with their reduction and the prevention of plague. One infected rat coming ashore might be the cause of an outbreak among the shore population and from time to time we are reminded of this ever present danger by the discovery of plague infected rats in other ports. Plague is rarely transferred from one human being to the other, such transfer requires an intermediary and the agent is almost always the rat flea. It is only when an epizootic breaks out among the rats and large numbers die that the infecting flea seeks a new host and may transfer his attention to human beings. In countries where the disease is endemic, outbreaks among human beings are always heralded by excessive mortality among rats. Excessive rat mortality on board ship is a very suspicious sign of plague infection and masters are bound to notify any such happening at the port of arrival. Plague is such a deadly disease that no relaxation in preventive measures can be tolerated and for this reason it is necessary to keep up a constant watch over vessels arriving from foreign parts and for systematic examination and extermination of rats.

#### *Water Supply.*

Drinking and boiler water is obtained directly from the public supply. There are upwards of 80 such hydrants available in this port. As mentioned in the section dealing specifically with the supply to the City, the water is subjected to systematic sampling and bacteriological examination throughout the year. 256 samples were examined during the year and the results indicated that the water was of first-class quality.



### D.D.T. and Cockroaches.

D.D.T. in solution and in powder form has been very successfully used on board vessels in this port in the control of cockroaches (or steam flies as termed by mariners). Three compartments, where food and drink is prepared and served on the S.S.—, were found to be heavily infested with cockroaches. Bearing in mind that these pests are mechanical agents in the transfer of infectious disease of the food borne type of infection, expeditious control was extremely desirable. After official representation, the owners requested the Local Sanitary Authority to carry out disinfection. The usual preparations were made in clearing the accommodation to be treated of everything portable. Wood-lockers were stripped completely of shelving and emptied, likewise bottleracks, sideboards, etc., etc., Having eliminated all temporary harbourages, the inside surfaces of each compartment, together with the interiors of all semi-permanent articles of furniture, were covered with a film of D.D.T. solution by means of two mechanical sprays fitted with fine nozzles. To complete the operation, the total floor surface of infested compartments was liberally dusted with D.D.T. powder. The results obtained from this treatment were somewhat disappointing, approximately 55% of the cockroaches only being exterminated. A week later a second treatment was given with the same insecticide and using the same method. This was found to have been much more successful. The crew report of the results indicated that a negligible number of *young cockroaches* had been seen during a period of three months after the date of the first treatment. The periodic visits of the Sanitary Inspector confirmed this report. Trained operatives were employed for this work and were issued with small mouth pads as a protective measure. Whilst spraying was in progress the crew were advised that naked flames should be avoided in that area and until drying and ventilation was complete. On the recommendation of the Local Sanitary Authority, a suitable powder gun and material was provided by the owners for use on board if necessary.

Table 79.—Return of Shipping entering the Port since 1930.

Year	Number of Arrivals			Tonnage		
	Foreign	Coastwise	Totals	Foreign	Coastwise	Totals
1930	297	1,636	1,933	364,650	617,783	982,433
1931	272	1,566	1,838	345,430	647,327	992,757
1932	315	1,375	1,690	352,459	602,509	954,968
1933	399	893	1,292	371,757	462,047	833,804
1934	404	817	1,221	407,188	463,169	870,357
1935	285	1,015	1,300	323,631	525,062	848,693
1936	249	1,053	1,302	277,779	583,922	861,701
1937	250	1,098	1,348	300,730	594,396	895,126
1938	239	1,084	1,323	280,403	598,114	878,517
1939	202	1,074	1,276	274,660	521,801	796,461
1940	116	1,053	1,169	174,087	373,841	547,928
1941	—	522	522	Nil	203,976	203,976
1942	Figures not available.					
1943						
1944						
1945						
1946	83	653	736	92,416	307,694	400,110



Table 80.—Summary of Inspections, Defects and Nuisances.

Description	Number of Arrivals	Tonnage of Arrivals	Number Inspected	Number Defective & Nuisances Found	No. of Defects & Nuisances Remedied
<i>Foreign</i> Steamers	48	Figures not available	48	18	18
<i>Coastwise</i> Motor & Steam	615	Figures not available	615	131	115
Total	663	Figures not available	663	149	133

Table 81.—Return of Vessels entering the Port which were dealt with by the Department each month during 1946.

Month	Foreign	Coastwise	Total
January ...	6	39	45
February ...	1	37	38
March ...	2	45	47
April ...	3	54	57
May ...	5	49	54
June ...	8	46	54
July ...	4	62	66
August ...	2	56	58
September ...	1	58	59
October ...	7	62	69
November ...	4	65	69
December ...	5	42	47
Totals ...	48	615	663

Table 82.—Return of Imports and Exports from 1930.

Year	Imports (tons)	Exports (tons)
1930	906,340	120,610
1931	861,782	85,704
1932	890,377	104,884
1933	710,149	89,319
1934	784,174	66,606
1935	743,939	63,219
1936	788,545	73,673
1937	829,704	78,530
1938	802,238	65,147
1939	900,644	105,659
1940	734,888	74,517
1941	262,222	37,448
1942	Figures not available	
1943	do.	do.
1944	do.	do.
1945	do.	do.
1946	375,494	36,159



## Sanitary defects and nuisances dealt with during 1946.

Dirty Focsles	...	...	...	...	...	77
Dirty Galleys	...	...	...	...	...	6
Dirty Store Rooms	...	...	...	...	...	8
Dirty Mess Rooms	...	...	...	...	...	7
Damp Quarters	...	...	...	...	...	14
Leaky Deckheads	...	...	...	...	...	20
Defective Port Frames and Discs	...	...	...	...	...	35
Defective W.C. Fittings	...	...	...	...	...	12
Defective Bogie Stoves, Galley Stoves and Funnels	...	...	...	...	...	3
Defective Flooring Boards	...	...	...	...	...	1
Defective Steam Heaters	...	...	...	...	...	5
Defective Lockers...	...	...	...	...	...	2
Defective Deck Planking	...	...	...	...	...	1
Verminous Quarters	...	...	...	...	...	8
Foul Water Closets	...	...	...	...	...	19
Ships' Gear in Accommodation	...	...	...	...	...	1
Dirty Ice Boxes	...	...	...	...	...	1
Defective Shell Plating	...	...	...	...	...	6
Choked Soil Pipes	...	...	...	...	...	1
Total						221
Verbal Notices Given	...	...	...	...	...	91
Written Notices Left on Board	...	...	...	...	...	56
Letters to Owners	...	...	...	...	...	1
Total						148

A total of 1161 inspections of vessels were carried out during the year.



