

[Report of the Medical Officer of Health for Edmonton].

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Edmonton Urban District.

ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE YEAR
1904,
BY
A. W. J. MacFadden,
M.B., C.M., D.P.H.

TOGETHER WITH THE
REPORT
OF THE
INSPECTOR OF NUISANCES
BY
Richard John Butland,
M.R.San.I., etc.

EDMONTON.

TOM JOLLY, Trade Union Printer, 238, Fore Street.

Edmonton Urban District.

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Medical Officer of Health :

A. W. J. MACFADDEN, M.B., D.P.H.

Edmonton Urban District.

SUMMARY OF ANNUAL REPORT.

Area	...	...	...	3890 acres.
Population—Census 1901	...	...	...	46899
Estimated population	...	...	...	53358
Number of inhabited houses	...	...	...	9244
Average number of inhabitants per house	...	...	...	5.75
Density of population	...	...	...	14.2
Rateable Value	...	...	...	£204,215
General District Rate	...	...	...	2s. 5d. in £
Poor Rate	...	...	...	Average 2s. 6d. in £

VITAL STATISTICS.

Birth Rate per 1000 living...	...	...	35.4
Recorded Death Rate per 1000 living	...	...	15.8
Corrected Death Rate per 1000 living...	...	...	16.08
Infantile Mortality per 1000 births	...	...	161.8
Zymotic Death Rate per 1000 living	...	...	3.8

Hospital Accommodation—

For Fever cases	...	Enfield Isolation Hospital.
For Small-Pox	...	South Mimms Small-Pox Hospital.

Water Supply	...	Metropolitan Water Board
Sewerage	...	Separate System.
Sewage Disposal	...	Broad Irrigation.

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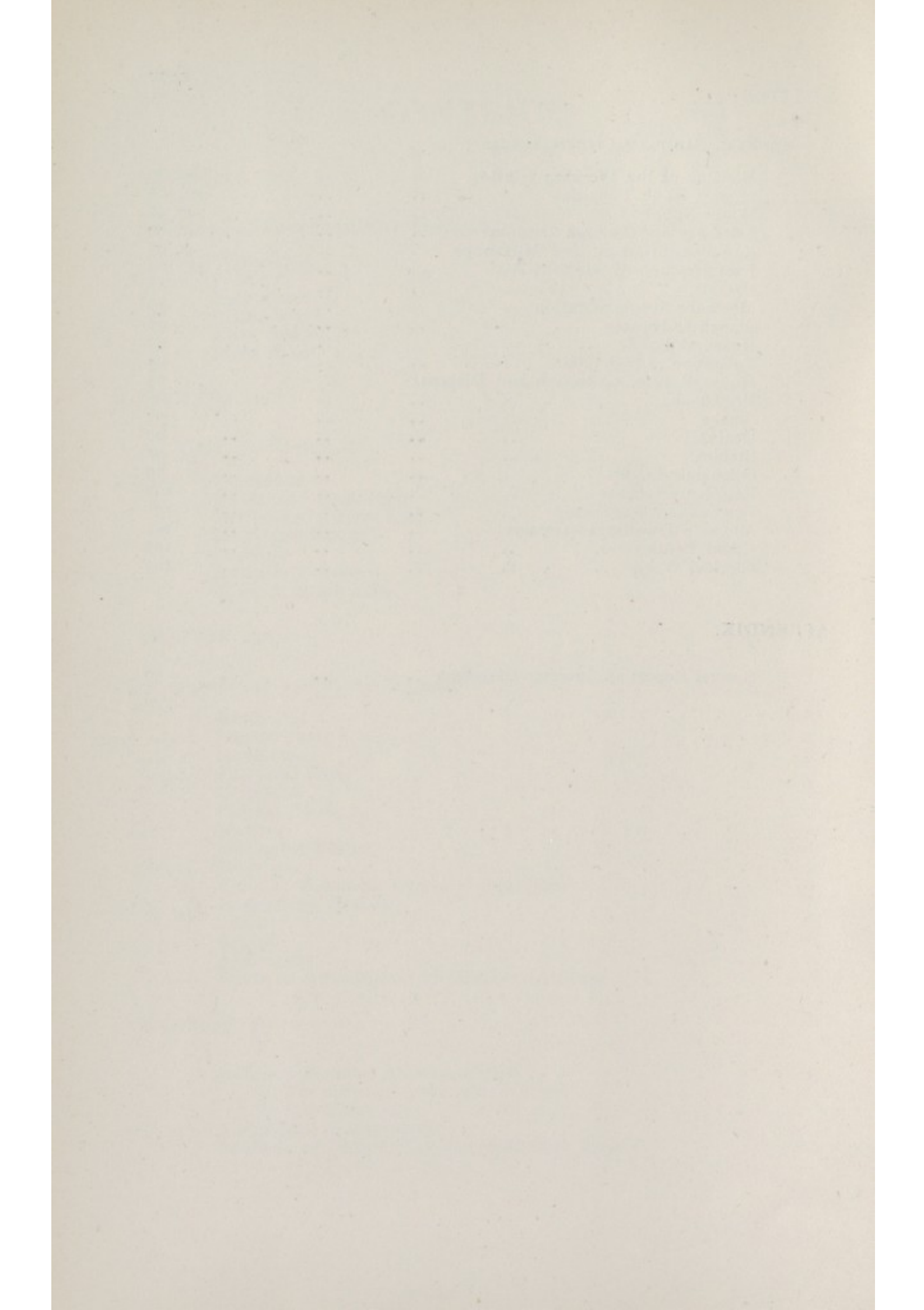
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PUBLIC HEALTH DEPARTMENT,
TOWN HALL,
EDMONTON.

March 31st, 1905.

*To the Chairman and Members of the
Edmonton Urban District Council.*

GENTLEMEN,

In accordance with my statutory duty I have the honour to present my second Annual Report on the health and sanitary circumstances of Edmonton.

As judged by the death rate, the general health of the district may be considered satisfactory, and had it not been for the large number of deaths amongst young children, due to an exceptionally severe epidemic of summer diarrhoea that occurred during the 3rd quarter of the year, our mortality figure, so lessened, would have indicated circumstances of a much more favourable nature. As it is, our death rate is below that of London and the country generally, and it compares favourably with most of the metropolitan boroughs whose social conditions are comparable with ours.

The question of the excessive mortality amongst young children, is dealt with in a special report on the epidemic above alluded to, which will be found appended.

The hospital schemes which are now under your consideration, and embrace the provision of permanent and increased accommodation for the ordinary infectious diseases, for small-pox, and, to some extent, for phthisis, will when carried through, place this district in a much improved position for dealing with these diseases.

In view of the growing importance of Edmonton, from a sanitary standpoint, the Council have decided that the Medical Officer of Health shall in future be required to devote his whole time to public health work and to the duties of his office. The new arrangement is one that cannot fail to greatly facilitate the sanitary administration of the district.

In conclusion I wish to express to the Sanitary Committee and to the Council my appreciation of the support they have always accorded to public health work. I wish also to thank Mr. Butland and the staff of my department for the whole-hearted assistance they have on all occasions given me.

I am, Gentlemen,

Your obedient servant,

A. W. J. MacFADDEN,

Medical Officer of Health.

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Edmonton Urban District.

REPORT

OF THE

Medical Officer of Health

FOR THE YEAR 1904.

GENERAL DESCRIPTION OF DISTRICT.

The Urban District of Edmonton, area 3,890 acres, seven miles distant from Liverpool Street Terminus, on the Enfield branch of the Great Eastern Railway, is situated in the County of Middlesex on the west bank of the River Lea.

It is bounded by Enfield Urban District on the north, and by the Urban Districts of Southgate and Tottenham on the west and south respectively. Chingford Urban District lies on the east, on the opposite bank of the river. The district is for the most part flat, rising slightly from the river marshes on the east, to the higher ground to the westward. Geologically, Edmonton is situated in the London chalk basin. The subsoil consists, for the most part, of valley drift (sand and ballast), beneath which, at varying depths, lies the London clay. The surface loam is not deep, and, in the northern part of the district especially, there is a rich and extensive deposit of brick earth.

The population is almost entirely industrial and a large proportion of the workers travel daily by train and tram to their employment

in the City and other parts of London. The building and brick trades form the chief local industry, but there are in addition several large works, notably the Cartridge Factory of Messrs. Eley Brothers, Messrs. Ridley Whitley's Linoleum Works, and the Gothic Gas Meter Works, whose employees are, for the most part, residents of Edmonton. In the first mentioned factory, however, where most of the workers (about 1,100) are women, nearly one quarter of their number reside in London, and come daily to their work by tram or rail.

Two large union work-houses are situated in Fore Street Ward; that belonging to the Strand Union, and to which is attached the Strand Union Schools, receives its inmates from the Strand district alone. Its population does not, therefore, enter into our statistics, except in the matter of births, which, however, are few in number. The institution belonging to the Edmonton Board of Guardians receives a certain proportion of its inmates from this district, and these are treated as part of our population for statistical purposes. The large bulk of the inmates are, however, derived from Tottenham, Southgate, Wood Green, Hornsey, Enfield and other districts that go to make up the large Poor-law Union of Edmonton, and these, of course, do not enter into our statistics. A table showing the number of inmates in both institutions, and the births and deaths that have taken place amongst them will be found on page 48 (Table II).

Pymmes Park with an area of 53 acres and containing some fine old timber is open to the public. An artificial lake is being constructed and there are some extensive stretches of well-turfed sward suitable for recreation grounds.

The Council also possesses a well-stocked free library and reading rooms.

During the year work has been in progress on the main road in preparation for the new electric tramway. The road has been widened at several points, and when the whole scheme for widening has been carried out, many old and dilapidated buildings will have

disappeared, much to the district's benefit and to its ultimate improvement in rateable value. Wood paving is being employed, and the ease with which cleansing operations can be carried out on such a surface, and the advantages which it possesses, from a sanitary point of view, over ordinary macadam should effect a considerable improvement, not only in the cleanly appearance of the district, but also in the health and comfort of its inhabitants.

VITAL STATISTICS.

Population. The following table shows the population of the district, exclusive of the two Union Workhouses, for the last three Census years :—

Year.				Population.
1881	...	...	...	13,065
1891	...	...	...	23,437
1901	...	...	...	44,911

The estimated population for the year is arrived at by multiplying the number of inhabited houses at the middle of the year, by the number of inhabitants per house, as given in the last Census Report. This figure for Edmonton in 1901 was 5·75. The number of inhabited houses in the district in the middle of 1904 was 9,244. To the figure thus obtained (53,152), is added the average number of Edmonton residents in the Edmonton Union Workhouse, which for the year was found to be 206.

The nett estimated population of the district, and that on which the various rates that follow are calculated, is therefore **53,358**.

The populations of the three Wards estimated in the same way are :—

Bury Street	...	...	18,468
Church Street	...	...	16,593
Fore Street	...	...	18,297

The Area of the district is 3,890 acres and the density of population, or the average number of persons per acre, is 14·2. This figure is calculated on the gross population, which includes the average populations of the Strand and Edmonton Union Workhouses, and amounts to 55,322.

The natural increase of the population by the excess of births over deaths during the year was 1,046.

BIRTHS.

The number of births registered was 1,891, which includes 55 births that took place in the union workhouses, 16 of which were among parents belonging to Edmonton. Hitherto, it has been the custom, in estimating the birth rate, to exclude all births taking place in the workhouses, except those of children born of Edmonton parents. By employing this modification, the number of births is found to be 1,852, and the birth rate 34·7 as compared with 35·4 in 1903. The more general custom is, however, to take as the births of a district all those that have been registered as occurring in it during the year. I purpose in future, therefore, to make my calculation from the total number of births registered.

The birth rate arrived at in this way is **35·4** per 1,000 inhabitants.

Of the total births, 75 or 3·96 per cent., were illegitimate.

In the country generally the birth rate has been steadily declining for some years past, and in 1904 it reached the lowest figure yet recorded, 27·9. Whatever may be the causes for this regrettable decrease, they do not seem to obtain in Edmonton, where the birth rate for the past six years has been maintained at a high figure, and for 1904 was among the highest in the country. The birth rates for the preceding 10 years will be found on Table I., page 47.

The births were distributed in the Wards as follows :—

WARD.		BIRTHS.	BIRTH RATE.
Bury Street	...	632	34·2
Church Street	...	596	35·9
Fore Street	...	663	36·2

DEATHS.

The deaths registered during the year were 1,050. Of these, 50 occurring in the Strand Union Workhouse and 248 among non-residents of the district at the Edmonton Union Workhouse, are excluded, while 63 deaths of Edmonton residents taking place in the Edmonton Workhouse are included in our total deaths. An arrangement exists with Somerset House and with the District Registrars of Tottenham and Enfield, whereby the deaths of all residents of Edmonton occurring in London, Tottenham and Enfield, are returned to me for inclusion in our statistics; 93 deaths were returned in this way during the year, making the nett total of deaths at all ages for the district proper, 845.

The recorded death rate is therefore **15·8**.

Corrected Death Rate. In order to make a fair comparison between the death rates of one district and another, or with the country as a whole, it is necessary to find what is known as the corrected death rate for the districts so compared. Death rates vary in different communities according to the composition of their populations, those localities in which there is a large proportion of inhabitants at the two extremes of life having, naturally, a greater death rate than is the case in districts where persons of the intermediate ages form the bulk of the population. In order to make an accurate allowance for differences of this kind, a corrective factor is found for each district, which varies with the age and sex distribution of its inhabitants as revealed in the census returns, and when the recorded death rate is multiplied by this figure, the result is the death-rate that would obtain if the inhabitants were distributed in the same proportion as regards age and sex as are the inhabitants of the country generally.

The rate arrived at in this way is called the corrected death rate, and is not only indispensable for purposes of comparison, but is actually a truer index to the health of a district than is the recorded death rate. The process whereby this factor is found is a laborious one, and I owe it to the kindness of the County Medical Officer, Dr. C. W. F. Young, that I am enabled to apply it to our death rate for this year, and, in this way, bring it into true comparison with that of the country as a whole.

The factor for correction for Edmonton is found by Dr. Young to be 1.01785 and the corrected death rate is, therefore, $(15.8 \times 1.01785) = 16.08$ per 1,000.

The death rate for England and Wales is 16.2, and that for the 76 great towns 17.2. The death rate for London is 16.1.

Although, when judged by this standard, the health of Edmonton may be considered fairly satisfactory, it will be seen that there is an increase on the recorded death rate of 1903 of 2.1 per 1,000. It must be remembered, however, that the death rate of 1903 (13.7) is the lowest ever recorded in the district, and that the present year's rate may be looked upon as the result of a return from very exceptional circumstances to those that more nearly approach the normal. I refer in particular to the meteorological aspects of the two years; the downpours of 1903 being in favour of a low incidence of the epidemic diseases, whilst the long period of hot, dry weather in 1904 favoured their spread. On referring to Table IV, pages 50-51 which sets out the causes of death, and comparing it with the same table for the preceding year, it will be seen that the greatest increase in the number of deaths for 1904 is to be found amongst those infectious diseases that tend to become epidemic. Especially has this been the case with summer diarrhoea, which, in itself, yields an increased death rate this year of 1.7 per 1,000, over that of the same disease in 1903.

Conditions of weather, however have not been alone in augmenting our mortality returns. Owing to the regrettable lack of employment

that has prevailed to such an unusual extent throughout the year in Edmonton, poverty has played its accustomed part as forerunner of sickness and death, and a not inconsiderable proportion of our increased mortality must, I think, be ascribed to this cause. Phthisis and the respiratory diseases all show an increase that is somewhat significant in this connexion.

Ward Deaths. The following are the deaths and death rates in the three Wards. Deaths occurring amongst residents in the institutions and of residents dying outside the district have been debited to the Wards in which they lately resided. Institution deaths amongst residents, that could not be allocated, are entered in a separate column on Table IV.

Ward.		Death.	Death Rate.
Bury Street	...	287	15.5
Church Street	...	295	17.7
Fore Street	...	257	14.0

Death Certification. The deaths with one exception were certified either by the medical attendant or by the coroner.

Inquests were held on 103 cases, or 9 per cent of the total deaths. The causes of these deaths will be found on Table IV., pages 50-51.

The ages at, and causes of, death are set out on tables IV and IV (a), the latter being an extended list of the various causes.

Infantile Mortality. The infantile mortality is a special death rate referring to the first age period (0 to 1 year), and is expressed as the number of deaths that take place amongst children under 1 year of age per 1,000 births registered. The number of such deaths in the district during the year was 306, and the births numbering 1,891, the infantile mortality is therefore **161.8** per 1,000 births.

This is a considerable increase on the rate of the previous year (140·3), and is due almost entirely to an unusually severe epidemic of summer diarrhœa, in which infants under 1 year formed 83 per cent of the fatal cases.

The infantile mortality rates for the year were, in England and Wales 146, in London 146, and in the 76 great towns 160.

The following are the chief causes that have contributed to the infant deaths:—

Measles	...	...	5
Whooping cough	...	...	2
Influenza	...	...	1
Diarrhœa	...	...	126
Enteritis	...	...	10
Erysipelas	...	...	1
Tuberculous disease	...	...	15
Bronchitis	...	...	16
Pneumonia	...	...	17
Venereal disease	...	...	1
Premature birth	...	...	31
Accidents	...	...	3
All other causes	...	...	78
<hr/>			
Total	...	...	306
<hr/>			

The figures for the wards are as follows:—

Ward.	Deaths under 1 year.	Infantile mortality.
Bury Street...	114	180·3
Church Street	106	177·8
Fore Street ...	86	129·7

In a special report which will be found in the appendix, I have gone somewhat fully into the conditions that govern the mortality

from summer diarrhœa. What I have there stated applies with equal force to almost all the other diseases of infancy and it is unnecessary to repeat those remarks here. It will be enough to say that the question is one that rests so much with the knowledge and capacity of the mother on the subject of infant rearing and domestic hygiene in general, that it is to her better education in these matters we must look, in the future, for any substantial reduction in the infant mortality. There is no age too young at which to begin the training of girls in these, the most serious and important duties of their lives. They are the things in a woman's up-bringing that really matter, and if a right knowledge on such domestic subjects were possessed generally by the women of a community, the effect for good on its health and well-being would be almost incalculable. Now that the Sanitary Authority has become also the Education Authority, we look to see a much needed reform inaugurated, and an educational system that has ignored some of the most vital and pressing needs of the nation, remodelled into one in which the conditions of modern life are recognised and some practical instruction in the right way to face its problems, provided for.