TABLE 83—RATS TRAPPED ASHORE.

Month	No.	Mus Decumans	Mus Alexandrinus	Mus Rattus	Species Unknown	No. of P.M. Exam.*
Jan. ...	3	—	2	1	—	1
Feb. ...	2	1	—	1	—	1
March ...	2	—	2	—	—	1
April ...	5	1	2	1	1	1
May ...	2	—	1	1	—	2
June ...	5	—	2	2	1	2
July ...	1	1	—	—	—	1
August ...	6	2	2	2	—	2
Sept. ...	2	1	—	1	—	2
Oct. ...	4	1	3	—	—	2
Nov. ...	4	—	2	2	—	1
Dec. ...	8	3	2	3	—	2
Total ...	44	10	18	14	2	18

\* All P.M. Examinations proved Negative.

TABLE 84—RATS TRAPPED ON VESSELS

Month	No.	Mus Decumans	Mus Alexandrinus	Mus Rattus	Species Unknown	No. of P.M. Exam.*
January	—	—	—	—	—	—
Feb. ...	—	—	—	—	—	—
March	—	—	—	—	—	—
April	—	—	—	—	—	—
May ...	—	—	—	—	—	—
June ...	—	—	—	—	—	—
July ...	—	—	—	—	—	—
August	—	—	—	—	—	—
Sept. ...	—	—	—	—	—	—
October	—	—	—	—	—	—
Nov. ...	—	—	—	—	—	—
Dec. ...	8	—	—	8	—	7
Totals	8	—	—	8	—	7

\* All P.M. Examinations proved negative.











## Section X—Meteorology.

I am indebted to Prof. H. N. Walsh, University College, for the following particulars concerning the weather conditions during the year, and more especially for the trouble which he has gone to to bring up to date the Tables which follow.

Table 85.—Rainfall in inches for each quarter and for each year from 1901 to present year.

Year	I.	II.	III.	IV.	Total
1901	10.07	7.62	10.75	10.12	38.56
1902	9.29	7.80	7.31	12.88	37.28
1903	16.89	8.80	14.95	12.13	52.77
1904	13.63	5.71	10.41	7.47	37.22
1905	11.70	6.59	9.82	9.14	37.25
1906	9.46	5.76	5.58	9.03	29.83
1907	4.06	10.10	7.40	16.02	37.58
1908	7.67	5.28	10.16	9.53	32.64
1909	7.61	9.94	2.62	9.74	29.91
1910	10.70	7.24	8.64	11.98	38.56
1911	5.94	6.89	7.87	18.47	39.17
1912	13.46	7.07	9.30	7.05	36.88
1913	13.92	10.32	7.73	12.49	44.46
1914	13.72	3.60	9.85	15.20	42.42
1915	11.62	6.27	9.26	15.68	42.83
1916	8.68	9.19	7.37	21.11	46.35
1917	8.75	6.93	9.40	7.25	32.33
1918	14.75	5.59	13.37	13.73	47.44
1919	10.78	7.11	6.77	6.97	31.63
1920	11.75	14.12	8.90	13.24	48.01
1921	8.04	2.22	8.71	9.90	28.87
1922	13.08	5.45	10.57	8.15	37.25
1923	14.41	5.38	10.71	10.54	41.04
1924	12.32	9.76	11.82	17.66	51.56
1925	10.31	10.49	8.43	11.92	41.15
1926	15.42	8.19	4.68	9.55	37.84
1927	12.20	6.16	11.45	16.06	45.87
1928	16.14	13.86	8.31	17.35	55.66
1929	11.28	6.72	7.27	20.91	46.18
1930	14.98	5.91	12.67	14.35	47.91
1931	12.30	10.35	8.34	13.27	44.26
1932	8.54	8.11	7.31	13.62	37.58
1933	8.61	8.74	5.22	6.47	29.04
1934	9.66	7.13	11.49	13.75	42.03
1935	5.33	9.33	9.98	10.97	35.61
1936	16.77	4.51	9.13	9.88	40.29
1937	19.67	6.12	7.90	8.52	42.21
1938	9.22	7.38	7.99	15.14	39.73
1939	13.01	4.94	7.43	16.53	41.91
1940	14.74	6.64	3.80	17.96	43.14
1941	12.82	5.47	5.73	14.40	38.42
1942	11.39	8.43	8.21	8.17	36.20
1943	11.59	7.47	8.80	10.99	38.85
1944	4.79	5.16	11.43	16.34	37.72
1945	8.90	6.23	10.30	12.25	37.68
1946	9.50	7.84	12.52	15.82	45.68

The mean temperature for 1946 was 50.2°F. The warmest day was June 22nd, with a maximum shade temp. of 77°F. The warmest night was July 23rd, with a minimum shade temp. of 60°F. The coldest nights were February 28th, and December 24th, with a minimum shade temp. of 24°F.



## SUNSHINE.

Total *bright sunshine* for 1946 was 1274.4 hours.