Early in the year the Council made a very important and useful addition to the staff of the Sanitary Department by the appointment of a Woman Inspector. Thanks to this step we have been able to break new ground in the work of inspection and visitation, that promises an excellent harvest of good results in the future.

The most important function of a Woman Inspector lies with this question of the prevention of sickness and death amongst young children, and I have been able to arrange for a system of visitation whereby all houses where children have recently been born and whose parents are too poor to afford medical advice in these matters, are visited shortly after the birth, and instructions given to the mother as to how best to rear her infant and guard against the many ills and dangers to which it is subject during the first year of life. Subsequent visits are made at the end of the first and second six months, and on all these occasions notes are taken on cards relative to the feeding of the infant, the sanitary condition of the house, etc.

In this way a large amount of valuable information is collected bearing on the subject, that will be of the greatest service in suggesting and carrying out future reforms. Besides the direct benefit to the infant derived from these visits, much useful sanitary work is also done in the way of remedying defective conditions discovered by the Inspector at the time of her visit; cleanliness is encouraged and some supervision is enabled to be kept over those very houses where a good sanitary condition is most essential. Further details of this work will be found in the special report on summer diarrhoea above referred to.

Zymotic Death Rate. This rate is a statement of the number of deaths from the seven principal zymotic diseases per 1,000 of the population. There were 207 deaths from these diseases in the district during the year, and the zymotic death rate is therefore **3·87**, as compared with 1·91 in the previous year. This large increase is due almost entirely to the number of deaths from diarrhoea. The zymotic death rate in London was 2·18, in the 76 great towns 2·49, and in England and Wales 1·94.

The following table shows the deaths from these diseases distributed amongst the three Wards:—

Disease.		Whole District.	Bury Street.	Church Street.	Fore Street.
Measles	...	28	9	8	11
Scarlet fever	...	3	1	0	2
Whooping cough		7	2	2	3
Diphtheria	...	10	1	6	3
Enteric fever	...	8	2	2	4
Diarrhoea	...	151	52	60	39
Total	...	207	67	78	62
Rates	...	3·87	3·62	4·70	3·38

In the following table is set out the death rate, infantile mortality and zymotic death rate for the past 10 years :—

Year.	Death Rate.	Infantile Mortality.	Zymotic death rate.
1895 ...	... 13·9	122·2	2·37
1896 ...	... 15·6	153·6	3·8
1897 ...	... 15·9	157·8	3·8
1898 ...	... 16·8	195·8	5·08
1899 ...	... 17·4	161·8	4·6
1900 ...	... 16·0	168·1	2·6
1901 ...	... 14·3	139·0	2·4
1902 ...	... 17·8	143·6	4·7
1903 ...	... 13·7	*140·3	1·9
1904 ...	... 15·8	161·8	3·87

INFECTIOUS AND OTHER DISEASES.

The Infectious Disease Notification and Prevention Acts have been in force in this District since March 1st, 1891.

Table V. page 58 shows the number of cases notified and the deaths from the notifiable diseases for 1904 and 10 preceeding years. The same table also shows the deaths that have occurred from the non-notifiable infectious diseases for this period.

The coloured chart sets out diagrammatically the number of cases of infectious disease notified during each month of the year.

On Table III. page 49 will be found details as to age distribution and locality of the notified cases, and the number of cases removed to hospital from each ward.

The following table shows the number of cases isolated, their percentage and the fatality, that is, the percentage of cases dying to those notified :—

* In calculating the infantile mortality for 1903, deaths due to premature birth were included for the first time.

Disease.	Number Isolated in Hospital.	Percentage of Isolations.	Fatality. per cent.
Small Pox	4	100	Nil.
Scarlet Fever	132	72·9	1·6
Enteric Fever	22	57·9	21·
Diphtheria	23	50·	21·7
Totals	181	67·2	7·8

As I stated in my Annual Report last year, the very favourable figures shown in the statistic of the infectious diseases for 1903 were quite exceptional and could hardly be expected to continue. The district to a certain extent has suffered from an increased incidence of these diseases during 1904, accompanied also by an increased mortality. An important cause for this circumstance is, as I have already said, to be found in the unfavourable meteorological conditions that prevailed during 1904, and more especially in the greatly diminished rainfall that was such a prominent feature of the year. The poverty into which large numbers of our inhabitants have been thrown from lack of employment, has doubtless also had a marked local influence on the spread of these diseases.

Amongst the notifiable diseases diphtheria has advanced from 19 cases in 1903 to 46 cases in 1904. This figure, however, which is considerably below the average for the last 10 years, cannot in itself be considered large in proportion to the population.

There was a less marked increase in the numbers of each of the other notifiable diseases, with the exception of puerperal fever, of which one case only was notified, as against 3 in the previous year.

The non-notifiable infectious diseases, judging by the death returns, show a like advance. With the exception of whooping cough, in which 7 deaths occurred as against 19 deaths in 1903, there has been an increase in the number of deaths from all these diseases. This has been most marked in the case of summer diarrhœa, which prevailed throughout the summer and autumn in unusually severe epidemic form.

Influenza and measles both contributed a larger number of deaths than in 1903. The great majority of deaths in the latter disease occurred in the first 6 months of the year, when it was very prevalent amongst school children.

SMALL POX.

During the year 4 cases of small pox were notified. Each case was a separate and distinct importation of the disease into the district and in no instance did a secondary case arise. The following are the particulars:—

No. on Notification Register.	Ward.	Sex and Age.	Vaccinal State.	Source of Infection.	Date of Onset.	Date of Removal
12	Church	M. 18	Vaccinated in infancy.	Doubtful.	Jan. 7?	Jan. 15
27	Fore	M. 46	Vaccinated in infancy. Re-vaccinated in childhood, but no marks.	Probably in London.	Jan. 26	Jan. 31
128	Bury	M. 45	Vaccinated in infancy.	W'stow.	June 11	June 16
152	Bury	M. 17	Vaccinated in infancy.	London (fellow workmen).	June 27	July 4

The first 3 cases were removed to South Mimms Small-Pox Hospital; the last case, which was recognised while the patient was at work in London, was notified to me by the Medical Officer of Health of Finsbury, and was removed to the Metropolitan Small Pox Hospital. The cases were of a mild type and all four patients recovered. In each instance there was a varying number of contacts, who were immediately placed under close personal observation until the period of incubation was safely passed. With one or two exceptions these contacts were either vaccinated or re-vaccinated within a few hours of the notification of the case, and to this fact and to the prompt and thorough way in which my staff carried out the removal of patients to hospital, and the disinfection of the infected houses, are, I think, to be ascribed the entire absence of secondary cases.

The very mildness of the disease created a situation of considerable gravity in regard to contacts. Two of the cases, 27 and 152, travelled to and from their work in London by train during the early stages of their illness. Their condition was fortunately recognised before the most infectious period was reached, and, so far as I could discover, they did not cause any secondary cases amongst their fellow travellers. The point suggests, however, a possible means of spreading the disease that would have a very far reaching effect in districts such as ours, where workmen make long journeys to and from their work daily, in more or less crowded trains.

In addition to the contacts arising out of the cases of small pox that occurred in Edmonton, a considerable number of persons were notified to me, from time to time, by neighbouring Medical Officers, as having been in contact with cases of the disease in their districts. These contacts were all visited by me and kept under observation until the danger of their taking the disease had passed. In the majority of cases they were re-vaccinated without delay. None of them developed small pox.

Vaccination.—The number of primary vaccinations for the year is approximately 1,120, as compared with 1,891 registered births. The percentage yielded by these figures (59) is considerably lower than it ought to be and its continuance in future would point to a dangerous proportion of our population growing up unprotected from the disease and ready to play the part of matchwood to the sparks, in the form of imported cases, to which, as we have seen, this district is so liable.

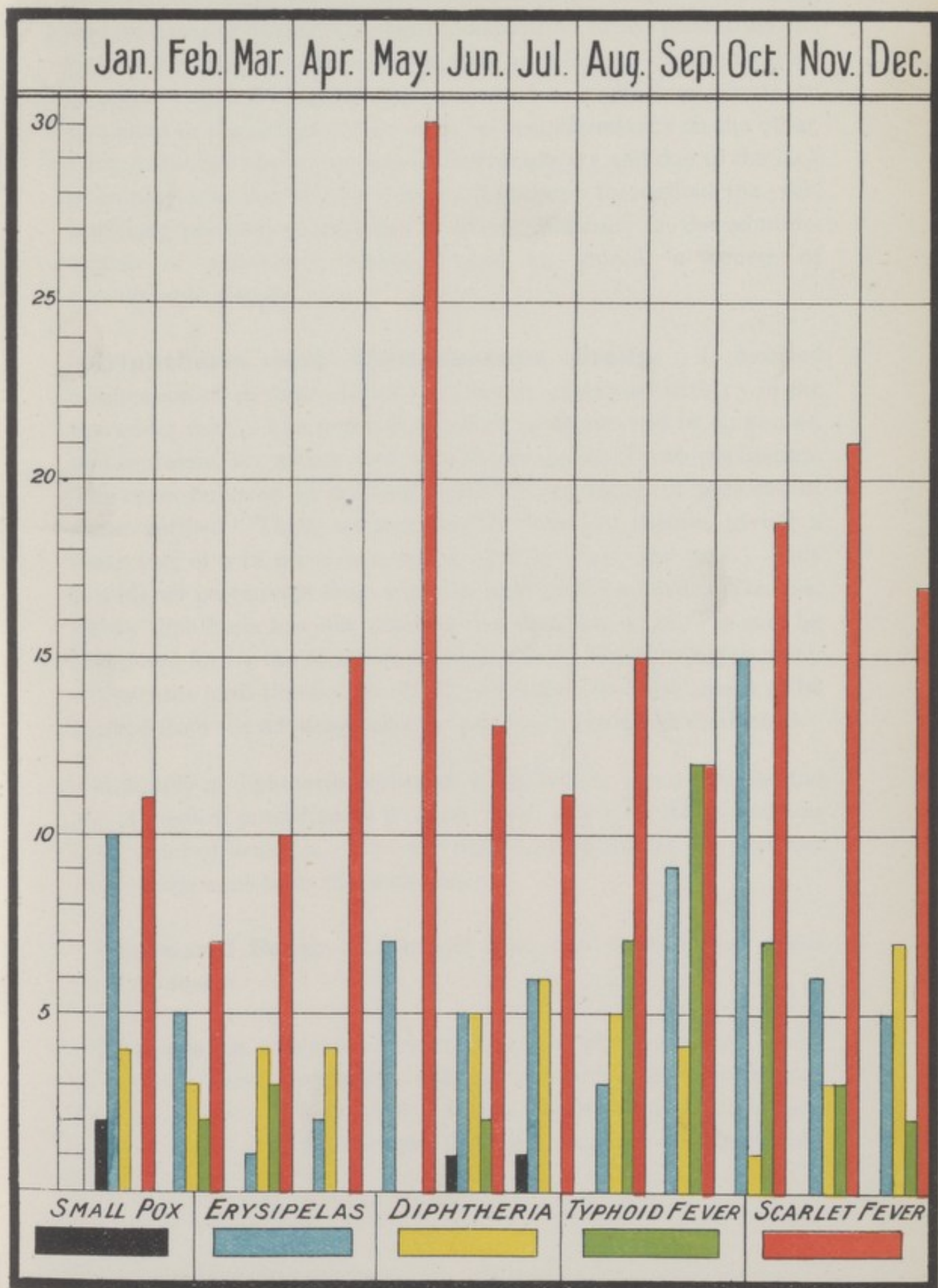
Scarlet Fever. 181 notifications were received during the year, giving an attack rate of 3·3 per 1,000 of the population. The cases were distributed among 133 houses and 66 streets. One case occurred in 103 houses, 2 cases in 14 houses, 3 in 9 houses, and 4 in 6 houses. The removals to hospital numbered 132—an isolation percentage of 72·9 per cent. There were 3 deaths, giving a fatality of 1·6 per cent: and a death rate of 0·05 per 1,000. The chief feature that marked the disease throughout the year was the number of cases that were overlooked or mistaken by the parents for complaints of a minor nature, such as simple sore throat, cold, and, less frequently, measles. On several occasions the medical attendant, on being called in to see a patient, has found another child of the family in the peeling stage, having evidently passed through the acute stage of the illness without attracting special notice. There is little doubt that in this way the number of scarlet fever cases was increased beyond the extent that its mildness, as judged by the low case mortality, and its consequently lessened infectivity, would account for. That the infectivity of the general run of the milder cases has been low, or of greatly shortened duration, is shown by the fact that many of these children, the nature of whose illness had been overlooked, attended school regularly, except perhaps for two or three days spent at home on account of the supposed simple sore throat or cold—in reality the scarlatinal onset—without communicating the disease to any of their schoolfellows. The closer intercourse of the home, however, was not proof against even a low degree of infectivity and the original case was, in the end, brought to light by the subsequent occurrence of the disease amongst his brothers and sisters.

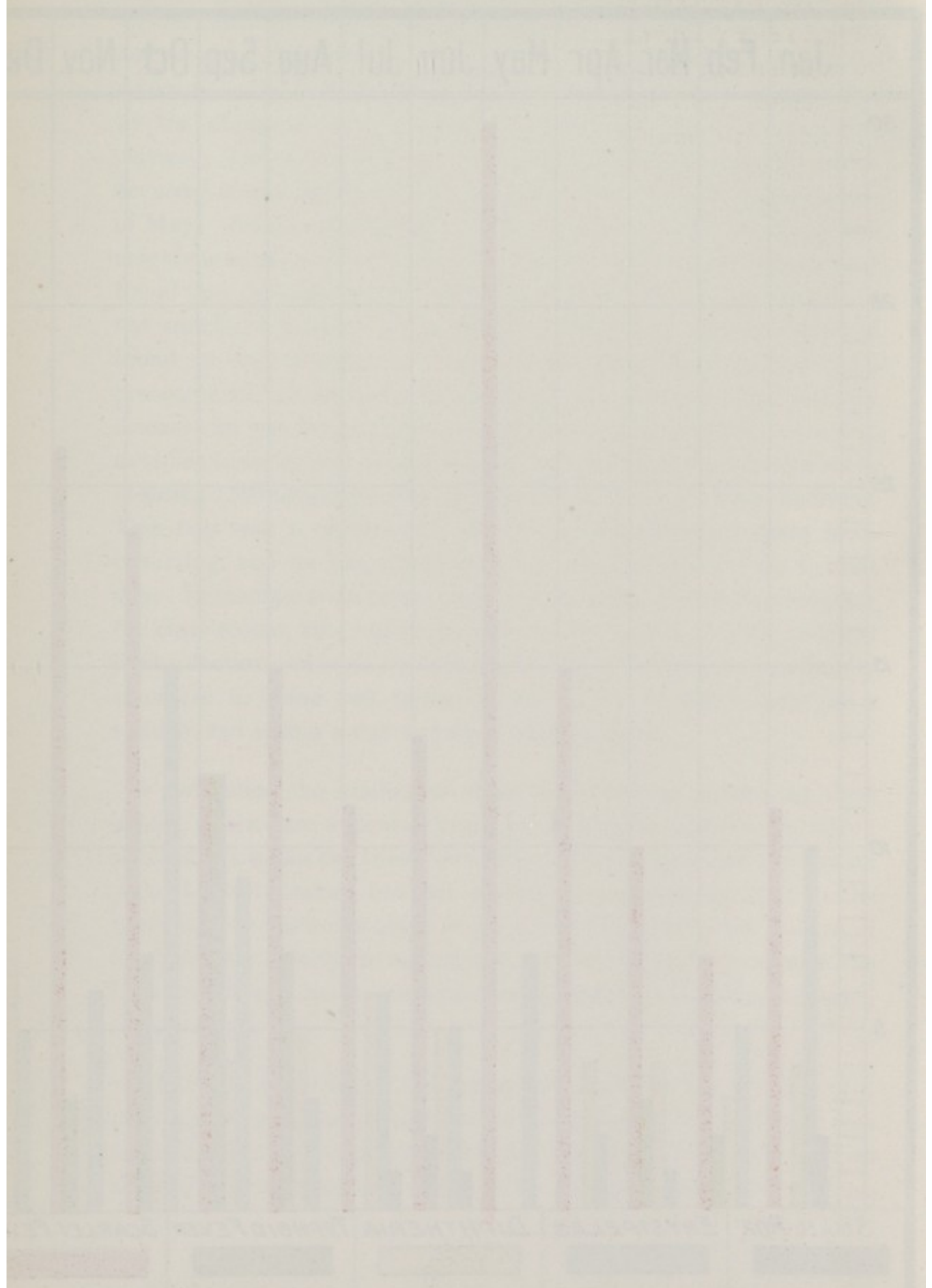
Although many of these missed cases appear to have worked no further mischief in the schools, this has not invariably been the case, and on more than one occasion small school outbreaks have occurred which were fortunately checked before reaching larger proportions by the discovery of a child in the infectious stage in one of the classes. The most noteworthy of these outbreaks was that which occurred in connection with Silver Street Board School in the middle of May. An unusual number of notifications reached me from the neighbourhood of the school at this time and on making enquiries, I found that the children affected had attended one of two classes in the school. I made an inspection of these classes without delay and found in one of them, in the Infant's Department, a boy who presented all the appearances of having had a recent attack of the disease; he was desquamating freely and was evidently beginning to suffer from kidney complications. On visiting his home the same morning I found another boy, his elder brother, in a similar condition. This boy was a member of the other class in which cases were occurring, and he had attended school fairly regularly up to that day. Immediate steps were taken to thoroughly disinfect and cleanse the class rooms, etc., but many of the children had already received their infection and in all 15 were notified where the illness was directly traceable to these two missed cases. The outbreak came to a sudden end within a day or two of their removal.

I questioned the mother of these boys closely concerning their illness, as the case appeared to me, at first sight, to be one in which proceedings under the Infectious Disease Notification and Prevention Acts should be taken, but her answers convinced me that in the first instance the acute stage of the disease had been very mild, and consequently difficult to detect, and that her failure to recognise the later stages was due to ignorance and incapacity for making ordinary observations.

I have no doubt that a not infrequent cause for the missing of a considerable number of these milder cases during the past year was to be found in the straightened circumstances of many of the families affected. In consequence of this, the medical attendant has been

Chart shewing the number of cases of Infectious Diseases notified during each month of the year 1904.





called in only where the illness seemed urgently to demand his help, and, in cases of apparently slight indisposition, when pressed by the School Attendance Officer, the parents have let the children return to school rather than incur the expense of a medical certificate on one hand or the risk of prosecution for non-attendance on the other. Circumstances like these may be but temporary and due to the lack of employment that has prevailed in Edmonton throughout the year, but their presence constitutes a serious difficulty in the administration of preventive measures and is, indeed, a source of considerable danger.

Diphtheria and Membraneous Croup. I received notification of 46 cases during the year as compared with 19 in the preceding year. The cases occurred in 33 streets and in 39 houses, and represent an attack rate of 0.86 per 1,000 of the population. The cases removed to hospital numbered 23, being 50 per cent. of those notified. There were 10 deaths from the disease, giving a death rate of 0.18 per 1,000, and a fatality of 21.7 per cent. This is a higher percentage than might be expected in a locality like this, where diphtheria has not assumed an epidemic form. It may be accounted for by the fact that medical aid was not obtained in many of the cases until the disease was far advanced, and the benefit to be derived from the administration of anti-toxin had much diminished.

A supply of diphtheria anti-toxin is kept at the Town Hall for the use of medical practitioners in those cases where its administration is a matter of urgency. On only two occasions during the year has the arrangement been made use of.

Puerperal Fever. Only one case was notified, and there were no deaths.

Erysipelas. 74 cases were notified, 5 of which occurred in the Edmonton Union Infirmary. All the remaining cases were from separate houses. There were 5 deaths, one in an infant under one year of age. The fatality was 6.7 per cent., and the death rate 0.09 per 1,000.

Enteric Fever. 38 cases were notified as against 40, 58 and 28 in the 3 preceding years. This is equal to an attack rate of 0·71 per 1,000 of the population. The cases occurred in 30 streets and all in separate houses. One case was reported from Edmonton Union Infirmary. The removals to hospital numbered 22, an isolation percentage of 57·9. There were 8 deaths, giving a fatality of 21 per cent., and a death rate of 0·14.

The source of infection in most cases was obscure and could not be definitely traced. In one series of cases the disease was undoubtedly caused by drinking the water of a polluted well, situated in the yard of business premises. An employee in this establishment failed with the disease, and my suspicions as to the source of his infection were aroused on hearing of the removal to hospital of a fellow workman, who lived in Enfield and developed enteric fever about the same time. On analysis, the water of this well showed serious pollution with sewage, and I took steps to have it immediately closed. Two further cases, one in a boy of 12 and the other in a young woman of 18, were also traceable to the same source.

During the months of August and September a series of cases, 7 in all, occurred, in which there was a history of the patients having eaten fried fish some time previous to their failure; a few, indeed, ascribed their illness to one particular meal they had eaten, but owing to the length of time that had elapsed it was found impossible to fix the actual source of the supply. The question of fried fish, and the circumstances attending its cooking and eating, are, I think, worthy of further investigation as a possible source of this disease.

Watercress. Following my report in January, 1904, on effluent grown watercress, the Council took steps to discontinue the cultivation of this vegetable on their farm in the future. The agreement between them and the cultivator has, therefore, been terminated, and this source of danger so far as Edmonton is concerned, has disappeared. It is to be hoped that similar action will be taken in other localities where watercress is grown under conditions involving

danger to the community. Special care was taken throughout the year in investigating the cases of enteric fever, to discover what part watercress and uncooked shell fish might have played in their causation.

It was found that seven of the patients had partaken of one or other of these foods, to a greater or less extent. Three had eaten both shell fish and watercress previous to their onset, two watercress alone and two shell fish alone. There is nothing in these figures that points conclusively to the articles in question having been, on this occasion, the source of infection, as, from a personal observation I believe that the number of people in the district who eat both watercress and shell fish is in itself a large one. The point, however, is always a necessary one to investigate thoroughly, as at any time the supply of these articles may be contaminated and give rise to many and wide spread cases of the disease.

Measles. There were 28 deaths from this disease as compared with 15, 19 and 10 in the three preceding years. This is equal to a death rate from measles of 0.52. The greatest mortality occurred in the second age period (1 to 5 years) in which group it accounted for nearly 6 per cent. of the deaths. This is the period at which children first begin school attendance in the baby and infant classes, and to this fact is to be chiefly ascribed the wide and rapid spread of the disease during its epidemic periods.

Measles was very prevalent in the first half of the year when most of the deaths occurred. Owing to the disease being infectious for some time before its leading symptoms manifest themselves, it is one that is very difficult to control by ordinary means. The large aggregation of children in schools makes the task in urban districts almost impossible, especially where, as is the case in most schools, children under 5 years are admitted.

To be in a position to control the outbreaks that periodically arise, it is necessary to have as complete information as possible of those families in which children are suffering from the disease.

When such information is available, by excluding from school attendance all children in the affected family who have not had measles previously, and by insisting on the same precautions being taken as regards home isolation etc., that are required in the case of the notifiable diseases, it is possible, in the early stages, to considerably limit the extent of the outbreaks. Up to the present my only source of information as to the prevalence of the non-notifiable diseases has been the notifications which I have received from the teachers, of those cases that have come under their notice amongst the children attending school. In the case of measles, such information when given fully and promptly would probably, in itself, be sufficient to enable the preventative measures above mentioned being carried out with some degree of success. I find, however, that the notifications received from the schools, which at the outset were fairly full, have fallen off recently to such an extent that it has become useless to continue the measures that were instituted for controlling the spread of the disease

The work being done in connection with measles and the other non-notifiable diseases is now limited to the visiting of those houses in which cases are still being reported from the schools and elsewhere, warning the parents of the serious nature of the illness, especially in young children, and advising them on the precautions necessary to prevent the many complications that follow carelessness or neglect in the early stages.

If the public were brought to recognise the really serious nature of this disease, which, as the past year's statistics show, is capable of causing 6 per cent. of all the deaths among children between the ages of 1 and 5 years, much more care would be taken in the nursing and treatment of patients suffering from it, and more solicitude would be shown in protecting children from infection, especially those who belong to the age period in which the heaviest mortality occurs.

The question of adopting some system for controlling school outbreaks of the non-notifiable diseases is one that I would strongly commend to the consideration of the Education Committee,

Whooping Cough was the cause of 7 deaths as compared with 3, 20, and 19 in the three preceding years. The death rate from the disease is 0·12. All the deaths occurred in children under 5 years of age, and formed 1·5 per cent. of the deaths for this age period.

The remarks that I have made on the subject of measles apply with equal force to whooping cough.

Diarrhœea. 151 deaths occurred from diarrhœa, and epidemic enteritis as compared with 46, 71 and 61 in the three preceding years. The death rate from the disease is 2·82. Of these deaths, 126 occurred in infants under 1 year of age, amounting to 41 per cent. of the infant deaths and 33·7 per cent. of the deaths of children under 5 years of age.

The subject is fully discussed in a Special Report which is appended.

Influenza. 10 deaths were reported as being due to this disease, giving a death rate of 0·18 per 1,000. The deaths for the three preceding years were 6, 8 and 2. Influenza was rather more prevalent than usual this year, and most of the fatal cases occurred in old people.

Phthisis and other Tuberculous Disease. The deaths from phthisis numbered 71 as compared with 38, 44 and 58 for the three preceding years. The death rate from the disease is 1·3 per 1,000 of the population, the average rate of mortality for the preceding ten years being 1·2. Of these deaths, 19 occurred amongst residents of Edmonton in the Edmonton Workhouse. The total deaths from phthisis in public institutions in the district numbered 55. The other tuberculous diseases together accounted for 40 deaths, giving a death rate of 0·74 per 1,000. In this way tuberculosis contributed a total death rate of 2·04 per 1,000 living, or nearly 13 per cent. of all the deaths.

PREVENTION OF CONSUMPTION.

Value of Notification. Each year sees an addition to the number of local authorities who have made phthisis a notifiable disease. Compulsory notification under the Act of 1899 has, in most cases, been preceded by a probationary period of voluntary notification, during which the benefits of the system have become apparent, and its opponents have been reconciled to the inclusion of phthisis in its proper category, namely, that of the compulsorily notifiable diseases.

It is only where a system of notification exists, either voluntary or compulsory, that the sanitary authority can influence directly the prevalence of the disease. In a district where most of the cases are reported, each patient can be visited and the probable origin of his infection ascertained. This first step is of the greatest importance. It might be found, for instance, that several of those affected had been employed in the same workplace, in which case suspicions as to insanitary conditions existing there would be at once aroused. The discovery of such conditions and their removal would secure the prevention of other cases arising from the same source. Actual instances of this kind are within my own experience and that of every Medical Officer of Health whose work has lain in a district where phthisis was a notifiable disease.

In addition to enquiries on the points alluded to, instruction could be given at the time of the visit as to how the patient should order his life so as to give himself the best chance of recovery and reduce to a minimum the danger of his communicating the disease to others. Disinfection of rooms, &c., where considered necessary, could also be carried out.

In order to make the system complete, and to add to its popularity and success, it is very desirable that provision should be made for the sanatorium treatment of some, at least, of the cases that come under observation. The Council, having entered into the Middlesex Open-air Sanatorium scheme, will, I hope, before long have at

their command this valuable adjunct to a definite system for the prevention of phthisis, and it becomes now all the more desirable that they should make the system complete by adopting in the near future one or other form of notification of the disease.

The Proposed Middlesex Open-Air Sanatorium.

As referred to in my last report, the Middlesex Sanatorium scheme was launched at a public meeting in the Middlesex Guildhall in November, 1903.

A Committee, which is representative of the various public bodies in the County who are interested in the question, and on which I have the honour to serve on behalf of this district, has been at work since then on the details of the scheme. By the constitution already agreed upon, the entire control of the institution is vested in those who establish and maintain it, in proportion to their stake in the enterprise.

It has for its object "the treatment of hopeful cases of Tubercular disease of the lungs and air passages among such *bona fide* inhabitants of the County (both male and female) as are unable to afford the fees of more expensive sanatoria, and for the Instruction and Training of the patients on the best means for preventing the spread of the disease."

"The intention is that 100 beds shall be provided, that the administrative buildings shall be as simple as possible, and that the patients shall be lodged in bungalows detached from the main buildings. The cost per bed of establishing the sanatorium need not exceed £300, nor the weekly maintenance 30s."

"The Public Authorities have already agreed to establish and maintain nearly one-third of the total number of beds. The general public are asked to establish the remainder for those who, by mutual insurance, or the help of employers and friends, can find the whole or the greater part of the weekly cost."

Such an institution will be, in my opinion, of infinite service to the County in dealing with the prevention of consumption.

Provision is made in the constitution for the education of the patient in the preventive and curative aspects of his ailment, and for an arrangement whereby he will be visited and encouraged to persevere in the sanatorium mode of life after he has left the institution. This is an aspect of the treatment of consumption that commends itself strongly to sanitarians, and should ensure for the Middlesex scheme the heartiest approval and support of those authorities to whom the prevention of disease is entrusted.

The Edmonton District Council was one of the first to signify their intention of supporting the scheme, and they have provisionally arranged to take up 3 beds in the institution for the use of patients belonging to the district whose cases, after investigation, may prove to be suitable ones for treatment.

In this way from 12 to 16 consumptives yearly may enjoy the benefit of having their health, in many cases, improved; in a few perhaps, restored; and in all the lesson will have been learnt as to how best to order their mode of living so as to prolong life, and at the same time prevent their disease from being a danger to their families and neighbours.

The district may be expected to benefit directly from this reduction in the number of its possible sources of infection, and indirectly, to an even greater extent, by the good example in sanitary living offered by the presence of an increasing number of ex-sanatorium patients among the inhabitants.

Respiratory Diseases, including bronchitis, pneumonia, pleurisy and other non-tuberculous diseases of the respiratory system, accounted for 135 deaths, or a death rate of 2·5 per 1,000. The number of deaths in 1903 was 106, and the death rate 2·0 per 1,000. The increased mortality from these diseases is, I think, partly

ascribable to the privations suffered by a considerable section of the population throughout the year.

Cancer. The deaths from cancer number 30, compared with 29, 19 and 40 in the three preceding years. The death rate from this cause is therefore 0·56. The attention that has been drawn to this disease in recent years owing to its apparently increased mortality as shown by the death returns, has directed a large amount of energy towards its more careful study. In order to assist this work it is of great importance that the certification of all deaths from this cause should be as full and as precise as possible.

Syphilis. During the year one death was returned as being due to this cause. Having in mind the number of nervous and other disorders ending fatally each year that find their origin in this disease, the small number of deaths habitually returned as due to it, can only be considered as an immense understatement of the facts.

Alcoholism. Seven deaths were returned under this head. Here, again, owing to the system of death registration, the actual number of deaths from alcoholism is greatly understated.

BACTERIOLOGICAL LABORATORY.

The Council have authorised the establishment of a laboratory at the Town Hall for the examination of specimens from suspected cases of infectious disease. I hope before long to have the laboratory in working order, when I shall acquaint the medical practitioners of the district with the arrangements that have been made for receiving specimens and for sending them the results of examination. It is hoped that this means will enable an earlier diagnosis of diphtheria and enteric fever to be arrived at, than is possible without the aid of bacterial examination.

INFECTIOUS DISEASES HOSPITAL ACCOMMODATION.

The Council have an arrangement with the Enfield District Council whereby the following beds are retained at their isolation hospital for the reception of patients from this district :—

Scarlet fever	...	...	12 beds.
Diphtheria ...	...	...	4 beds.
Enteric fever	...	...	3 beds.

An annual charge of £1,153 11s. 4d. is made for this accommodation, any beds required over and above this number being charged for at the rate of 4s. 6d. per day. The amount paid to Enfield for extra beds during 1904 was £45 9s., making a total charge for hospital isolation of £1,199 os. 4d.

It has been felt for some time that this arrangement is unsatisfactory, for, although we have always been treated with consideration by the Enfield hospital authorities in the matter of extra accommodation, there is no guarantee that such accommodation will be always available, and it has become increasingly apparent that a growing district like Edmonton should be placed in a more assured position as regards the isolation of its infectious cases.

The Council therefore decided to hold a special meeting to consider the advisability of proceeding with the construction of an isolation hospital on the Hertford Road site, already acquired for the purpose.

I was requested to present a report at this meeting on the staff required for, and the cost of maintaining, the proposed new hospital, plans of the building having already been made by your Engineer. I here reproduce my report :—

Report on Staff Required and Expenses of the Proposed New Isolation Hospital.

29th June, 1904.

TO THE CHAIRMAN AND MEMBERS OF THE
EDMONTON URBAN DISTRICT COUNCIL.

GENTLEMEN,

In accordance with the resolution of the Council passed on the 14th June, I beg to present my report on the staff required for, and

the annual expenses of, the proposed new Isolation Hospital.

Before proceeding to discuss the figures on which I have based my report, it will be well to consider briefly the general subject of the isolation requirements of this district. On this head there are two factors in the population with which we have to deal, that are of importance. They are :—

- (1). Its being almost entirely a working class population.
- (2). The large proportion of young children composing it.

The first calls for a high percentage of isolations to cases notified, as in very few families are the conditions such as to favour effective isolation at home. The second leads one to expect a high incidence of infectious disease.

It becomes necessary therefore, in considering the establishment of an isolation hospital in such a district, to first of all arrive at what would be a proper proportion of the infectious cases to isolate in hospital.

As will be seen from Table I, our average percentage of cases isolated to those notified during the last three years has been about 45 per cent.

This low figure is one that, in the past, has been dictated by the limited hospital accommodation at our disposal, and by no means represents the percentage of isolation that is desirable, and indeed demanded by, the circumstances above referred to. In my opinion 65 per cent of these cases at least, should be isolated, and even a higher percentage than this should be aimed at in the future.

Owing to the rapid changes that have taken place in the district recently, I have thought it best to go no farther back than three years for the figures upon which to base the expectation of the incidence of infectious disease in the near future.

On Table I are set out the necessary facts relating to incidence and hospital isolation during the years 1901, 1902 and 1903, and in Table II the averages of these years have been taken and the percentage of isolations has been raised to the figure I suggest, namely, 65 per cent. On the figures thus obtained I have based my calculations of the accommodation that is likely to be required during the next few years.