	Hours		Hours
1930	... 1,478.1	1938	... 1,350.9
1931	... 1,313.8	1939	... 1,393.1
1932	... 1,282.5	1940	... 1,493.9
1933	... 1,465.8	1941	... 1,246.5
1934	... 1,480.1	1942	... 1,482.5
1935	... 1,442.0	1943	... 1,093.8
1936	... 1,357.5	1944	... 1,209.1
1937	... 1,259.4	1945	... 1,263.8

Table 88.—*Mean Temperature* (°F.) for each quarter and for each year from 1901 to present year.

Year	I.	II.	III.	IV.	For whole year
	°	°	°	°	°
1901	37.5	50.4	57.2	41.9	46.8
1902	40.4	48.1	55.3	43.3	46.5
1903	41.1	49.4	54.4	41.4	46.6
1904	38.3	49.1	55.4	45.6	47.1
1905	42.1	52.4	56.9	42.4	48.4
1906	40.6	50.6	57.9	44.0	48.3
1907	41.3	49.1	57.5	42.1	47.5
1908	40.6	50.4	57.0	46.6	48.6
1909	40.2	50.6	56.9	41.8	47.5
1910	39.5	50.3	56.3	43.2	47.4
1911	39.7	51.3	58.5	42.4	47.5
1912	40.9	50.4	53.5	47.9	48.2
1913	43.0	49.4	57.4	48.7	49.6
1914	40.3	51.4	56.7	43.5	48.1
1915	38.3	49.2	52.7	39.2	44.9
1916	40.0	45.9	53.7	39.7	44.8
1917	36.7	48.1	54.2	43.9	45.7
1918	40.0	51.3	55.0	42.0	47.0
1919	37.6	48.5	54.4	40.0	45.5
1920	40.3	48.9	52.6	42.0	45.9
1921	39.6	48.3	54.3	42.7	46.2
1922	40.2	49.9	57.8	46.4	48.6
1923	44.0	50.7	58.4	43.8	49.2
1924	42.6	51.4	56.7	47.6	49.6
1925	43.3	51.8	57.9	44.5	49.4
1926	45.1	52.1	61.1	44.0	50.6
1927	44.1	52.2	58.5	45.5	50.1
1928	44.7	52.0	58.0	46.4	50.3
1929	43.2	52.3	59.4	45.7	50.1
1930	40.7	52.9	57.8	46.5	49.5
1931	42.3	53.1	58.2	46.7	50.1
1932	43.2	52.1	59.7	46.4	50.4
1933	42.3	54.5	62.1	44.9	51.0
1934	42.4	52.8	59.8	47.6	50.6
1935	44.1	52.7	59.4	44.2	50.1
1936	42.8	52.6	59.9	47.1	50.5
1937	42.6	53.8	59.2	44.9	50.1
1938	45.3	52.3	58.4	46.6	50.6
1939	44.6	53.9	59.8	45.9	51.0
1940	43.2	55.6	58.9	45.4	50.8
1941	40.4	51.8	60.0	47.5	49.9
1942	42.6	53.4	59.6	45.5	50.2
1943	44.9	53.8	57.0	46.3	50.5
1944	44.4	53.9	58.7	45.3	50.5
1945	43.9	52.5	60.3	49.3	51.5
1946	44.3	52.5	57.4	46.7	50.2

## BAROMETER.

The mean reading for 1946 was 29.94 inches. The highest reading was 30.75 ins., on December 17th. The lowest was 28.82 ins., on 20th November.



Table 86—Temperature at Cork (in the Shade) from 1884 to Present Year.