It will be seen from Table II that the average number of beds estimated to be occupied under these circumstances amounts to 22, and in order to allow a small margin I have provided in my estimate for an average of 25 beds. This number, as an average, bears a very just proportion to the beds (52) that would be available in the proposed hospital, and would put the Council in a very satisfactory position for dealing with infectious disease during the next few years; for notwithstanding the steady growth of our population, I am of opinion that an increased measure of isolation, such as I have mentioned, would tend to reduce the incidence of infectious disease in the future and would enable the work of isolation to be efficiently carried on, without an addition to such an hospital, for a number of years to come.

I may say that in preparing these estimates I have quoted the lowest possible cost that is compatible with efficiency. It must be remembered, however, that the administration of a small hospital, like the one proposed, *is* always comparatively expensive, and that an institution of 100 or more beds will always cost relatively less than one of 50 beds.

I may here be permitted to say that this point suggests the propriety of the Council's considering a possible alternative scheme to the one proposed, namely the forming of a joint hospital scheme with the Enfield Council. At Enfield there already exists a well constructed modern isolation hospital, which, with some addition to its number of beds, could be made to serve the needs of both districts. It would then be of a size that would enable it to be run on the most economical lines.

I do not know whether such a scheme would meet with the approval of Enfield; I merely suggest it for the Council's consideration.

In conclusion, I would draw the Council's attention to the figures set out on Table III, which show the amounts spent during the past three years on isolation, and the returns obtained.

Under our present arrangement with Enfield, when the number of beds at our disposal for any one disease is exceeded, the extra beds are charged at an increased rate, which continues so long as the case in question remains in hospital, no matter how many of our allotted beds become vacant in the meantime.

In the case of an epidemic occurring, the expense involved becomes, in this way, proportionately great; moreover, there is no guarantee under present conditions, that a sufficient number of beds in such an emergency, would be at our disposal—in fact the reverse might not be unexpected, as times of epidemic would, in all probability, be coincident in the two districts.

Adequate accommodation to our probable needs is what is most urgently required, whether in our own hospital or in that of a Joint Board. The present arrangement is not to be relied on in time of emergency, and is therefore most undesirable.

I am, Gentlemen,

Your obedient Servant,

A. W. J. MACFADDEN,

Medical Officer of Health.

STAFF REQUIRED to provide for 3 Wards being constantly in use and an average number of 25 beds occupied, with salaries and wages:—

			£	s.	d.
Medical Superintendent ...	...	...	150	0	0
Matron ...	...	...	65	0	0
2 Charge Nurses, at £35	...	...	70	0	0
6 Nurses, at £30	...	...	180	0	0
3 Wardsmails, at £16	...	...	48	0	0
1 Laundry Woman, at £20	...	...	20	0	0
1 Laundry Assistant, at £16	...	...	16	0	0
1 Cook, at £30	...	...	30	0	0
1 Kitchen Maid, at £16...	...	...	16	0	0
1 Housemaid, at £18	...	...	18	0	0
1 Sempstress, at £18	...	...	18	0	0
1 Engineer and Disinfector, at 40s. (to live at lodge with wife)	...	...	104	0	0
1 Porter, &c., at 25s.	...	...	65	0	0
1 Boy, at 8s. 6d.	...	...	22	0	0
1 Gardener, at 30s.	...	...	78	0	0
Total			£900	0	0

Estimated Annual Expenditure under the following items:—

	Per Bed Occupied.			Total.		
	£	s.	d.	£	s.	d.
Provisions ...	36	0	0	900	0	0
Coal and Gas ...	20	0	0	500	0	0
Establishment and miscellaneous charges, including:—	12	0	0	300	0	0
Replacement of Linen, Crockery, &c., £35.						
Maintenance of Buildings, £200						
Uniforms, &c., £40.						
Garden, £25.						
Rates and Taxes ...	8	0	0	200	0	0
Surgery and Dispensary...	4	0	0	100	0	0
Salaries and Wages ...	36	0	0	900	0	0
All charges, exclusive of Capital	116	0	0	2900	0	0

Ambulance charges, amounting to £160 per annum, have not been included in this estimate.

TABLE I.

June, 1904.

Table showing the number of cases notified, the numbers and percentages of those isolated, the average duration of stay in hospital, &c., for the three years 1901—1903 :—

1901.						
Disease.	Notification.	Isolation.	Percentage of Isolation.	Average stay in Hospital in Days.	Patients accommodated per Bed Yearly.	Average No. of Beds Occupied.
Scarlet... ..	156	72	46·1	51	7·1	10
Diphtheria ...	40	16	40	47	7·8	2
Enteric ...	65	35	53·8	43	8	5
Total ...	261	123	47·1	47	7·6	17
1902.						
Scarlet... ..	179	66	38	54	7	9
Diphtheria ...	58	18	31	31	12	2
Enteric ...	86	31	36	35	10	3
Total ...	323	115	35·5	40	9	14
1903.						
Scarlet... ..	119	57	47·9	52	7	8
Diphtheria ...	18	5	26·3	54	7	1
Enteric ...	28	15	53·5	34	10	2
Total ...	165	77	46·6	47	7·7	11

June, 1904.

TABLE II.

Table showing an average of the figures given on Table I., with the number of cases isolated to those notified, taken at 65 per cent.

Disease.	Notification.	Isolation.	Percentage of Isolation.	Average stay in Hospital in Days.	Patients ac- commodated per Bed Yearly.	Average No. of Beds Occupied.
Scarlet ...	152	98	65	52	7	14
Diphtheria ...	37	24	65	44	8	3
Enteric ...	60	39	65	44	8	5
Totals ...	249	161	65	47	7.7	22

TABLE III.

June, 1904.

Table showing the Expenses incurred for Isolation under the existing arrangements with Enfield during 1901-02-03.

1901.

Disease.	Allotted Beds.	Cost.	Extra Beds required.	Cost.	Average Beds Occupied.	Total Cost.	Cost per bed per Annum.
Scarlet	9	£ 546	30	£ 315	10	£ 861	£ 86
Diphtheria ...	4	243	...	...	2	243	121
Enteric ...	1	61	26	148	5	209	42
Totals ...	14	850	56	463	17	1313	77

1902.

Scarlet ...	9	546	16	144	9	691	77
Diphtheria ...	4	243	...	...	2	243	121
Enteric ...	1	61	22	109	3	170	51
Totals ...	14	850	38	253	14	1104	79

1903.

Scarlet ...	12	683	4	44	8	727	91
Diphtheria ...	4	243	0	0	1	243	243
Enteric ...	3	152	5	22	2	174	87
Totals ...	19	1078	9	66	11	1144	104

The figures in Column 2, under 1903, show the increased number of beds obtained at the beginning of the second quarter of the year.

The figures in the cost column are in round numbers.

To the annual expenditure estimated under the headings in this report, would have to be added capital and other charges which would bring the total annual cost of the hospital to a figure probably in excess of £4,700. In view of this large expenditure the Council decided to consider the alternative scheme put forward in the report, and it was agreed to approach the Enfield Council on the subject of a joint scheme. A special committee was formed for this purpose, and the Enfield authorities having signified their willingness to consider the proposals put forward by Edmonton, several meetings between the representatives of the two Councils took place. It is estimated that the annual cost to this district under a joint hospital scheme with Enfield would amount to about £3,700, which is considerably less than the estimated annual cost of the proposed isolation hospital. Negotiations as to details are still proceeding, but I have little doubt that before long the arrangements will be completed, to the great advantage of both districts.

Small Pox Hospital Accommodation. Negotiations are still proceeding for the acquiring of Clare Hall Small Pox Hospital by certain of the district councils of the County, of which Edmonton is one. In the meantime the Council have increased the number of beds they retain at South Mimms from 6 to 9. In addition, they have made certain alterations in the old temporary small pox hospital at Claverings Farm whereby, at the shortest notice, accommodation of a satisfactory kind to meet an emergency, could be arranged for 10 male and 6 female patients. The possession of this conveniently situated building is of great value to the Council, as it should enable them to deal effectively, for the time being, with any sudden outbreak that might occur. Even after the Clare Hall scheme has been established, it would be to the Council's advantage to retain the building in its present condition. Its usefulness in times of epidemic, as an emergency building or for the purpose of dealing with contacts, would be very great, and the cost of its upkeep, so long as it continues to form part of the disinfecting station, is trifling.

Ambulance Arrangements. The Council undertake the removal of all cases of infectious disease to hospital, free of charge, in

their own ambulance. Separate vehicles are kept for small pox and for other infectious diseases. A closed conveyance has also been provided for bringing patients home again after their discharge from hospital—an arrangement that is very valuable in protecting the health of children, whose parents are unable to afford a suitable conveyance, when discharged from hospital during cold and wet weather. Particulars as to the work done will be found in the report of the Sanitary Inspector.

Disinfection. Rooms are disinfected, after the removal of the patient, by spraying with a 1 in 40 solution of formaline. Linen and cotton articles are stepped in a solution of Jeyes' Fluid in the room previous to being washed, and articles of clothing, bedding etc., are removed in a van provided for the purpose by the Council, to the disinfecting station where they are treated in a Washington-Lyon steam disinfector of the latest pattern. After treatment the bedding etc. are returned in a separate van used only for conveying disinfected articles. Details under this head are given in the Sanitary Inspector's report.

HOUSES AND HOUSING ACCOMMODATION.

Housing of the Working Classes. Large numbers of new houses continue to be built in the district, and it is satisfactory to notice that some of these have been constructed of a size and at a weekly rental that will put them within the reach of the low wage earner whose family is still young.

The Council's bye-laws are carried out under the supervision of the Building Inspectors, by whom the drains are water-tested. On their completion, and before they are occupied, all new houses are visited by me, to ascertain their general fitness for habitation. In the great majority of instances the only point that remains for me to determine on these occasions, is the condition of the inside plastering as regards dampness. In a certain number of cases I have found it necessary to defer the date of occupation for varying periods to enable the plaster to set and dry sufficiently to prevent

danger to the health of ingoing tenants. I have dealt with this subject in a report recently presented to the Sanitary Committee.

The number of new houses inspected by me during the year was 612 dwelling houses and 19 shops.

Several houses have become more or less dilapidated during the year and some of these have been closed. Proceedings were instituted with a view to obtaining a closing order under section 32 of the Housing of the Working Classes Act, on houses in Eaton Place, but before the statutory notice expired, certain repairs were effected by the owner, that have put the proceedings in abeyance for the time being at any rate.

Houses let in Lodgings. A revised code of bye-laws is being prepared under this head. Up to the present no action has been taken by the Council in the matter of registering houses of this kind. I believe, however, that the time has arrived when the question might, with advantage, be taken up. The system of registration might be established to begin within those parts of the district where overcrowding has been found most prevalent in the past. The measures provided by the bye-laws would also be found useful in those cases where good sized houses have fallen on evil days and are at present sub-let to many different families. A more complete control is necessary over property of this kind to keep the conditions under which its occupants live up to a good sanitary standard, and this would be obtained most effectively by registration under the proposed bye-laws.

Water Supply. The district is supplied by the Metropolitan Water Board. There are still a few shallow wells in domestic use, but their numbers are being diminished each year. These wells have been kept under observation and their water analysed from time to time.

Sewerage and Sewage Disposal. The sewerage is constructed on the separate system, the surface water being carried into the Pymmes and Salmon's brooks, while the sewage proper, together

with that of the neighbouring district of Southgate, is led to the Council's sewage farm of 235 acres, where it is treated by broad irrigation. The effluent enters Salmon's Brook near Angel Road, and reaches the river below Tottenham Lock, two miles further down and well below the intake of any water supply.

The Council have recently brought into use a considerable area of land, known as Claving's Farm, that was not previously available for sewage treatment, and in this way it is hoped that longer intervals of rest being secured in future for the different irrigation areas, a less variable and better effluent will be obtained.

An attempt has been made to reduce the amount of the suspended solids in the sewage and so render it more suitable for putting on the land, by improvising in the large underground receiving reservoir a form of "septic tank" treatment. Owing, however, to the heading up of the sewage in the sewers which this involved, and the consequent escape of offensive gases, the attempt at septic tank treatment was not continued.

In consequence of the growth of our population and that of Southgate, the contributing district, which now sends more than the amount of sewage authorised under the award of 1883, it is recognised by the Council that some supplementary scheme will have to be introduced to provide in future for the increasing amount of sewage to be dealt with.

In 1903 the Engineer reported to a Joint Committee representing the Districts of Cheshunt, Edmonton, Enfield and Southgate on a scheme embracing all these districts, but the negotiations finally fell through. A Special Committee, the Sewage Disposal Committee, has now been appointed to negotiate with Southgate and to further enquire into the general question of sewage disposal. The Engineer, under their instructions, is at present considering the best means for increasing the capacity of the existing works, and the Council have arranged to provide apparatus for water and sewage analysis in the laboratory at the Town Hall, to enable me to make regular

examinations, both of the sewage and effluent, in order to find means for overcoming some of the difficulties which have arisen in dealing with the discharges of certain trade effluents, and to test the relative values of the different systems experimented with.

Failing the realization of a main drainage scheme of a sufficiently comprehensive character to relieve the whole of the districts now draining into the Lea Valley, it becomes eminently desirable that a purification system should be adopted that is at once efficient, free from danger to the health and comfort of the inhabitants, and capable of considerable expansion in the future. At the present rate of growth of Edmonton and Southgate, it cannot be long before the land at the Council's disposal will have reached the limit of its capacity for dealing with their sewage by broad irrigation alone, and it is therefore satisfactory to note that steps are being taken to introduce one of the bacterial methods of purification to supplement the old system.

Cow Sheds, Dairies and Milk Shops. Inspections of these premises are made every month and at irregular intervals between. The cow sheds and dairy farms in the district are few in number, but most of them are favourably situated as regards space and the possibility of further developments.

It is desirable, where such conditions obtain, that as much of the milk supply as is possible should be derived from the district itself, and I note with satisfaction that in one instance at least, such improvements are being carried out as will insure a good proportion of our milk being produced under sound modern conditions.

FACTORY AND WORKSHOPS ACT.

During the year the premises coming under this Act have been periodically inspected and a record of the work done will be found set out on the form supplied by the Home Office on page 45. A list of defective conditions remedied is also appended.

In connection with one of our large factories where women are employed, notice was received from one of H.M. Inspectors of

Factories calling attention to the following points observed by her at time of her inspection :—

- (a) Insufficient W.C. accommodation.
- (b) Insufficient lights to W.C.s.
- (c) Obnoxious smells arising from the Council's Sewage Farm.

By the Home Office order of 4th February 1903, it is prescribed that there shall be 1 W.C. for every 25 females employed. In this factory there were 36 W.Cs. provided and on going into the number of women employed I found that to be in strict compliance with the order, there should have been 44. On the manager being informed of this, instructions were at once given to construct a block of 10 more W.C.s, so that the accommodation is now satisfactory.

Regarding the complaint of insufficient light, it may be explained that the light in these places is purposely curtailed to prevent the workers from reading there, and in this way a sanitary end is served. The W.C.s in question were well constructed, clean, and well ventilated, and I think that under the circumstances the complaint was hardly justified. The complaint as to the smells arising from the Sewage Farm was referred to the Sewage Disposal Committee.

It is the duty of employers to notify the local authority twice a year of the name and addresses of their outworkers. We have received during the year from other authorities the names and addresses of 84 persons residing in this district who are outworkers for firms situated elsewhere. These outworkers have been visited and the particulars kept in the register provided for that purpose. This register is under constant revision as the number of outworkers is subject to great fluctuation.

During the year one case of scarlet fever occurred at an outworkers house. The patient was at once removed to hospital, the home-work removed for disinfection, the employer notified and the premises thoroughly disinfected.

The work carried out during the year is as follows :—

Bakehouses.

Limewashed	23
Ceilings rendered impervious	5
Drains reconstructed	2
Underground Bakehouse rendered in conformity with the Act	1
Walls rendered impervious	5
New River water supply laid on	1
Drain repaired	1
New W.C. apparatus	1
Troughs made moveable	2
W.C. made efficient	1
Yard paved	1
Roof repaired	1
Total	44

Laundries.

Overcrowding abated	1
Floors cleansed	2
Total	3

Other Factories and Workshops.

Lip urinal basins and flushing apparatus provided	2
Urinal paved cement concrete	1
Iron cover to inspection chamber	1
New block 10 W.Cs. to factory	1
W.Cs. repaired	3
4-in. ventilation shaft	1
Overcrowding abated	2
Door step repaired, per complaint of H.M. Inspector	1
Total	12

FACTORIES, WORKHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

1.—Inspection.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of Inspections.	Number of Written Notices.
Factories... .. (Including Factory Laundries.)	88	9
Workshops (Including Workshop Laundries.)	123	3
Workplaces	48	0
Homeworkers' Premises	146	7
Total	405	19

2.—Defects Found.

Particulars.	Number of Defects.	
	Found.	Remedied.
Nuisances under the Public Health Acts:—*		
Want of cleanliness	2	2
Overcrowding	3	3
†Sanitary accommodations—		
Insufficient	1	...
Unsuitable or defective	2	...
Total	8	5

* Including those specified in Sections 2, 3, 7 and 8, of the Factory Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; standard of sufficiency and suitability of sanitary accommodation for persons employed in factories and workshops has been enforced according to recommendation of the Home Secretary.

3.—Other Matters.

Class.	Number.
Matters notified to H.M. Inspectors of Factories :—	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5)—	
Notified by H.M. Inspector	4
Reports (of action taken) sent to H.M. Inspectors	4
Underground Bakehouses (S. 101) :—	
In use during 1903	1
Certificates granted in 1904	1
In use at the end of 1904	1
Homework .—	
Lists of Outworkers* (S. 107) :—	
Addresses of outworkers received from other Authorities	87
	Wearing Apparel.
Homework in unwholesome or infected premises :	
Cases of infectious disease notified in homeworkers' premises	1
Orders prohibiting homework in infected premises (S. 110)	1
Workshops on the Register (S. 131) at the end of 1904 :—	
Bakehouses (171 Inspections)	32
Laundries (3 defects remedied)	32
Total number of workshops on Register	192

Vital Statistics of Whole District during 1904 and previous years.

YEAR.	Popu- lation esti- mated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		DEATHS IN PUBLIC INSTITUTIONS.	Deaths of Non-residents registered in the District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES. NETT.	
		Number.	Rate.*	Number.	Rate per 1,000 Births regis- tered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	28,419	906	30.15	121	132.24	584	20.54	235	91	22	515	18.12
1895	30,080	1024	32.25	116	122.65	608	20.2	243	196	17	424	13.95
1896	31,888	1020	30.57	169	153.68	691	21.6	253	208	17	500	15.6
1897	33,804	1139	32.5	163	157.18	704	20.8	291	201	39	542	15.95
1898	35,836	1148	31.03	217	195.84	783	21.8	272	221	44	606	16.81
1899	39,523	1146	34.9	242	161.87	831	21.0	207	175	32	688	17.4
1900	47,166	1606	34.0	301	168.1	983	20.8	307	268	42	757	16.0
1901	44,911	1640	36.5	271	139.0	787	15.2	233	183	70	674	15.0
1902	50,388	1747	34.67	251	143.67	1006	19.9	270	161	56	901	17.88
1903	52,139	1846	35.4	259	140.3	844	15.6	248	194	74	724	13.7
Averages for years 1894-1903	39,415	1322	33.8	211	159.6	782	19.8	256	190	41	631	16
1904	53,358 (A)	1891 (B)	35.4	306 (C)	161.8	1050 (D)	18.9	361	298	93	845	15.8

* Rates in columns 4, 8 and 13 calculated per 1,000 of estimated corrected population. (See Note D).

The deaths included in column 7 of this table are the whole of those registered during the year as having actually occurred within the district. The deaths to be included in column 12 are the number in column 7, corrected by the subtraction of the number in column 10 and the addition of the number in column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere. Returns under this head are obtained by the Medical Officer by arrangement with the Registrars of the London District and of the districts of Tottenham and Enfield.

NOTES.—(a) The estimated population of the district corrected by excluding non-residents in the two workhouses.

(b) Births registered in the district uncorrected for Institutions.

(c) Corrected for Institutions, and including residents dying outside the district.

(d) Calculated on the gross population (inclusive of Institutions) 55,322.

Area of District in acres (exclusive of area covered by water) 3,890.

Total population at all ages, excluding Union Workhouses—44,911	} At Census of 1901.
Number of inhabited houses—7,807	
Average number of persons per house—5.75	

I.—Institutions within the District receiving sick and infirm persons from outside the District.	II.—Institutions outside the District receiving sick and infirm persons from the District.	III.—Other Institutions, the deaths in which have been distributed among the several localities in the District.
Edmonton Union Workhouse Infirmary. Strand Union Workhouse Infirmary.	Enfield Fever Hospital. South Mimms Small Pox Hospital.	Tottenham Hospital.

TABLE II. — VITAL STATISTICS OF SEPARATE LOCALITIES AND OF THE EDMONTON AND STRAND UNION WORKHOUSES IN 1904.

1. WHOLE DISTRICT—					
(a)	Population estimated to middle of each year	...	...	...	53358
(b)	Births registered	...	...	...	1891
(c)	Deaths at all ages	...	...	...	845
(d)	Deaths under 1 year	...	...	...	306
2. BURY STREET WARD—					
(a)	Population estimated to middle of each year	...	...	...	18468
(b)	Births registered	...	...	...	632
(c)	Deaths at all ages	...	...	...	287
(d)	Deaths under 1 year	...	...	...	114
3. CHURCH STREET WARD—					
(a)	Population estimated to middle of each year	...	...	...	16593
(b)	Births registered	...	...	...	596
(c)	Deaths at all ages	...	...	...	295
(d)	Deaths under 1 year	...	...	...	106
4. FORE STREET WARD—					
(a)	Population estimated to middle of each year	...	...	...	16297
(b)	Births registered	...	...	...	663
(c)	Deaths at all ages	...	...	...	257
(d)	Deaths under 1 year	...	...	...	86
5. UNDISTRIBUTED DISTRICT DEATHS—					
(c)	Deaths at all ages	...	...	...	6
6. EDMONTON UNION—					
(a)	Mean population for the year	...	...	...	*831
(b)	Births registered	...	...	...	†50
(c)	Deaths at all ages	...	...	...	‡311
(d)	Deaths under 1 year	...	...	...	**15
7. STRAND UNION AND SCHOOLS—					
(a)	Mean population for the year	...	...	...	1339
(b)	Births registered	...	...	...	5
(c)	Deaths at all ages	...	...	...	50

Deaths of residents occurring in public institutions beyond the district are included in sub-items (c) of this table, and those of non-residents registered in public institutions in the district excluded, except in blocks 6 and 7 where the institutions are separately dealt with.

Deaths of residents occurring in public institutions, whether within or without the district, are allotted to the respective localities according to the addresses of the deceased.

Care should be taken that the gross totals of the several items in this Table respectively equal the corresponding totals for the whole districts in Tables I and IV.: thus, the totals of sub-items a, b, and c should agree with the figures for the year in the columns 2, 3, and 12 respectively, of Table I: the gross totals of the sub-items c should agree with the total of column 2 in Table IV., and the gross total of sub-items d with the total of column 3 in Table IV.

* 206 of these were residents of Edmonton.

† 16 of these were born of Edmonton parents.

‡ 63 of these were residents of Edmonton.

** 4 of these were residents of Edmonton.

TABLE III. CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1904.
EDMONTON URBAN DISTRICT.

NOTIFIABLE DISEASES.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.			NO. OF CASES RE- MOVED TO HOSPITAL FROM EACH LOCALITY.			
	At all Ages.	At Ages—Years.						Bury Street Ward.	Church Street Ward.	Fore Street Ward.	Whole District.	Bury Street Ward.	Church Street Ward.	Fore Street, Ward.
		Under 1	1 to 5	5 to 15.	15 to 25.	25 to 65.	65 and up- wards.							
Small-pox	4	—	—	—	2	2	—	2	1	1	4	2	1	1
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria	43	—	15	18	7	3	—	16	14	13	23	10	6	7
Membranous croup	3	—	1	1	—	—	—	—	1	2	—	—	—	—
Erysipelas	74	1	2	11	9	48	4	20	27	27	—	—	—	—
Scarlet fever	181	5	49	104	12	11	—	62	42	77	132	45	33	54
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric fever	38	—	4	12	5	17	—	19	9	10	22	12	6	4
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	1	—	—	—	—	1	—	—	—	1	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	344	6	71	146	35	82	4	119	94	131	181	69	46	66

Isolation Hospitals—Clarehall Smallpox Hospital, South Mimms Rural District; Enfield Isolation Hospital, in Enfield Urban District.

TABLE IV. Causes of, and Ages at.

CAUSES OF DEATH.	DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" WHETHER OCCURRING IN OR BEYOND THE DISTRICT.						
	All Ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.
Small-pox ...	...	...	...	...	...	...	...
Measles ...	28	5	20	3	...	...	...
Scarlet fever ...	3	...	2	1	...	...	...
Whooping-cough ...	7	2	5	...	...	...	...
Diphtheria and membranous croup ...	10	...	8	2	...	...	...
Croup ...	...	...	...	...	...	...	...
Fever { Typhus	...	...	...	...	...	...	...
Enteric	8	...	...	2	2	4	...
Other cont.	...	...	...	...	...	...	...
Epidemic influenza ...	10	1	2	...	...	5	2
Cholera ...	...	...	...	...	...	...	...
Plague ...	...	...	...	...	...	...	...
Diarrhoea ...	151	126	24	...	...	1	...
Enteritis ...	14	10	3	...	...	...	1
Puerperal Fever ...	...	...	...	...	...	...	...
Erysipelas ...	5	1	...	...	...	3	1
Other septic diseases	3	...	1	1	...	...	1
Phthisis (Pulmonary Tuberculosis) ...	71	...	5	3	8	54	1
Other tubercular diseases ...	40	15	19	5	...	1	...
Cancer, malignant disease ...	30	...	...	...	...	20	10
Bronchitis ...	57	16	11	2	...	9	19
Pneumonia ...	67	17	25	5	1	18	1
Pleurisy ...	5	...	1	...	2	2	...
Other diseases of Respiratory organs...	6	...	1	1	...	2	2
Alcoholism	...	...	...	...	...	...	...
Cirrhosis of liver)	7	...	...	...	...	5	2
Veneral diseases	1	1	...	...	...	...	...
Premature birth	31	31	...	...	...	...	...
Diseases and accidents of parturition ...	1	...	...	...	...	1	...
Heart diseases ...	45	...	...	4	4	25	12
Accidents ...	20	3	1	1	2	11	2
Suicides ...	2	...	...	...	...	1	1
Homicide ...	1	...	1	...	...	...	...
All other causes	222	78	13	8	5	68	50
All causes ...	845	306	142	38	24	230	105

Death during Year 1904.

DEATHS AT ALL AGES OF "RESIDENTS" BELONGING TO LOCALITIES, WHETHER OCCURRING IN OR BEYOND THE DISTRICT.						INSTITUTION DEATHS, RESIDENTS AND NON-RESIDENTS.			
Bury Street Ward.	Church Street Ward.	Fore Street Ward.	Un-distributed Deaths.	Hospital, etc. beyond District.	Residents in Edmonton Union.	Edmonton Union.	Strand Union and Schools.	Total.	Inquest Cases.
...
9	8	11	...	...	...	...	...	...	2
1	...	2	...	3	...	...	...	...	...
2	2	3	...	...	...	...	1	1	...
1	6	3	...	2	...	...	...	...	...
...
2	2	4	...	3	...	...	...	...	1
...
1	3	6	...	...	...	...	3	3	...
...
...
52	60	39	...	9	...	5	2	7	8
2	5	7	...	1	...	3	...	3	3
...	2	...	...	...	...	1	...	1	...
2	2	1	...	...	...	1	...	1	2
2	1	...	...	1	1	2	...	2	...
28	24	18	1	5	19	53	2	55	3
22	12	6	...	6	1	5	1	6	5
8	17	5	...	4	8	27	1	28	...
17	25	15	...	3	2	11	10	21	1
28	20	19	...	6	...	7	1	8	15
2	2	1	...	2	...	...	...	...	1
2	3	1	...	...	...	...	1	1	...
1	3	3	...	...	...	1	3	4	4
...	1	...	...	...	...	...	...	...	...
14	10	7	...	...	3	6	...	6	3
1	...	...	...	...	...	1	...	1	...
13	15	16	1	3	10	45	3	48	6
9	2	9	...	5	1	2	1	3	14
1	1	...	...	...	...	2	...	2	2
...	...	1	...	...	...	...	...	...	1
67	71	80	4	40	18	139	21	160	32
287	295	257	6	93	63	311	50	361	103

TABLE IV_A.

Causes of, and Ages at,

No.	CAUSES OF DEATH.	Deaths at the subjoined Ages of "Residents" whether occurring in or beyond the District.									
		All Ages.			Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and Upwards.	
		M.	F.	T.							
2	Measles	12	16	28	5	20	3	...	...	...
3	Scarlet Fever	2	1	3	...	2	1	...	...	...
5	Epidemic Influenza...	7	3	10	1	2	...	...	5	2
6	Whooping Cough ...	4	3	7	2	5	...	...	...	...
7	Diphtheria (Mem. Cp.)	6	4	10	...	8	2	...	...	...
8	Enteric Fever	8	...	8	...	...	2	2	4	...
10	Diarrhœa, Dysentery	36	37	73	64	8	...	...	1	...
11	Epidemic Enteritis ...	48	30	78	62	16	...	...	...	...
15	Tetanus	1	...	1	...	...	...	...	1	...
18	Syphilis	1	...	1	1	...	...	...	...	...
21	Erysipelas	4	1	5	1	...	...	...	3	1
22	Puerperal Fever ... ..	...	...	...	...	...	...	...	...	...
23	Pyæmia (Septicæmia)	2	...	2	...	...	1	...	...	1
25	Stomatitis	1	...	1	...	1	...	...	...	...
27	Rheumatic Fever ...	1	1	2	...	...	...	1	1	...
29	Tuberculosis of Brain	9	8	17	7	9	1	...	...	...
31	Phthisis	41	30	71	...	5	3	8	54	1	
32	Abdominal Tuber. ...	6	6	12	4	5	3	...	...	...
33	General Tuberculosis	2	9	11	4	5	1	...	1	...	
34	Others forms „	1	...	1	...	...	...	...	1	...
36	Thrush ... ..	...	1	1	1	...	...	...	...	...
42	Chronic Alcoholism...	3	1	4	...	...	...	...	2	2
45	Osteo-Arthritis	2	...	2	...	...	...	...	1	1
46	Gout	2	1	3	...	...	...	...	2	1
47	Cancer	13	17	30	...	...	...	...	20	10
48	Diabetes Mellitus ...	2	1	3	...	...	...	...	2	1
49	Purpura Hæmorrhagica	1	1	2	...	...	2	...	...	...
51	Anæmia	1	...	1	1	...	...	...	...	...
53	Premature Birth	24	7	31	31	...	...	...	...	...
54	Injury at Birth ... ..	...	1	1	1	...	...	...	...	...
55	Debility at Birth	5	4	9	9	...	...	...	...	...
56	Atelectasis	3	6	9	9	...	...	...	...	...
57	Congenital Defects ...	6	4	10	10	...	...	...	...	...
59	Atrophy, Debility, Marasmus	10	5	15	13	2	...	...	...	...

Death during Year 1904.

Deaths at all Ages of "Residents" belonging to Localities, whether occurring in or beyond the District.				Hospitals, &c., beyond the District.	Edmonton Union Residents.	Institution Deaths, Residents and Non-Residents.			Inquest Cases in District.
Bury Street.	Church Street.	Fore Street.	Institution and Street Deaths that could not be distributed.			Edmonton Union.	Strand Union and Schools.	TOTAL.	
9	8	11	...	...	...	...	...	...	2
1	...	2	...	3	...	...	...	...	...
1	3	6	...	...	...	3	3	...	...
2	2	3	...	...	...	1	1	...	...
1	6	3	...	2	...	...	...	...	...
2	2	4	...	3	...	...	...	...	1
20	33	20	...	...	...	5	2	7	6
32	27	19	...	9	...	...	...	...	2
1	...	...	...	...	...	1	...	1	1
...	1	...	...	...	...	...	...	...	...
2	2	1	...	...	...	1	...	1	2
...	...	...	...	...	...	1	...	1	...
1	1	...	...	1	1	2	...	2	...
1	...	...	...	...	...	...	...	...	...
1	1	...	...	1	...	...	...	...	...
10	4	3	...	2	...	...	1	1	1
28	24	18	1	5	19	53	2	55	3
6	5	1	...	1	...	...	...	...	3
6	3	2	...	3	1	4	...	4	1
...	1	...	...	...	...	1	...	1	...
...	1	...	...	...	...	...	...	...	...
1	1	2	...	...	...	1	...	1	4
1	1	...	...	...	1	5	...	5	...
1	...	2	...	...	...	...	...	...	...
8	17	5	...	4	8	27	1	28	...
1	1	1	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...
...	...	1	...	...	...	1	...	1	1
14	10	7	...	...	3	6	...	6	3
1	...	...	...	...	...	...	...	...	...
1	4	4	...	1	...	1	...	1	...
2	4	3	...	1	...	...	...	...	2
2	4	4	...	3	...	...	...	...	1
5	5	5	...	3	1	1	...	1	1

Causes of, and Ages at,

No.	CAUSE OF DEATH.	Deaths at the subjoined Ages of "Residents" whether occurring in or beyond the District.								
		All Ages.			Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and Upwards.
		M.	F.	T.						
106	Gastritis ...	7	7	14	9	1	1	...	3	...
107	Enteritis ...	8	6	14	10	3	...	...	1	...
108	Appendicitis ...	1	...	1	...	...	...	...	1	...
109	Obstruction, Intestine	2	5	7	1	...	...	1	5	...
111	Cirrhosis of Liver ...	...	3	3	...	...	...	...	3	...
112	Other diseases of Liver	...	2	2	...	...	...	...	1	1
113	Peritonitis ...	...	2	2	...	...	...	1	1	...
115	Exophthalmic Goitre	...	1	1	...	...	...	...	1	...
116	Acute Nephritis ...	...	1	1	...	...	...	...	1	...
117	Bright's disease ...	10	6	16	...	...	...	2	8	6
119	Diseases of Bladder and Prostate	2	...	2	...	...	...	...	1	1
123	Diseases of Uterus and Appendages	...	1	1	...	...	...	...	1	...
128	Puerperal Convulsions	...	...	...	...	...	...	...	...	...
130	Puerperal Thrombosis	...	1	1	...	...	...	...	1	...
131	Other diseases of pregnancy & child-birth	...	1	1	...	...	...	...	1	...
136	Pemphigus ...	1	...	1	1	...	...	...	...	...
140	Accidents on railways	1	...	1	...	...	...	...	1	...
142	Accidents in building operations	2	...	2	...	...	...	...	2	...
143	Accid. by machinery	...	...	...	...	...	...	...	...	...
145	" burns & scalds	...	1	1	...	...	1	...	...	...
147	Surgical Narcosis ...	2	...	2	...	1	...	...	1	...
150	Accidents: drowning	5	...	5	...	...	...	1	4	...
151	Suffocation: overlaid in bed	...	2	2	2	...	...	...	...	...
152	Suffocation: otherwise	2	...	2	1	...	...	...	1	...
153	Falls not specified ...	...	1	1	...	...	...	...	1	...
155	Accidents not stated	3	1	4	...	...	...	1	2	1
156	Homicide ...	1	...	1	...	1	...	...	...	...
157	Suicides by poison ...	...	...	...	...	...	...	...	...	...
159	Suicides by hanging and strangulation	1	...	1	...	...	...	...	1	...
160	Suicides by drowning	1	...	1	...	...	...	...	...	1
169	Found in water, no evidence to show cause	1	...	1	1	...	...	...	...	...
TOTALS ...		450	395	845	306	142	38	24	230	105

Death during Year 1904.