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YEAR	January			February			March			April			May			June			July			August			September			October			November			December			Mean Temper- ature of Year
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean				
	Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees			Degrees						
1884	55-31-45.5	54-31-46.5	54-30-45.5	57-34-48.5	68-37-55.5	73-40-59.0	72-45-61.5	74-44-62.2	71-45-58.5	60-34-52.2	60-28-45.2	55-28-41.3	51.8																								
1885	54-27-41.7	50-27-43.5	54-30-43.5	62-30-48.2	61-34-52.0	73-42-59.2	80-43-62.0	74-46-60.5	65-36-55.2	57-35-46.7	58-31-46.7	54-25-39.5	49.9																								
1886	52-23-38.0	52-28-41.5	57-25-41.5	65-32-46.7	65-33-50.5	76-45-57.7	79-44-59.5	76-45-60.5	65-39-56.5	64-37-51.5	58-29-45.0	50-22-39.0	49.0																								
1887	54-30-43.0	54-27-43.5	58-25-42.0	62-26-44.5	70-35-52.5	81-47-62.5	80-47-64.2	76-42-60.7	69-39-55.0	61-28-48.2	54-24-42.0	55-25-39.7	50.0																								
1888	54-26-43.0	52-26-38.2	56-26-40.7	59-28-46.5	68-39-53.2	73-39-57.0	70-40-57.5	74-42-60.0	66-37-55.5	63-31-50.5	58-27-48.0	56-28-44.7	49.6																								
1889	58-26-43.0	57-27-42.2	59-29-44.7	58-32-46.7	68-40-48.0	77-46-58.0	77-45-60.0	72-43-58.7	70-38-57.2	59-32-48.2	60-29-48.2	56-29-44.2	49.9																								
1890	55-29-44.0	54-29-42.5	58-28-45.2	61-29-48.0	70-39-53.0	73-45-58.0	72-43-58.4	72-40-58.4	75-42-50.2	66-34-53.0	60-24-44.6	52-25-39.0	50.3																								
1891	53-23-40.3	56-31-45.7	61-22-42.1	60-31-46.9	73-34-50.0	78-40-58.6	75-44-59.0	73-40-58.0	71-39-56.5	61-29-48.5	53-28-42.6	55-26-44.0	49.4																								
1892	55-20-39.2	55-25-42.3	57-24-40.0	62-27-47.2	66-37-53.1	73-39-56.2	73-44-59.0	70-44-60.0	68-37-55.0	56-28-45.0	56-31-47.2	53-27-42.7	49.7																								
1893	53-21-40.5	53-24-42.5	60-34-47.5	67-31-51.5	69-43-56.5	80-46-59.8	74-46-61.2	77-45-61.7	71-33-55.2	63-31-49.0	59-30-43.0	53-26-42.5	50.9																								
1894	53-11-39.5	56-28-44.6	57-33-44.8	62-37-49.0	67-34-50.0	71-38-57.0	72-45-69.0	71-44-57.5	66-36-53.5	66-33-49.5	59-28-46.0	54-29-44.5	49.6																								
1895	47-23-36.5	48-22-34.5	63-27-44.0	61-31-48.2	70-33-53.0	74-40-58.7	70-44-58.7	70-43-59.0	71-46-58.9	62-28-46.0	56-30-45.0	54-26-42.5	48.7																								
1896	53-26-43.0	55-32-45.2	56-31-46.5	65-34-50.0	74-33-56.2	82-47-60.5	75-42-60.0	73-41-57.5	68-41-55.0	65-30-43.2	53-29-42.0	53-23-40.0	49.9																								
1897	50-22-37.5	56-32-46.0	55-31-44.0	58-29-46.0	70-35-51.0	75-41-59.0	77-43-61.0	80-45-59.5	67-38-53.2	61-37-52.2	58-32-47.2	53-29-44.0	50.1																								
1898	55-32-45.8	54-26-41.5	58-28-41.0	60-31-47.7	67-34-51.0	74-39-56.8	78-44-59.5	73-46-69.5	72-40-58.7	64-34-51.3	59-30-44.0	55-27-45.4	50.3																								
1899	53-26-40.1	52-29-43.0	64-22-43.0	63-29-46.6	65-34-50.6	78-41-59.5	76-45-60.0	76-46-62.3	71-31-54.1	60-29-47.9	55-39-47.2	51-24-40.0	49.5																								
1900	54-27-39.5	52-14-35.4	51-25-38.6	65-33-47.8	68-36-50.7	75-42-56.8	75-45-60.1	71-42-57.0	67-38-55.1	63-32-48.1	57-29-41.7	52-26-42.3	47.9																								
1901	49-24-37.8	49-22-35.8	51-34-38.9	59-39-45.0	68-34-51.9	72-37-54.2	76-46-60.2	75-41-57.5	67-39-54.0	61-31-47.0	54-19-41.2	51-26-37.5	46.8																								
1902	50-25-40.6	52-19-36.6	57-30-44.0	57-29-44.0	67-31-47.3	74-38-53.1	74-40-56.0	68-40-56.2	68-36-53.6	62-34-57.4	55-30-43.5	52-25-39.0	46.8																								
1903	50-22-39.5	52-29-42.7	52-29-41.1	57-27-43.7	69-36-50.4	70-35-54.0	74-43-56.6	68-40-54.3	64-36-52.4	60-28-46.2	55-24-41.0	48-22-37.0	46.4																								
1904	49-27-38.5	49-24-37.2	52-25-39.1	60-32-44.4	65-32-48.6	69-49-54.2	73-40-57.3	69-41-56.4	63-38-52.5	63-35-50.2	57-25-43.5	52-28-43.0	47.4																								
1905	51-29-42.0	55-23-41.6	53-30-42.6	58-33-46.4	68-36-52.6	75-42-58.0	76-45-60.0	70-42-55.5	68-39-53.6	62-26-45.0	52-23-39.0	50-20-43.3	48.3																								
1906	50-28-41.1	47-25-38.0	58-30-42.6	59-29-44.3	64-33-49.7	75-42-57.8	74-44-59.0	73-44-59.8	71-40-55.0	63-29-49.0	55-29-44.0	53-20-39.0	48.4																								
1907	49-18-39.6	52-25-38.4	57-32-45.8	64-30-45.4	65-35-48.7	69-49-53.5	78-41-58.6	68-43-57.0	68-38-57.0	60-28-45.9	52-29-49.8	49-27-39.5	47.5																								
1908	52-23-38.5	53-31-43.0	52-29-40.4	56-26-43.4	68-37-52.0	71-40-55.7	80-46-59.5	74-44-58.2	67-38-53.5	64-33-53.0	56-28-45.7	51-30-41.1	49.0																								
1909	51-28-40.3	52-22-39.6	56-23-40.6	61-31-46.8	66-33-51.0	69-41-54.0	71-45-58.6	69-43-59.7	65-37-52.3	64-26-49.0	55-20-38.2	50-24-38.3	47.4																								
1910	50-25-38.5	53-27-39.9	55-30-41.0	60-29-43.9	68-34-51.4	66-44-55.5	70-45-57.5	69-46-57.0	68-37-54.5	62-34-49.0	53-24-39.0	50-28-41.5	47.3																								
1911	50-27-39.2	53-22-39.7	56-29-40.3	59-27-40.9	70-37-52.2	72-45-56.7	79-44-61.0	73-45-60.2	73-39-54.3	57-31-48.0	53-26-39.9	49-27-39.3	48.0																								
1912	50-27-40.8	50-32-40.0	57-32-41.8	61-32-47.0	63-36-51.2	66-32-52.9	74-44-55.7	61-36-51.3	68-36-53.5	61-31-50.1	59-33-49.2	54-30-44.3	48.1																								
1913	52-27-40.6	54-32-43.6	55-34-45.0	59-29-44.7	64-36-49.5	75-38-54.0	74-47-55.9	74-40-58.8	72-44-57.6	61-32-51.5	60-34-48.9	56-33-45.6	49.6																								
1914	54-43-48.5	55-50-53.0	55-50-52.4	60-53-56.9	62-55-58.2	70-59-64.4	69-53-64.8	67-63-64.6	66-60-62.6	62-55-58.4	58-50-53.4	53-46-50.0	47.2																								
1915	50-37-43.5	45-25-35.0	58-35-46.5	50-35-42.5	62-40-51.0	64-40-52.0	62-42-52.0	65-43-54.0	62-40-51.0	55-37-46.0	48-28-38.0	40-28-34.0	44.9																								
1916	50-36-43.3	47-30-39.1	45-30-37.8	49-36-42.6	60-34-47.4	55-40-47.8	66-40-53.4	65-49-57.7	60-40-50.0	56-36-46.4	47-32-40.4	40-24-32.5	44.8																								
1917	52-22-36.0	50-24-35.0	52-23-30.25	59-30-41.5	70-32-50.25	66-40-52.25	68-40-55.4	70-46-56.12	66-26-51.25	56-36-40.8	58-30-44.5	56-26-38.4	45.7																								
1918	50-22-36.0	54-32-43.0	56-26-41.0	64-32-48.0	67-33-50.0	76-36-56.0	76-40-58.0	74-40-57.0	64-36-50.0	62-30-46.0	54-26-40.0	54-26-40.0	47.0																								
1919	54-24-36.0	50-26-39.0	50-24-37.8	56-30-43.2	72-34-51.2	68-36-51.0	74-40-56.0	80-40-57.5	64-34-49.7	62-36-44.6	56-14-34.5	54-28-41.0	46.0																								
1920	52-30-40.0	50-30-39.8	50-30-41.3	56-36-46.3	66-28-46.3	68-34-53.7	66-42-53.5	66-40-53.2	68-32-51.2	60-36-48.5	56-24-41.6	50-20-36.0	45.9																								
1921	60-25-44.7	50-24-36.2	50-24-37.5	58-26-41.5	70-34-48.4	76-32-55.0	80-40-60.0	74-38-54.2	64-32-48.2	62-28-47.4	46-20-39.7	50-28-41.2	46.2																								
1922	56-20-49.1	48-24-37.2	46-24-34.5	48-22-34.8	80-30-61.0	74-40-54.0	72-38-67.2	72-36-54.0	66-36-52.3	60-20-56.0	66-30-44.0	54-26-39.2	48.6																								
1923	54-27-43.4	55-29-43.6	56-30-45.1	58-31-46.2	65-33-49.3	65-33-49.3	79-48-62.2	78-42-59.6	69-37-53.4	61-30-49.5	58-20-38.8	53-25-43.0	49.2																								
1924	53-29-43.8	51-26-41.4	46-25-42.5	62-27-46.0	65-35-51.5	70-41-56.7	68-42-57.9	70-40-57.8	71-40-54.4	64-57-50.8	59-29-46.0	56-33-46.0	49.6																								
1925	55-31-44.4	55-28-41.8	60-29-43.8	57-30-45.6	62-34-50.3	81-44-59.5	75-45-60.2	74-43-60.2	68-35-53.3	69-32-52.5	59-24-41.2	56-21-39.8	49.4																								
1926	53-28-43.1	57-32-46.5	61-31-45.7	63-31-49.8	75-33-51.1	72-39-55.5	83-45-63.3	75-46-61.8	72-37-58.2	74-25-48.3	57-27-42.3	55-21-41.5	50.6																								
1927	60-28-42.3	57-26-44.1	57-27-45.9	65-29-48.4	72-36-53.5	70-38-54.5	74-50-61.1	76-46-59.9	70-36-54.5	65-35-52.2	61-23-43.5	52-26-40.8	50.1																								
1928	55-30-44.1	57-33-45.6	57-27-44.4	64-30-46.2	75-37-54.0	69-40-55.8	78-43-60.6	72-41-58.8	70-34-54.7	65-32-50.8	58-27-46.5	55-28-41.9	50.3																								
1929	54-23-39.8	56-28-43.5	69-26-46.3	65-33-47.9	75-31-52.4	71-41-56.7	75-42-59.8	72-44-59.6	69-42-57.5	70-40-56.5	61-35-51.6	60-27-44.6	49.5																								
1930	53-26-41.3	52-24-37.7	57-26-43.2	66-30-47.4	68-36-53.0	76-40-58.3	78-45-59.3	76-42-57.5	70-40-56.5	61-35-51.6	60-27-44.6	54-29-43.3	49.5																								
1931	53-27-41.2	55-30-42.2	56-25-43.5	64-34-48.3	65-35-52.7	72-43-58.4	71-43-59.5	76-37-59.4	65-23-49.8	61-29-45.8																											