Deaths at all Ages of "Residents" belonging to Localities, whether occurring in or beyond the District.				Hospitals, &c., beyond the District.	Edmonton Union Residents.	Institution Deaths. Residents and Non-Residents.			Inquest Cases in District.
Bury Street.	Church Street.	Fore Street.	Institution and Street Deaths that could not be distributed.			Edmonton Union.	Strand Union and Schools.	TOTAL.	
5	3	6	...	1	...	...	...	...	1
2	5	7	...	1	...	3	...	3	3
...	1	...	...	...	...	...	...	...	...
3	1	3	...	3	...	...	...	...	2
...	2	1	...	...	...	...	3	3	...
1	...	1	...	...	...	...	...	...	...
...	1	1	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...
5	4	5	2	9	1	6	...	6	1
...	1	1	...	1	1	6	...	6	...
...	...	1	...	1	...	...	...	...	...
...	...	1	...	...	...	1	...	1	...
...	...	1	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	1
...
2	...	...	...	1	...	...	...	...	2
...	...	...	...	...	...	...	1	1	...
...	...	1	...	...	...	...	...	...	...
1	...	1	...	2	...	...	...	...	1
2	...	3	...	...	...	...	...	...	3
...	2	...	...	...	...	...	...	...	2
1	...	1	...	...	...	1	...	1	1
...	...	1	...	1	1	1	...	1	3
...	...	1	...	...	...	1	...	1	...
...	1	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	1
1	...	...	...	...	...	...	...	...	1
TOTALS ...				93	63	311	50	361	103

TABLE V.

Table showing the Number of Cases Notified and the Deaths from the principal Zymotic Diseases for the Year 1904 and ten preceding years.

DISEASE.		1904.		1903.		1902.		1901.		1900.		1899.		1898.		1897.		1896.		1895.		1894.	
		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.		Pop.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
		53,358		52,139		50,388		44,911		47,166		39,523		35,836		33,804		31,888		30,080		28,419	
Notifiable.	Small Pox	4	1	701	120	13	3	..	..	..	..	..	..	..	..	..	3	..	1	..	1	..	
	Scarlet fever	181	3	119	2	179	6	156	6	136	4	167	4	124	2	148	5	269	4	162	4	100	3
	Diphtheria and Membranous Croup ..	46	10	19	1	60	13	42	8	43	10	39	12	34	7	91	18	28	5	31	12	52	23
	Erysipelas	74	5	63	2	66	3	54	1	66	4	56	4	44	..	50	2	58	..	41	..	53	..
	Enteric fever	38	8	28	6	86	14	65	5	67	6	43	8	23	2	28	5	34	5	30	5	27	5
	Simple Continued fever .. .. .	..	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
	Puerperal fever	1	..	3	1	4	2	4	..	3	..	8	3	6	2	5	2	4	4	4	1	2	..
Non-notifiable.	Diarrhœa and Epidemic Enteritis ..	..	151	..	61	..	46	..	71	..	68	..	126	..	125	..	73	..	61	..	39	..	28
	Enteritis .. .. .	..	14	..	8	..	29	..	39	..	74	..	..	..	..	..	..	..	..	..	..	..
	Measles .. .. .	..	28	..	10	..	19	..	15	..	7	..	16	..	16	..	20	..	36	..	5	..	11
	Whooping Cough .. .. .	..	7	..	19	..	20	..	3	..	30	..	2	..	24	..	9	..	12	..	8	..	17
	Influenza .. .. .	..	10	..	2	..	8	..	6	..	55	..	9	..	..	..	..	..	..	..	..	..
	Phthisis .. .. .	..	71	..	58	..	45	..	38	..	64	..	48	..	38	..	46	..	47	..	32	..	30

Infectious Diseases Notification Act has been in force since March 1st, 1891.

Deaths in the Strand Union and amongst non-residents in the Edmonton Union are excluded from this table.

Deaths of Residents occurring outside the District are included.

APPENDIX.

Report

ON

Summer Diarrhœa

BY THE

Medical Officer of Health.

TOWN HALL,

EDMONTON,

15th December, 1904.

To the Sub-Committee appointed to enquire
into the recent outbreak of

SUMMER DIARRHŒA.

GENTLEMEN,

In accordance with the request of the Sanitary Committee, I beg to present the accompanying report on the epidemic of Summer Diarrhœa that occurred in Edmonton during the third quarter of the present year. The epidemic has been, as you are aware, an unusually severe one, and has placed this district in the unenviable position of third on the list of death rates, from this disease, in the kingdom. As I hope to point out, however, this prominent place in the Registrar General's table is, to some extent at any rate, hardly deserved; nevertheless, the figures themselves indicate a condition of things sufficiently grave to demand the most serious attention of all who are interested in the welfare of the district.

Seeing that Summer Diarrhœa is an epidemic infectious disease, it is necessary, in order to deal with it efficiently, that the measures decided upon for its control should be put into operation some considerable time before the epidemic season sets in. It is very desirable therefore, that an understanding on the nature and extent of these measures should be arrived at as speedily as possible.

The facts examined in this report were, for the most part, obtained by your Woman Inspector, Miss M. M. Pole, in the course of her systematic visits to houses where deaths from diarrhœa occurred. In commenting on them I have sought to point out certain broad lines on which preventive measures might be based in the future. I may state them here as being :—

Firstly—The education of the people in matters relating to their children's health and well-being.

Secondly—A high standard of municipal cleanliness.

Thirdly—Greater control over the milk supply.

Of these the first is by far the most important; the second, besides being a valuable adjunct, may be considered as a means to securing the first. The third can only be obtained in a satisfactory manner by legislation. I have, however, touched on the question of municipal milk supply.

It is from education in domestic hygiene and the care of infants, I feel confident, that the best results in combating this disease are to be anticipated.

I am, Gentlemen,

Your obedient Servant,

A. W. J. MacFADDEN,

Medical Officer of Health.

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REPORT ON SUMMER DIARRHŒA DURING THE THIRD QUARTER OF 1904.

The infant population of Edmonton has suffered heavily from this disease in the past, as will be seen from the following table which I have prepared from material found in the Reports of the Registrar General and in those of your Medical Officers for the past 11 years

Table I.

Showing comparison between mortality from diarrhœa in London and Edmonton for 11 years 1894—1904, together with some meteorological conditions prevailing during the third quarter of each year in London.

Year.	Diarrhœa death rate per 1000 living.		Meteorological conditions prevailing during third quarter of each year in London.		
	Edmonton	London	Rainfall in inches	Days rain fell.	Mean temp. of air
1894	0.98	0.40	7.5	52	58.6
1895	1.00	0.84	6.5	36	62.3
1896	1.91	0.74	8.7	45	60.4
1897	2.16	0.95	6.3	43	60.9
1898	3.40	1.00	2.5	25	62.7
1899	3.18	0.97	4.3	29	63.0
1900	1.44	0.84	4.6	23	61.8
1901	1.58	0.82	5.1	24	61.7
1902	0.89	0.58	5.9	41	59.1
1903	1.11	0.64	12.3	46	59.8
1904	2.82	1.04	4.9	34	61.2

A comparison of the figures of different localities in a matter of this kind, where local conditions count for so much, should be approached with great caution, and deductions made from them should only be of the broadest and most general kind. In the above table the figures for London represent very accurately the fluctuations in the diarrhoea death rate that have taken place in the country generally during this series of years and these, in their turn, have been marked, for the most part, by corresponding meteorological fluctuations, as shown in table I. Edmonton's figures for the ten years present a similar variation. Even in the good years they were considerably higher than those of London, due largely, no doubt, to the peculiar constitution of our population, the inflammable nature of which is seen in the high comparative increase that occurred in such bad years as 1897, 1898 and 1899. This inflammability is the result of our high birth rate and consequent large proportion of children of a susceptible age.

Allowing much for local conditions of population, however, it certainly would seem that in years like these, if not, indeed, in the whole series, there is some justification for assuming that an excessive mortality from summer diarrhoea has been a feature in the past history of the district.

Before entering on that part of my report which deals with the question locally, it will be of interest to examine briefly the conditions, as shown in the returns of the Registrar General, that have prevailed elsewhere during the period under consideration. In London the mortality from diarrhoeal diseases during the third quarter of the present year was the highest recorded in this quarter for the last thirty years, and is in striking contrast with the death rate for the same period of 1903. The following table shows the figures for London, together with the temperature and rainfall observations during the two periods in question :—

TABLE II.

3rd Quarter of year.	Annual death rate per 1,000 from diarrhoeal diseases.	Mean Temp. of Air.	Rainfall.	
			Amount in inches.	Days on which rain fell.
1903	1.51	59.8	12.3	46
1904	3.42	61.2	4.9	34

There is no doubt that the wet summer of 1903 played an important part in controlling the disease.

Among the 76 great towns, most have exceeded their average death rate for the third quarter of the past 10 years from this cause; some of them, *e.g.*, West Ham (7.3), Leyton (6.3) and Walthamstow (6.0), by figures almost, or more than, double their average figures for that period. It is, however, among the lesser towns that the highest death rates are to be found, and the figures shown by Farnworth (10.6), Pemberton (9.8), Edmonton (9.6), Enfield (9.5), and Batley (9.0) are the highest of these. No doubt the probability of error which exists in making statistics for small populations accounts, to some extent, for these high figures, small towns often tending to consist almost exclusively of one class of population, which may, or may not, be one whose conditions of life, or age distribution render it unusually susceptible.

A comparison of the six lesser towns with the highest diarrhoea death rate, and a short examination of some of their other figures will be of interest and enable me to explain the position of this district among them :—

TABLE III.

	Pop. 1904.	Diarrhœa death rate 3rd Qtr. 1904.	Birth rate 1903.	Infant deaths per 1000 births 3rd Qtr. 1904.
Farnworth	26700	10.63	28.6	492
Pemberton	22785	9.83	—	355
Edmonton	54036	9.69	36.5	327
Enfield	46502	9.54	29.1	351
Batley	30924	9.05	27.4	339
Chesterfield	28944	8.70	34.4	396

It is seen from this table that, whilst Edmonton occupies a middle position as regards the number of deaths from diarrhœa per 1000 of the population, its birth rate is much higher, and its infantile death rate lower than the same rates of any of the towns with which it is compared.

Now the great majority of deaths from diarrhœa (about 80 per cent.) occur among children under one year of age, and, in communities where there is a large proportion of children of this age period, in other words, where a high annual birth rate exists, other things being equal, a greater number of deaths from diarrhœa per 1000 of the population is to be expected. It would, therefore, be a fairer test of the actual condition of things, in making comparisons, if the figures were stated as infantile mortality rates, that is, as the numbers of deaths from diarrhœa occurring among children under one year of age, per 1000 births. Unfortunately this figure is not forthcoming for these other districts, and an actual comparison cannot therefore be made; but it is fairly obvious, from an examination of their birth rates and infantile mortality rates, that if such a comparison were possible, this district would almost certainly occupy a more favourable position on the list.

I give in the next table, a comparison under the same heads, between this district and neighbouring communities:—

TABLE IV.

	Pop. 1904.	Diarrhœa death rate 3rd Qtr. 1904.	Birth rate 1903.	Infant deaths per 1000 births 3rd Qtr. 1904.
Edmonton	54036	9·69	36·5	327
Enfield	46502	9·54	29·1	351
Wood Green	37062	3·88	31·4	217
Tottenham	112981	4·83	32·3	233
London	4648950	3·42	28·4	211

Time. Summer diarrhœa made its appearance in the district somewhat earlier than usual this year. The first three deaths from the disease were registered in the week ending July 2nd, these and the deaths per week for the third quarter, the period with which this report is concerned, are shown on the following chart.

It will be seen that the disease rapidly reached its maximum in the week ending August 6th, and thereafter declined somewhat less rapidly, till at the end of September it had practically ceased to give rise to fatal cases. A parallel column showing the meteorological record of the district would be instructive, but this is not available. It is worth noting, however, that the disease did not reach its maximum in London, nor indeed in most of the great towns, until a fortnight later than was the case in this district.

With a view to collecting as many facts as possible, bearing on the question of summer diarrhœa, I arranged early in the season for the Woman Inspector to visit every house where a fatal case occurred and to note, under certain headings, those conditions that were likely to influence the disease. Of the 131 deaths, 121 have, in this way, been fully reported upon. In the case of the remaining 10 deaths particulars as to age, sex and locality alone were ascertainable, owing to the families in which they occurred having removed before the visit was made, or for other reasons. Details as to the numbers, sex and age at death in the three wards, are as follows:—

CHART

Showing the weekly Deaths from Summer Diarrhœa during the third quarter and two preceding weeks of 1903.

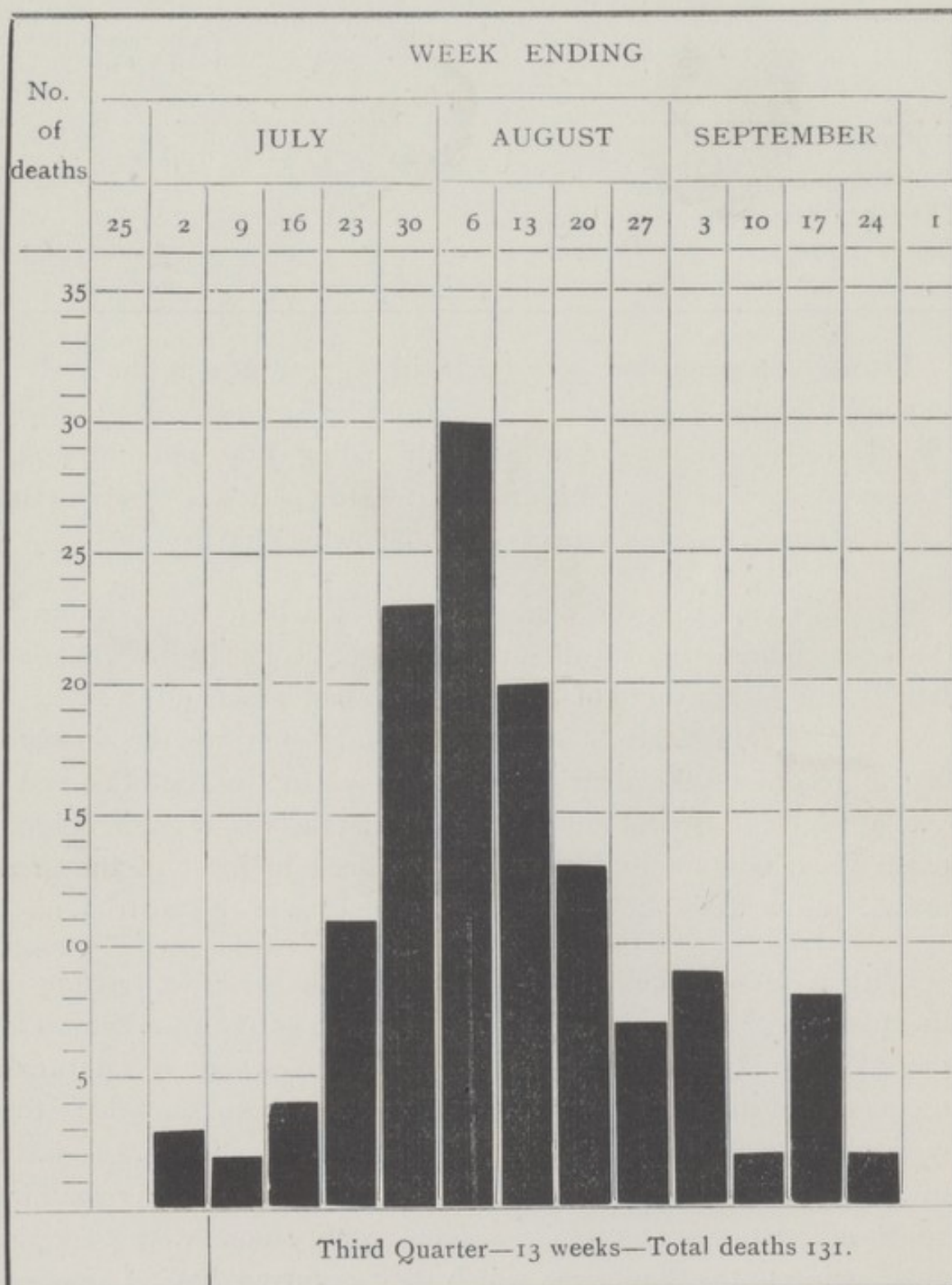


TABLE V.

Ward.	At all Ages.			Under 1 Year.			1 Year & over.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
Fore Street ...	28	18	46	25	13	38	3	5	8
Church Street ...	19	23	42	17	14	31	2	9	11
Bury Street ...	25	18	43	23	16	39	2	2	4
Totals ...	72	59	131	65	43	108	7	16	23

DEATHS IN STREETS AND WARDS.**BURY STREET WARD.**

Deaths.			Deaths.		
Bury Street ...	5		Lowden Road ...	2	
Bounces Road ...	1		Millbrook Road ...	1	
Balham Road ...	1		Marsden Road ...	1	
Chiswick Road ...	1		Nelson Road ...	1	
Cornwallis Road ...	2		St. Joseph's Road ...	2	
Forest Road ...	2		St. Mary's Road ...	5	
Findon Road ...	2		Sutherland Road ...	1	
Gordon Road ...	1		Town Road ...	2	
Graham Road ...	1		Westminster Road ...	5	
Hertford Road ...	2		Wallbrook Road ...	1	
Hendon Road ...	1				
Total ...		40.			