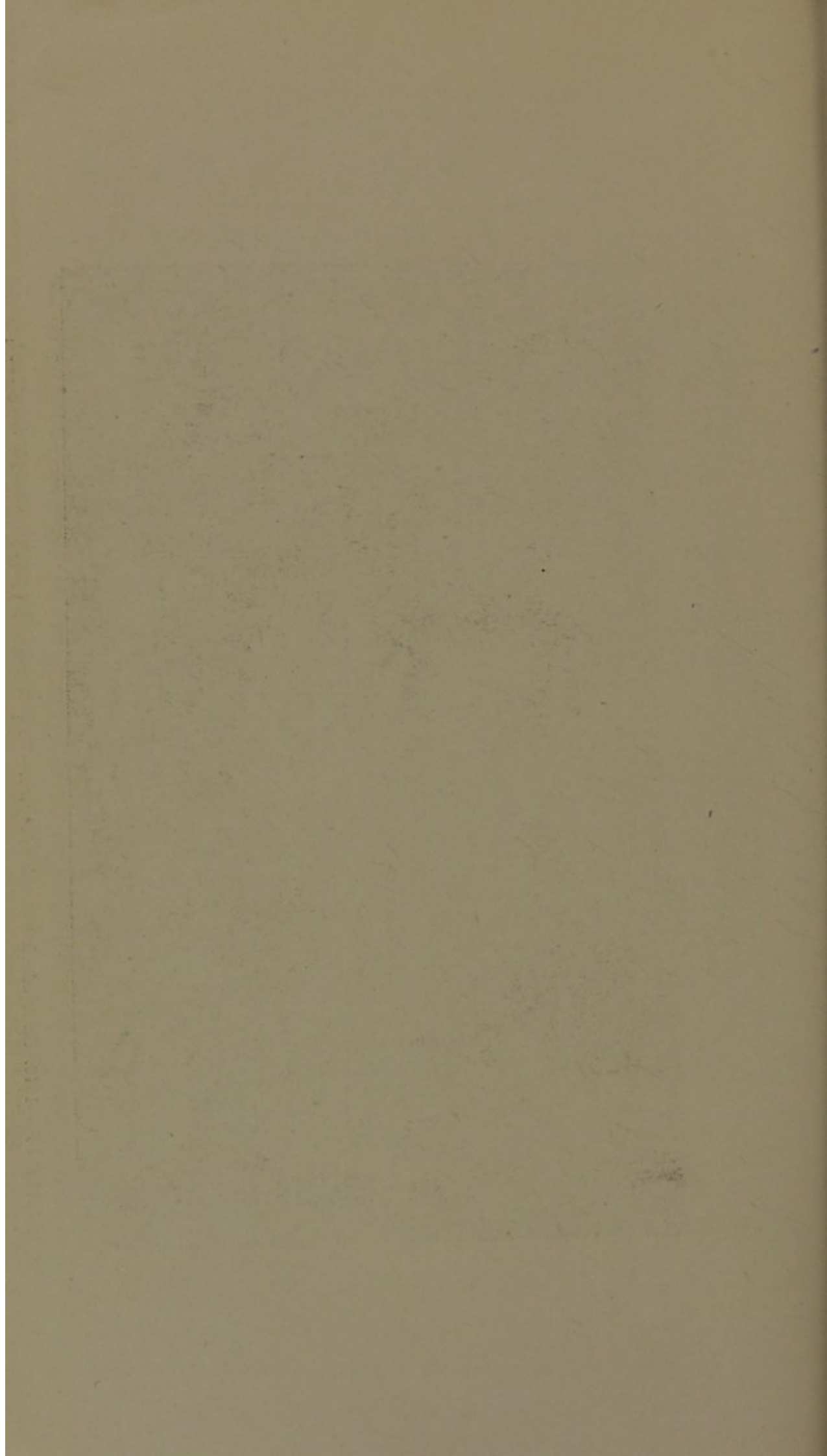






*PLATE IV*,—1946. Gurrana-braber Housing Scheme.—Derelict property (partly cleared) in foreground.







# Appendix I.

## OPERATION OF THE SCHEME FOR THE TREATMENT OF VENEREAL DISEASES.

Table 89.—Record of Work Done in the V.D. Treatment Centre.

	Cork City		Cork County		Other Districts		Total		Total Male and Female Cases
	M.	F.	M.	F.	M.	F.	M.	F.	
<i>New Cases (1st time) ...</i>									
Syphilis ...	15	28	14	12	4	—	33	40	73
Soft Chancre ...	—	—	—	—	—	—	—	—	—
Gonorrhoea ...	21	9	12	4	2	—	35	13	48
Not V.D. ...	58	33	34	5	—	—	92	38	130
Total ...	94	70	60	21	6	—	160	91	251
<i>Total Attendances :—</i>									
Syphilis ...	461	1616	346	444	6	—	813	2060	2873
Soft Chancre ...	—	—	—	—	—	—	—	—	—
Gonorrhoea ...	174	172	87	34	3	—	264	206	470
Not V.D. ...	97	49	51	6	—	—	148	55	203
Total ...	732	1837	484	484	9	—	1225	2321	3546
<i>Cured :—</i>									
Syphilis ...	5	3	2	1	—	—	7	4	11
Soft Chancre ...	—	—	—	—	—	—	—	—	—
Gonorrhoea ...	18	8	8	2	—	—	26	10	36
Not V.D. ...	—	—	—	—	—	—	—	—	—
Total ...	23	11	10	3	—	—	33	14	47
<i>Pathological Exams. :—</i>									
Wassermann ...	137	142	86	26	—	—	223	168	391
Gonococci ...	36	48	14	7	—	—	50	55	105
Exam. for T.P. ...	4	—	6	—	—	—	10	—	10
Total ...	177	190	106	33	—	—	283	223	506
<i>Therapy :—</i>									
Stabilarsan or other Arsenicals ...	263	1037	210	334	1	—	474	1371	1845
Bismuth Preparations ...	227	512	174	186	3	—	404	698	1002
Irrigations ...	63	—	32	—	—	—	95	—	95
Douches ...	—	57	—	5	—	—	—	62	62
Sulphonamides ...	83	42	38	11	2	—	123	53	176
Iodides ...	5	—	3	—	—	—	8	—	8
Penicillin... ...	25	6	5	—	—	—	31	6	37
Vaccines ...	—	4	—	—	1	—	—	5	5
Total ...	666	1658	462	537	7	—	1135	2195	3230



Table 90.—Record of *new cases* treated annually at Centre.

Period	Syphilis	Soft Chancre	Gonorrhoea	Not V.D.	Total
1937	29	2	34	30	95
1938	29	—	42	34	105
1939	37	1	27	42	107
1940	34	8	30	46	118
1941	25	6	42	68	141
1942	54	4	63	67	188
1943	113	4	79	101	297
1944	81	1	49	116	247
1945	59	—	63	107	229
1946	73	—	48	130	251

Table 91.—Record of new cases treated during 1946 (non V.D. Cases not included).

Period	Males	Females	Total
Jan.	3	4	7
Feb.	8	7	15
Mar.	6	1	7
Apr.	8	11	19
May	5	1	6
June	5	6	11
July	3	1	4
Aug.	9	5	14
Sept.	4	4	8
Oct.	5	7	12
Nov.	5	5	10
Dec.	7	1	8
Totals	68	53	121

Table 92.—Monthly attendances at V.D. Centre, 1946.

Period	Males	Females	Total
Jan.	96	170	266
Feb.	89	221	310
Mar.	103	187	290
Apr.	96	239	335
May	102	201	303
June	103	169	272
July	96	169	265
Aug.	106	146	252
Sept.	127	212	339
Oct.	118	203	321
Nov.	105	249	354
Dec.	84	155	239
Totals	1225	2321	3546



The total number of new cases, male and female, of Gonorrhoea and Syphilis treated during the year was 121. This figure for 1945 was 122, which was 8 less than for the previous year and 62 less than for the year before. It will be seen, therefore, that the outbreak of venereal diseases, the most serious ever recorded in this city, which began in 1942 is maintaining its decline. The figure for total attendances (3,546) is 104 less than last year.

The facilities afforded to private practitioners under the scheme were availed of by eight doctors during the year. The particulars set out in table 93 relate to the patients treated by them and the results obtained. The number of ampoules supplied to them was 675 (in comparison with 1,005 provided in 1945).

Table 93.—Particulars of cases treated by Private Practitioners.

Form of Disease	Number of Cases		Cured	Discontinued Treatment	Remaining under Treatment	Wassermann or other Tests
	Males	Fem's				
Syphilis ...	39	13	14	16	22	65
Gonorrhoea ...	2	7	38	—	11	2
S. Chancre ...	2	—	2	—	—	—



## Appendix II.

### OPERATION OF THE COUNTY BOROUGH SCHEME FOR THE WELFARE OF THE BLIND.

The following are the terms of the Scheme drafted for this purpose and now in operation within the Borough :—

In this scheme the term "Blind Person" shall mean any inhabitant of the County Borough who is so blind as to be either unable to perform any work for which eyesight is essential, or unable to continue his or her ordinary occupation ; the term "The Corporation" shall mean the Lord Mayor, Aldermen and Burgesses of the County Borough of Cork, acting by the City Manager ; the term "The Minister" shall mean the Minister for Local Government and Public Health.

2. The Corporation will establish and maintain a Register in which shall be entered the name and address, age, sex, religion and other necessary particulars of every blind person who shall produce a certificate from a recognised Ophthalmic Surgeon that the acuity of vision of such person (refractive error being corrected) is below 1/20th normal (3/60th Snellen), or that such person is so blind as to be unable to continue his or her ordinary occupation. Any person between the ages of 30 and 70 may, however, be registered without producing such certificate on furnishing evidence of being in receipt of a pension in pursuance of Section 6 of the Old Age Pensions Act, 1932. The Register shall be kept written up-to-date, and shall be revised annually in the month of January. The Corporation shall be empowered to pay reasonable fees to Ophthalmic Surgeons for certifying in cases of necessitous persons.

3. Arrangements will be made by the Corporation with the Authorities of one or more of the Institutions for the Blind mentioned in the Schedule hereto on such terms as may be approved by the Minister for the following purposes :—

- (a) the education or industrial training of suitable blind persons between the ages of five years and thirty years ;
- (b) the employment in workshops for the Blind of blind persons suitable for such employment, their maintenance in a Hostel, and the augmentation of their wages ;
- (c) the maintenance in Homes of blind persons who, owing to age or infirmity, are incapable of work.



4. The Corporation may in cases of unemployed and necessitous blind persons ineligible for education or industrial training under Article 3 (a) of this Scheme and living in their own homes or in lodgings, grant assistance to such persons in accordance with the following scale:—

Classification of Blind Persons	Amount of weekly allowance*
(a) Blind person over 15 years and under 30 years of age	12s. 6d.
(b) Blind person 30 years of age and upwards	... 6s. 0d. (with pension)
(c) Married man under 30 years of age with wife dependent on him ... ..	... 19s. 0d.
(d) Married man 30 years of age and upwards with wife dependent on him ... ..	... 12s. 0d. (with pension)
(e) Additional allowance for each child ... ..	... 2s. 6d.

In considering the grant of allowances on this scale to the classes of blind persons at (a) and (c) above, the Corporation will not take into account casual earnings of any such person where they are satisfied that such earnings do not exceed six shillings per week.

5. Nothing in this Scheme is to be construed as giving blind persons irrespective of their means or conduct, a right absolute to assistance. The Corporation will not grant an allowance under Article 4 above to any blind person under 30 years of age who is capable of instruction and who declines without a satisfactory reason to take advantage of the facilities for education, training or employment under the Scheme, or who is by conduct or otherwise deemed unsuitable for assistance. No habitual mendicant shall be granted an allowance under the Scheme unless the practice of mendicancy is discontinued. No person shall be eligible to receive assistance under this Scheme who shall not have been resident within the County Borough for two years previous to date of application for assistance.

6. The Corporation may incur such expenditure in the execution of this Scheme as the Minister may from time to time approve.

7. This Scheme shall come into operation on the 1st October, 1932, and shall continue for a period of three years, but may during the period with the consent of the Minister be modified, extended or revoked by the Corporation, and with the like consent may be continued for such further time as may be deemed necessary. Any question, dispute or difference arising in connection with the interpretation of this Scheme shall be determined by the Minister whose decision shall be final.