CHURCH STREET WARD.

Deaths.			Deaths.		
Brettenham Road ...	5		Litchfield Road ...	1	
Balfour Road ...	3		Maldon Road ...	4	
Cedar's Road ...	2		Montagu Road ...	6	
Chamberlain Road ...	3		Penn Street ...	1	
Chauncey Street ...	1		Rays Road ...	4	
Chichester Road ...	1		Salisbury Road ...	3	
Cavendish Road ...	1		St. George's Road ...	1	
Fore Street ...	2		Victoria Road ...	2	
Folkstone Road ...	2		Winchester Road ...	7	
Hartington Road ...	1		West Street ...	2	
Kenninghall Road ...	1				
Total ...		53.			

FORE STREET WARD.

Deaths.		Deaths.	
Angel Road ...	3	Short Street ...	1
Cheddington Road ...	4	Sheldon Road ...	1
Dyson's Lane ...	1	Shakespeare Road ...	1
Fairfield Road ...	1	Somerset Road ...	1
Gilpin Grove... ..	1	Trafalgar Place ...	1
Grove Street... ..	3	Union Road ...	5
Haselbury Road ...	1	Wakefield Street ...	1
Huxley Road ...	1	Warwick Road ...	1
Leeds Street... ..	1	Windmill Road ...	1
Pretoria Road ...	1	Woolmer Road ...	1
Raynham Road ...	7		
Total	38.		

Locality. It will be seen from the distribution shown in the table, that there is little to choose between the wards, so far as number of cases is concerned, and this, indeed, was to be expected from the homogeneous nature of the district, both in regard to population and general conditions. A study of the list of deaths in streets, however, shows a marked grouping of the fatal cases in certain areas of the different wards, *e.g.*, certain streets of the Hyde (20), Winchester Road (8), the Langhedge group of roads (5), Union Road and Gilpin Grove (5), St. Mary's Road, etc. (6), and it is significant to note that in 1898, a bad diarrhoea year, the Medical Officer at that time (Dr. Green) refers in his annual report to the last three groups of roads as being areas in which the disease was then very prevalent.

With the houses themselves, in some of these groups at any rate, *e.g.* Winchester Road and the Hyde, there is little fault to find; they are well built and the sanitary arrangements are in good order. In the latter locality the houses are certainly more closely concentrated than is the case in other parts of the district, but even here the space at the back is, in most cases, considerable and would be quite sufficient for the ordinary requirements of health if it were kept reasonably clean. This is not done, however, in the majority of instances and most of the evils that I have noted under "Yards and Gardens" are to be found in the worst kept of these houses.

Age and Sex. The age and sex distribution of the fatal cases follows that which is usually found in epidemics of the kind. The high mortality among infants under one year of age, nearly 83 per cent. of the total, and the large proportion of males (at this age the more delicate sex) among these, are also features that are commonly observed. That the age when infants are most dependent on their mother's skill and care for protection from outside evil influence, should be that in which they suffer most, is an observation of very grave significance.

Employment of Women. The percentage of married or widowed women occupied, to the total of married or widowed women in the district, is only 9·4 per cent, quite a low figure, as is also that of unmarried girls employed to the total living from 10 years old and upwards, viz. 42 per cent. Indeed, so far as the number of employed women is concerned, the figures for Edmonton compare very favourably with those of any other district in the county. Among the 121 fatal cases under enquiry 19 were children of mothers who were otherwise employed than in their own house-work. This gives, in the group of our population concerned with these deaths, 15 per cent. of women employed, as against 9·4 per cent. of such women in the general population. Of course the figures with which I am dealing are much too small to justify conclusions being drawn from them, but it is, perhaps, suggestive that this increased percentage of employed women should be found among mothers of children who have died from diarrhœa.

Feeding. The following table sets out the nature of the food taken by each child, immediately prior to the onset of the illness that proved fatal :—

TABLE VI.

Food.	Total.	Under 6 months.
Breast alone	13	12
Breast with other foods	5	1
Cows milk alone	47	25
Cows milk with other foods	18	1
Condensed milk alone	34	16
Condensed milk with other foods	4	0
Total	121	55

Breast Feeding. I am as yet unable to compare with the above table, figures for this district showing the proportions in which the several methods of feeding occur among a normal healthy group of children of the same age, but it has been found in Croydon that among a certain section of the population very similar to our own, 58 per cent. of children under six months of age are fed by the breast alone, the remaining 42 per cent. being fed by other forms of milk or prepared foods. In the absence of figures of our own, showing this percentage, I may, I think, take this standard of Croydon's as representing, approximately, what would be found in this district. It will, at any rate, serve as a rough indication of the normal frequency of breast feeding among a community not unlike the one in question. If this standard is compared, then, with our group of fatal cases under six months of age, it is found that among the latter barely 22 per cent. have been fed on the breast alone. To state it in tabular form :—

TABLE VII.

Food.	Normal group of 100 living at 6th month of age.	Group of 100 fatal cases of diarrhoea under 6 months of age
Breast alone	58	22
Other forms of food ...	42	78

In this comparison I have taken infants under 6 months, for up to that age at any rate, children ought to be entirely breast fed. The earliest age at death among these infants was 18 days, so that all had lived long enough to be influenced by the food they had received. Though the figures dealt with are small, they still serve to show the greatly decreased proportion of breast fed infants found amongst the fatal cases, compared with an ordinary infant population.

Cows Milk, &c. Of the other forms of food, cows milk occurred most frequently, and was found to be the only food taken by 40 per cent. of the cases investigated. It is not surprising to find this high proportion of milk fed children among the fatal cases. Milk is a fluid that at all times and especially in the summer months, is mostly highly prone to contamination and decomposition, and the conditions under which it is at present conveyed from the cow to the purchaser almost guarantee that it shall receive contamination to the fullest extent. The unclean cow-shed, the ungroomed or diseased cow, and the milker with soiled hands and clothes, are the chief characteristics of most of the dairy farms in the country. Add to these, in many cases, an impure supply of water for cleansing cans, etc., and here, at the very outset, the grossest pollution of the milk supply takes place. In the up-to-date milk shop where the milk arrives some hours later, the shining tiles and vessels (excellent things in themselves) can do little to correct this initial fault. The small general shop, however, where it is sold in pennyworths and half-pennyworths at a time, can and does add to the pollution through the medium of flies and dusty atmosphere.

Similar conditions meet it in the home, itself unclean in many cases, and where the milk is too often carelessly stored and improperly handled. This was a point very frequently observed in the course of the investigation.

The above remarks, to some extent, apply also to condensed milk, which it is seen, formed the food of more than 28 per cent. of the fatal cases enquired into.

Method of Feeding. Observations were also made on the way in which the food was given to the children. In very few instances was there found any attempt at regularity in feeding, the general answer to the enquiry on this point being "we feed him when he cries," showing small appreciation of the fact that even infants can suffer from other conditions of the stomach besides emptiness.

Feeding bottles were employed in 88 cases.
 Those with long rubber tube in 51 cases.
 Boat shaped bottle without tube in 37 cases.
 The remaining 33 were fed by spoon.

Many instances of utterly improper feeding were innocently revealed by young mothers, such as giving infants bread and potatoes and, in one or two instances, fruit.

Condition of Houses, Yards, Inhabitants A note of the state of cleanliness of the house, yard and inhabitants of each of the 121 households that were investigated yields the following analysis:—

TABLE VIII.

		Houses.		Yards and Gardens.		Inhabitants.
Clean	...	49	...	36	...	62
Fair ...	...	43	...	45	...	41
Dirty ...	...	29	...	40	...	18

The words "clean," "fair," and "dirty" were taken as convenient terms to express briefly the conditions that were found, and in applying them care was taken not to fix the standard of cleanliness unnecessarily high. A slightly higher standard would indeed have relegated many of those marked "fair" to the list of "dirty."

Houses. Only 49 of the houses (40 per cent.) showed a satisfactory state of cleanliness, while 24 per cent. were to a greater or less degree unquestionably dirty.

Yards and Gardens. The condition of the yards and gardens was found to be even more unsatisfactory. Only 22 per cent. were clean while 33 per cent. were dirty. The chief causes of this uncleanliness of yards and gardens were found to be (1) the keeping of fowls, either in runs or at large, which not only pollute the small space with their excrement, but give rise to the added nuisance of house refuse being dumped in the garden for their benefit, instead of

being kept in the dust bin, (2) the accumulation of lumber and organic matter in the yards of certain houses where small businesses were carried on. The houses of Edmonton, even the poorest, are, with very few exceptions, well off in the matter of gardens at the back, but there is a regrettable tendency in many instances towards the benefit derived from this extra air space, being counteracted and even converted into a positive danger, owing to the way in which many of these gardens are kept.

Inhabitants. The personal cleanliness of the inhabitants of these households is indicated by the figures shown; 15 per cent., it is seen, were classed "dirty."

In the course of the inspection it was found that irregularity in the collection of house refuse had occurred in 14 instances, that 13 of the houses were not provided with dust-bins, and that other sanitary defects, chiefly in connection with fittings, occurred in 27 instances.

Overcrowding. A tendency towards overcrowding through two or more families occupying one tenement, was observed in those areas where a greater concentration of fatal cases occurred. In a few instances the overcrowding seemed to be the result of choice rather than of necessity, though even where a family had say 3 rooms at their disposal and occupied only two of them, economic reasons for their doing so were mostly put forward. In most instances of this kind of overcrowding, where its real disadvantages and dangers to child life were explained to the people, they readily put their empty room into use again and so improved matters.

Unmade Streets. Of the 63 streets and roads in which fatal cases of diarrhoea occurred 15 were unmade, and in these 24 deaths took place. Though much has been done in recent years to improve matters in this respect, there are still many unmade streets and roads in the district. Some of them are in newly-built parts where there has not yet been time to take them over, some on the

other hand run through quite old property and have been in their unmade condition for years. The effect of an unmade road on the deterioration of adjoining property has more than one illustration in the district. In such a road it is impossible for the inhabitants to maintain cleanliness and neatness in their houses be they never so willing, and the result is, that before long, these houses come to be occupied solely by a class that cares for neither cleanliness nor order.

Experimental Area. Having been led to expect a more severe diarrhoea season than usual this year, and being convinced of the important part played by dust arising from organic matter of all kinds, in favouring the disease, I obtained the consent of the Council to carry out an experiment the result of which, if successful, might serve as a guide in the adoption of preventive measures in the future. An area was selected for special treatment as regards scavenging, road-watering and the removal of house refuse, for the purpose of seeing in how far special attention to such points as these—which are under the absolute control of the Local Authority—might lessen the ravages of the disease. The area selected is that which is bounded by Hertford Road on the west, Seymour and Cornwallis Roads on the east, Town Road on the south, and Bounces Road on the north. It is an area which has a large proportion of young children in its population and lies in the centre of a locality that, in past years, has suffered severely from diarrhoea. I quote from Dr. Green's Annual Report for 1898, in which he says, speaking of summer diarrhoea—"31 of the deaths took place in the Town and Bounces Roads and their bye-roads, together with St. Mary's and St. Joseph's Roads, a part of the district that I have found to suffer severely from this disease."

In the early days of July the streets and sidewalks of the selected area were thoroughly swept and cleaned, and on July 4th the roadways were treated, by means of the watering carts, with a 10 per cent. solution of "Westrumite," a preparation of which the basis is a mineral oil. Two tons of the material were used on the first occasion and the same amount 6 weeks later when the area was again treated. Nothing else in the way of watering was done from

July 4th till the end of the summer. There is little traffic in these side streets, and so far as the prevention of dust was concerned, this treatment proved very satisfactory and must have influenced very considerably the cleanliness of the houses in the neighbourhood. I learn from the Engineer, that the method is likely to secure an actual saving in the expense of street watering, especially in a hot dry summer, when the effects of sprinkling with water alone last for such a short time.

Great care was taken all through this period to secure the regular scavagery of this area and the removal of the house refuse.

On examining the spot map it will be seen that the larger area described in Dr. Green's report maintains, on the whole, with its 32 cases, the evil reputation attached to it, but that this specially treated portion has enjoyed singular freedom from fatal cases of the disease, three deaths only having occurred within its boundaries. Without wishing to claim undue merits for the system employed, I think that in the face of these results, the Committee will agree that there is sufficient justification for continuing similar experiments on a larger scale, in future years.

I may mention here that the apparent success of this special treatment led to its employment in other areas which were found to be suffering severely, and Winchester Road, the Hyde, Gilpin Grove, Union Road, etc; St. Mary's Road and Gardens were similarly dealt with, but not until the middle of August was reached and the epidemic was at its height, and when very little benefit could be expected from preventive measures. As a matter of fact, beyond a reduction of the dust and a saving in watering, no benefit was secured in these latter districts.

Summary.—I shall now summarise the results of these observations and select from the material before us, those conditions that seem to have an influence on the disease. The germ that gives rise to summer diarrhœa is said to be allied to the colon group of organisms and, like others of this kind, it has probably a wide

distribution in all forms of decaying organic matter, *i.e.*, in dirt. Certain conditions associated with a hot dry summer and autumn are favourable to the growth of this organism, and its virulence and power under these circumstances appear to be increased to an enormous extent.

Favoured by such conditions it soon gains access to milk and similar food materials that have not been handled with the utmost care, and so becomes established in the intestine of the infant that is deprived of the protection of breast feeding. The evidence that we have collected on the subject of infant feeding, brings out very clearly the high percentage of artificially fed children found among the fatal cases, and points to the neglect of breast feeding alone, for the first six months of life at any rate, as being by far the most fatal flaw in the infant's armour against such diseases as diarrhoea.

In the large majority of our cases, then, breast feeding was not employed, and the infant had to depend for the most part, on cow's milk, in one form or another, for its nourishment. It is obvious that to insure some measure of purity, the treatment and handling of this milk should be subject to a high degree of skill and knowledge. We have seen how, in reality it is treated:—

1. On its way from the cow to the purchaser,
2. In the home.

I shall deal with suggestions on these two points later.

It was also observed that much ignorance existed amongst the mothers who were visited, as to the proper care and handling of infants. Irregular and careless feeding of the child was found to be very common.

Proceeding to other conditions in the home bearing on this point, we find that 13 per cent. of the mothers were personally unclean, of their houses 24 per cent. were unquestionably dirty, and of the back premises 33 per cent. were ill kept. It is not that these mothers were wanting in solicitude for their children, most of them

undoubtedly did their best, and the very eagerness with which many of them listened to the advice on these points, given by the Woman Inspector, spoke sufficiently for their good intentions.

It was seen that a tendency towards overcrowding existed among many of the families affected, a condition which certainly encourages bad and unhealthy habits of living. Finally, the facts noted in connection with the experimental area have been brought out, and go to illustrate, I think, the good that may be done by taking early measures to secure a good service of scavagery, refuse removal and dust prevention.

I shall now consider the remedies that suggest themselves from the foregoing observations.

Education. Ignorance and consequent neglect are in reality the crucial points of the question of infantile mortality generally, as well as of this important constituent of it. Girls nowadays have no time nor, indeed, inclination, to acquire domestic knowledge in their mother's homes. They certainly have no opportunity at school, and we must not, therefore, be surprised when we hear that while other infectious diseases in the country are showing diminishing death rates, summer diarrhoea and other illnesses contributing to the causes of infantile mortality present no improvement whatever.

In the absence, then, of any proper or adequate teaching in the schools on such matters, much may be done in the future by continuing and expanding the system which the Council has already instituted with success, namely, the employment of a Woman Inspector to visit those houses especially where births have recently taken place, and where the inhabitants cannot afford medical aid and to impart instruction and advice to the mother on matters connected with her infant's health.

In this way the vital importance of breast feeding can be impressed upon the mother, and if for any reason it is impossible for her to supply natural nourishment, she can be shown how to sterilize cow's milk by boiling, how to secure its freedom from

further contamination by careful storage, and how to mix the milk in proportions suitable to the infant's requirements. She can be taught how to keep an infant in good health by regular and judicious feeding and attention to its bodily wants; how, by keeping her house and yard clean, she may minimise the number of flies and other pests that convey infected matter to the child. Such a system is in course of time, certain to be attended with much good.

The Woman Inspector's work might be supplemented by properly organised lay help, and the co-operation of the district nurses in this matter, would be most valuable. The distribution, too, of printed advice of a simple kind would serve to fix the instruction so given in the mother's mind. A sheet containing a warning on the subject of diarrhoea, and setting out the steps to be taken to avoid the disease, was widely distributed this summer, just before the commencement of the outbreak, and was, I think, appreciated by the people.

Improvements in Sanitary Conditions. It is obviously impossible that the Council should undertake the wholesale remedy, by active measures, of such faulty conditions as were found in the people's houses during the investigation.

Reforms of this kind are most difficult to bring about except by a slow process of education. Poverty is a severe check to enterprise, and the discouraging effect that this evil has on the desire for better things amongst our poorest, must be admitted. Moreover, there are many practical difficulties in the way of securing a high standard of cleanliness in small houses that should be taken into account, and the task of performing her house work efficiently and at the same time attending to the wants of several young children and perhaps an infant, throws a heavy strain on the physical resources of the artizan's wife.

It is all the more necessary, therefore, that she should receive as much help and encouragement as possible in her efforts to keep her

house in order, and for this reason a very high standard of municipal cleanliness should be aimed at in every part of a working class community. The effect of such a system would be, not only to save work in the household by lessening the amount of street dust and refuse dust that gains access to it, but by force of example would tend to raise the standard of household and personal cleanliness throughout the district.