\* In addition to the above Food Vouchers to the value of 4/- per week have been granted to recipients of blind pensions, since 1st June, 1946.



## SCHEDULE.

Institutions for the Blind Approved by the Minister	Class of Blind Persons Received
1. St. Mary's Institution for Female Blind, Merrion, County Dublin ... ..	Females, also boys up to 7 years of age
2. St. Joseph's Asylum for Male Blind, Drumcondra, Dublin ... ..	Males
3. Richmond National Institution for Industrious Blind, 41, Upper O'Connell Street, Dublin ... ..	Males
4. Cork County and City Asylum for the Blind, In- firmery Road, Cork ... ..	Males and Females

The number of persons receiving weekly allowances in their own homes from the Corporation during the year was 235, and the disbursements under the heading amounted to £4,282 4s. 6d. 26 applications were received for allowances. Other disbursements amounted to £82 12s. 0d. (examinations, grant to National Council and other expenses). In addition to the above-mentioned 25 cases maintained in Institutions by direct grants from the Corporation, viz. :—Cork Blind Asylum (5 males and 6 females) ; St. Mary's, Merrion (13 females) ; and Richmond National Institution (1 male). The total cost of the maintenance amounting to £520 6s. 0d.

The following note is contributed by the Hon. Secretary of the local branch of the National Council for the Blind of Ireland.

### Home Teaching for the Blind.

Under the National Council for the Blind, this very essential service has been inaugurated in Cork City, to which the Corporation has granted a small annual contribution towards the expenses incurred by employing trained and qualified Home Visitors and Teachers.

The work of the Home Visitor is varied and broad, embracing social as well as mental instruction. She must help the blind to become active members in their homes, teach them to read embossed type, various handicrafts, such as knitting and rugmaking, and to bring an interest and hope into their otherwise hopeless lives.

The Home Visitor can help to prevent blindness in children, who often, through parental ignorance and negligence, or want of interest, lose their sight, which under proper care and supervision can be cured by seeing that they are provided with glasses where necessary and sent for treatment. She also gives her assistance and advice over pension applications, appeals and better accommodation.

Wireless sets are distributed on loan where most required, entertainments organised and free seats at musical shows secured.

Voluntary visitors also give their services to read and spend some time talking to the lonely blind, who greatly appreciate these visits.



Classes are held weekly for instruction in basket making, chair-caning and other forms of handicraft. The finished articles are presented for sale only if up to standard—no inferior goods labelled “ Made by the Blind ” are passed for sale. Efficiency is the definite aim.

The Home Teacher becomes a real friend of the Blind, who turn to her in all their difficulties, knowing that they will obtain help and encouragement to become as useful and important as their sighted brothers and sisters.

Suitable cases are urged to enter institutions for the blind and arrangements made for this purpose.

The Home Teacher has office hours daily where any blind or defective sighted person can get in touch with her and make enquiries. Over the Home Visitor is an Executive Council who meet monthly, receive the reports of the Home Visitor, deal with various cases, arrange the financial side of the work and follow closely and with interest the progress which is being made.

The following is a resume of the work done by the Home Visitors of the National Council for the Blind.

Number of Cases on Register on 31st December	...	...	424
Visits paid to the Blind	...	...	2,354
Visits paid on behalf of the Blind	...	...	132
Interviews at the Office, City Hall	...	...	620
Number of Braille Readers	...	...	18
Number of Moon Readers	...	...	4
Number attending Men's Handicraft Class	...	...	8
Number attending Women's Handicraft Class	...	...	10
Number of Home Workers whose work is of saleable standard	...	...	28
Number sent to Convalescent Home	...	...	1
Number helped to obtain spectacles and artificial eyes	...	...	12
Number given Fuel and Christmas Gifts	...	...	87
Number given help to buy Dentures	.....	.....	1
Number given Nourishment and Relief	...	...	70
Helped to purchase Furniture and Bedding	...	...	6
Individuals issued with Penny Dinner Tickets	...	...	1
Sent to Institutions for the Blind	.....	.....	3



## Appendix III.

### Physical Features of the Area

The City of Cork is situated on the river Lee, fifteen miles from its mouth in Cork Harbour. On the north bank of the river there is steep rising ground almost prohibiting building development, save in the form of hillside roads and open building of large houses, with the exception of the marked break of the Blackpool valley, very full use of which has been made. Next comes the flat island comprising the centre of the City. This island is almost entirely artificial, and consists of six feet of filled-in material, with ten feet of slob below that and then gravel overlying old red sandstone. Southwards is a gently undulating tract of land about one and a half miles wide enclosed by a range of hills. There is a considerable amount of land liable to flood in the Lee Valley, west of the city, towards Carrigrohane, and the flatness of the islands on which the city is built and the height to which unusual tides ascend being nearly to the crown of the arches of the old bridges, render certain portions of the city itself also liable to flooding.

The geological formation of the city region is simple and clearly marked in its effect on the landscape. There are only two systems visible, both paleozoic rocks, the carboniferous limestone and the older underlying Devonian, representing the old red sandstone. Each of these formations is in two series; the carboniferous in a crystalline limestone and in a dark shale (with some 10 feet slate); The Devonian in the upper old red sandstone (yellowish and reddish) and in the lower, old red sandstone (red and purple). The characteristic aspect of the countryside has been caused by the crinkling of these strata into regular parallel folds. Further the limestone which should have formed the ridge of the anticlines has been denuded or dissolved away, so that the highest ground consists of old red sandstone, and even the lower series of this; the hollow folds, floored by limestone, have been subsequently protected from further denudation by a covering of boulder clay. In this immediate region there are thus three old red sandstone ridges and two limestone valleys, in the northern of which the city stands under the brow of the northern sandstone ridge. If this sandstone ridge had possessed its original limestone capping, it would probably have been at least 2,000 feet high.