We have already seen what appears to be the good effect an attempt in this direction has had in lessening the mortality from diarrhœa in the area that was specially treated this summer, and I feel sure that if applied generally, such a system might claim even greater results than the checking of this disease

The proper scavagery and watering of macadamised streets and roads are difficult and costly. There would be much lessening of expense and better results would be achieved if the surface with which we had to deal were of a more impervious and less pulverable nature. Various kinds of tar macadam are now being used in other districts for road making, with encouraging results. Their cost is, I believe, not much greater than ordinary macadam and the labour and expense involved in their cleansing and up-keep are considerably less.

Milk Supply. Little can be done in controlling the milk supply till powers are obtained by local authorities giving them a right to inspect and regulate *the sources of supply outside* their own district. There is no doubt that, in course of time, the public will come to ask for the same degree of purity in the milk supply that it has learnt to demand in that of the water supply, and such an event is much to be desired.

The question of establishing a municipal supply of milk for infant feeding, naturally suggests itself in a report of this kind. The idea has had many advocates, and there are several depôts of the sort in existence in this country at the present moment.

The two main lines on which such establishments may be managed are the following:—

1. Appropriate mixing with sugar, water and cream (so-called “humanizing”) of milk obtained in bulk from wholesale sources; sterilizing in air-tight bottles, each containing sufficient for one feed; retailing to the public, either from the sterilizing dépôt or from distributing stations in various parts of the district.
2. Involves the maintenance of a herd of disease free cows and a well appointed dairy farm, where every possible source of contamination of the milk, during and after milking, is removed. The milk should be received from the cow in previously sterilized bottles, which should be immediately sealed and chilled. They should then be distributed without delay and marked “pure untreated cow’s milk.”

The latter method is the ideal one for securing pure clean milk—in contradistinction to sterilized or treated milk. It is not, so far as I am aware, employed as yet in any municipal dépôt.

A process like the former tends to produce much the same moral effect on the mind of the dairy farmer as formerly did the addition of boric acid and formaline to milk—it demonstrates to him that clean milk is not absolutely necessary and, in fact, may be got on very well without. The latter method on the other hand, would, in addition to securing good milk to the purchaser, be an object lesson to every dairy farmer in the country, of what could be effected in the way of milk preservation by simple cleanliness.

The following are the advantages claimed for municipal milk dépôts as established in this country:—

1. They provide a germ free preparation of milk suitable to the wants of young infants.

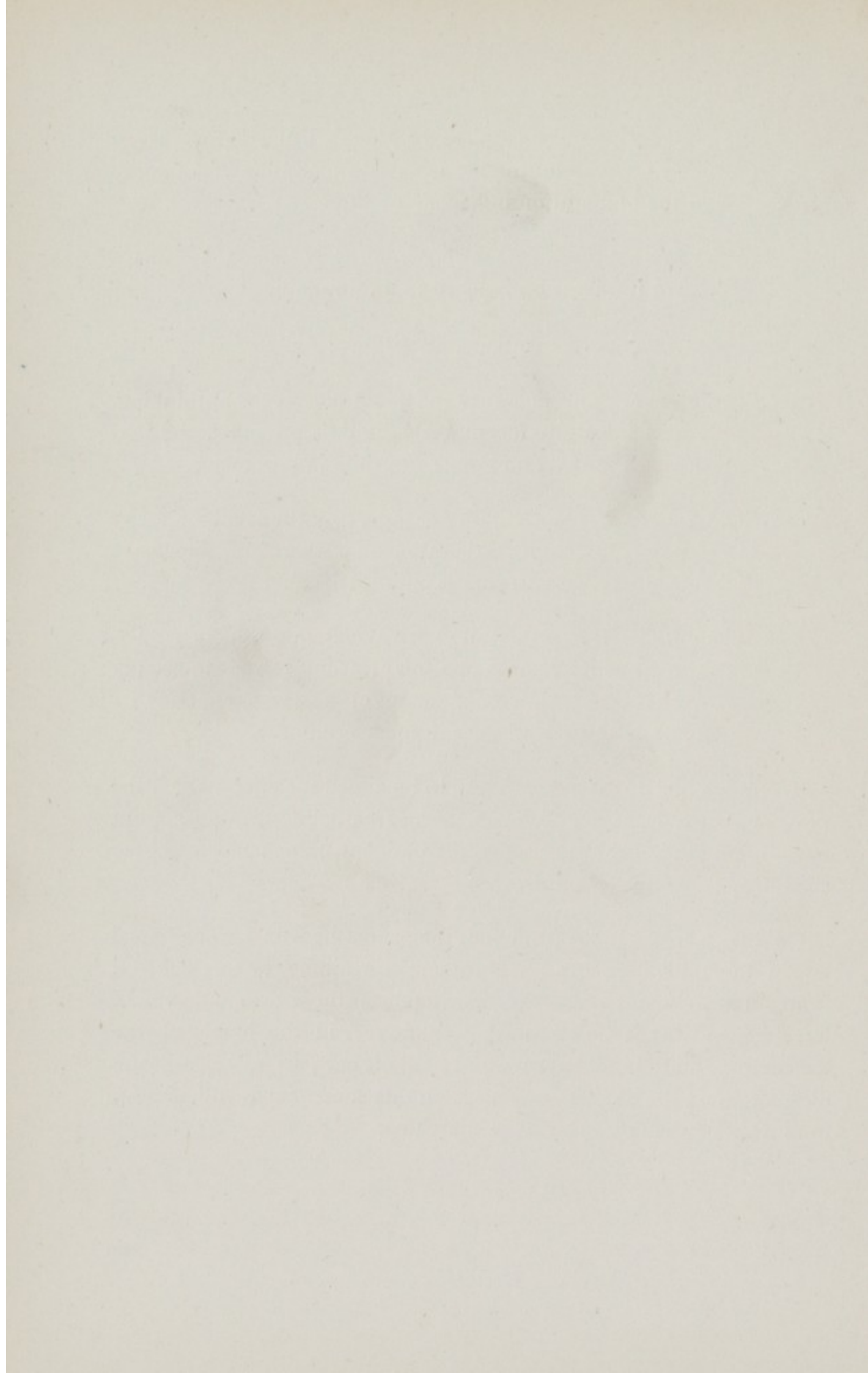
2. As the bottle only requires heating a little, before use, a busy and careful mother is saved much time and anxiety in the preparation of her infants' food.
3. A careless mother has her opportunities for doing her infant harm in this way, reduced to a minimum.

The objections may be mentioned as follows:—

1. Their tendency to encourage the idea amongst the unthinking, that a substitute for mother's milk is provided, and that breast feeding is no longer of prime importance.
2. The weight of responsibility assumed by the local authority necessitating an elaborate and therefore expensive machinery for carrying it out.
3. The milk itself is rather an expensive item to a poor family, costing as it does for one infant, from 1s. 6d. to 2s. per week. For this reason it might be least available for many of those who were in most need of it.

To these objections should, I think, be added the effect which the provision of a milk supply made germ free by sterilization, might have in postponing the time when the public will demand a supply *naturally pure* from the source.

On the whole, I am of opinion, that most benefit is to be hoped for, in the milk difficulty, as in others pertaining to this subject, from an enlightened system of instruction in those principles that I have referred to; for, after all, the situation is in the hands of the mother, and intelligent care and skill on her part will guard the infant against the dangers arising from this source, as it will, indeed, from most of the other causes of diarrhœa.



Edmonton Urban District.

REPORT

OF THE

SANITARY INSPECTOR

FOR THE YEAR 1904.

SANITARY DEPARTMENT,

TOWN HALL, EDMONTON.

TO THE CHAIRMAN AND MEMBERS OF

THE EDMONTON URBAN DISTRICT COUNCIL.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to present to you my report on the work done in the Sanitary Department for the year 1904.

During the year under report one or two small enactments have been placed on the Statute book, by the past Session of Parliament, which are directly connected with Public Health work, viz. :—

The Public Health Act, 1904 (4 Edw. VII., chap. 16). This is strictly a one-clause Act, to enable regulations to be made for carrying into effect conventions with respect to the prevention of danger arising to Public Health from vessels, and the prevention of the conveyance of infection by means of vessels, etc.

The Shop Hours Act, 1904, also places responsibility on Local Authorities, with respect to early closing, although until the persons affected make the necessary applications the Local Authorities have no power to act.

The Employment of Children Act, 1903. When this Act is applied or put in force, the officers, who would probably have the best knowledge of the children affected in this district, would be the school attendance officers, as they are in touch with them during school age; but this is a matter which will need the earnest consideration of the Council to enable the best results to be obtained.

COMBINED DRAINAGE.

The law on this question remains in *status quo*, and several cases during the year under report have been decided against the Local Authorities concerned. The Public Health Amendment Act, 1890, did much to improve the definition of the word "Sewer," etc., where two or more owners were concerned, but where only one owner exists, the law remains the same, and I can only reiterate my former statements, that I welcome the time when the present legal aspect will have entirely disappeared, as it has a deterrent effect, and prevents work proceeding as quickly as it should do.

NEW DEEP SEWER, ANGEL ROAD.

During the year several factories have been connected to the new deep sewer connecting with the Angel Road Pumping Station. The whole of the drainage of Woodbine and Cook's Ferry Terraces has been reconstructed, and connected also with this new sewer, and the cesspool formerly taking the drainage properly filled up. I need hardly mention that the efficient drainage of the cottages is a very great relief to my mind as the cesspool which existed previous to the drainage was a continual source of annoyance and a serious nuisance to all in the vicinity. However, this is all changed and the improvement much appreciated by residents in the neighbourhood.

There remain but few old houses to be connected and these are receiving attention,

FLUSHING OF SEWERS AND DRAINS, &c.

The regular flushing of drains and sewers during the summer months, from April to September, and about two months during the winter, has been carried out, with good results. The channels through the main road are regularly washed down on Saturday mornings.

On Sunday mornings, during the hot weather, the channels and gullies were flushed with a powerful disinfectant and deodorant, special attention being paid to places where costers' fish barrows and vehicular traffic draws up, and the result obtained was a decided success. This was especially noticeable on the Green, where two fish stall holders do a large trade.

While fish stalls stand near channels, nuisances more or less will arise.

TEMPORARY BUILDINGS, CLAYERING'S FARM.

This building is still the store for the bedding and utensils, etc., of the Temporary Small Pox Hospital and contains much valuable property for Small Pox purposes.

The goods stored are regularly overhauled and kept in good condition, and should be a valuable asset when the proposed Joint Small Pox Hospital Scheme for Middlesex comes into effect.

The building could afterwards be retained for emergency purposes, and in such a district as Edmonton, with an ever increasing population, would be of great value in a sudden outbreak, or other special circumstances.

Any material that can be utilised with safety is being used upon various works at the Council's Farm, viz., timber, ironwork, etc.

The Council are aware that the steam disinfector, in which all clothing from infected houses in the district is disinfected, adjoins the temporary hospital, where the caretaker resides, and even if the temporary buildings were not there it would be necessary to have someone in residence near, or such a valuable apparatus would soon suffer.

The Caretaker of the temporary hospital also has charge of the disinfecting apparatus, and disinfects all clothing brought there.

PUBLIC AND PRIVATE URINALS.

The whole of these have been regularly inspected. Those attached to public houses need much attention, although in the majority of cases the owners are not to blame, as much trouble is still given by those offensive persons who seem absolutely destitute of common decency.

One has been repaired, channelled and drained.

One water supply laid on.

One altered and enlarged.

A public house, having a gateway entrance from Hertford Road to the stables, &c., at the rear of the premises, is a cause of considerable trouble owing to the gates, instead of being closed, being allowed to remain open. The public use the walls and the rear of the gates as a convenience. I have seen the freeholder and the brewers on the matter, and also written the proprietor of the public house. The brewers have had a new gate erected, but the proprietor of the public house seems little inclined to keep the matter under observation. However, should the nuisance continue, some further action will have to be taken.

The Council possess four public urinals. These are cleansed twice a day during the week, and once on Sundays, and credit is due to the present man for keeping the urinals in a much better

condition than formerly, although the existing iron urinals will never give much credit for the labour expended upon them. They are scraped and coated with hot coal tar as occasion requires.

I also wish to reiterate my statement of former years, viz., "that I hope the time is not far distant when public conveniences will be in evidence on the Green and at Angel Road for both sexes." Especially does this apply to the Green. Indeed, in this case the necessity for such accommodation is apparent to everybody. Your Medical Officer of Health, agreeing with my recommendation, recently reported this matter to the Sanitary Committee, and as a result your Engineer was instructed to prepare plans.

I regret that an opportunity has not yet presented itself for placing a convenience at the northern end of the district, although there is a three-place urinal belonging to the premises known as the "Cock" Public House, which is much used by the general public. A convenience here would be of great public service.

The need of such a convenience will be more especially felt when the electric trams are in working order, and the Council may perhaps be able to erect some such convenience on their own land at Houndsfield.

MORTUARY.

The Council's mortuary consists of a Post Mortem room, with the necessary appliances, and an ante-room for medical practitioners; also two mortuary chambers, one for infectious bodies and one for non-infectious bodies. The interior of each is faced with white glazed bricks, and is disinfected and washed after the removal of each body.

During the year 112 bodies were received into the mortuary and 101 inquests held.

It was found necessary to detain three bodies in the mortuary after inquests, although the parents were anxious to remove them to their own homes to await burial. But owing to the fact that decomposition had set in, and after explaining the facts to the

parents they saw the necessity of retention. In each case the bodies were taken direct to the cemetery on the day of the funeral.

Two bodies were removed from the infectious disease hospital to the mortuary chamber to await burial.

A case of diphtheria was notified, and as usual the premises were at once visited, but on arriving at the house we found the child was dead and lying on a side table. The parents were a very dirty class of people. A shell was at once obtained, and we removed the body in the Council's ambulance to the mortuary and arranged for the burial.

I received information that a child was lying in a house unburied. On visiting, I found a still born child had been lying in a room for eleven days. The mother was in bed and the father was in prison. This child was at once removed to the mortuary and arrangements made for the burial, forthwith.

My attention was called to a child having been dead several days, and on going to the house I found the parents were very respectable and had been endeavouring to get money enough to bury the child decently, but unfortunately the father was out of work and the undertaker refused to bury unless the money was forthcoming. The body was rapidly decomposing, and was removed to the mortuary and arrangements made for burial.

I was informed that a child had been dead several days. I visited the house and found the body of the child lying on a side table in a living and sleeping room, and had been there several days. The mother seemed to trouble little about it, casually observing "she could not afford to bury the body." This body was at once removed to the mortuary and arrangements made for burial.

Three other bodies were deposited at the mortuary by undertakers to await burial owing to no accommodation for retention of bodies in the houses.

The mortuary attendant's residence being some ten minutes walk from the mortuary, and he being at call night and day, may I suggest that in a probable re-adjustment of his salary that a residence adjoining the Town Hall be provided for him in lieu of part of his salary. He would also then be able to keep a closer watch on the Council's property.

INFECTIOUS DISEASES HOSPITAL, WINCHMORE HILL.

It is a pleasure to know that the Joint Hospital Scheme with Enfield is being brought to a satisfactory issue. It will be of great assistance to the district to have plenty of accommodation when necessity arises, besides doing away with the necessity of erecting a hospital in our own district.

My thanks are due to the Medical Superintendent and the Matron of the Hospital for their consideration and assistants in taking cases beyond our prescribed numbers, when occasion arose, and patients and parents at all times express their gratitude for the kindness shown them.

AMBULANCE, BEDDING VANS, &c.

The Council possesses two ambulances, one for ordinary infectious disease and one for smallpox, and one bedding van for the collection of infectious bedding, and one bedding van for returning disinfected bedding. Both these vans are lined with zinc.

The Council have recently added a brougham for bringing patients home from hospital after recovery. This is certainly a great acquisition, as the hospital is some three miles away, and previously many patients had to return home under very trying conditions. Especially was this so in their weakened condition, and during wet and frosty weather.

No. of journeys made by Council's ambulance				
to hospital	...	...	...	119
No. of journeys of bedding van to collect bedding				146
No.	do.	return bedding after disinfection		146
No.	do.	brougham to hospital		17

DISINFECTIONS.

The steam disinfecting apparatus continues to work well. It has been overhauled by the Insurance Company and passed as satisfactory. The doors have had two new rubber rings fitted. During the year:—

- 555 rooms were disinfected.
- 147 rooms stripped and cleaned.
- 5849 articles of clothing, &c., disinfected.
- 236 articles destroyed.

DISINFECTANTS.

The public fully availed themselves of the opportunity generously afforded them by the Council of obtaining disinfectants free (fluid and powder). The number of applicants during the year was 35,723. This was an increase on any previous year. The disinfectants are supplied between 9 and 10 a.m., and 4 and 5 p.m. Saturdays 9 and 10 a.m. only.

This entails a lot of labour, but no doubt the results are beneficial if only to encourage cleanliness.

SLAUGHTERHOUSES.

The number of these on the register is six, of which four are licensed under the Public Health Amendment Act, 1890, renewable yearly. Only two remain in the district that are of old registration, one very old slaughterhouse having been demolished during the year.

The advantage of slaughterhouses being licensed annually is obvious, especially so, should the Council, in the future, decide to provide a Public Abbatoir.

Speaking generally, the slaughterhouses in the district are kept in conformity with the Bye-laws, and when it has been necessary to call attention to any defects, these have been at once remedied.

DAIRIES, COWSHEDS AND MILKSHOPS.

In 1894 there were 11 registered cowkeepers, but now there are only four on the Register.

The Bye-laws dealing with cubic space in cowsheds have done much to reduce their numbers, and no doubt the year 1905 will see a further reduction, as most of the premises now in use will not permit of extension.

The periodical limewashing and cleansing is carried out, but requires constant supervision. Tactful persuasion is the best mode of procedure as too much pressure might have the effect of keeping cows out of the district, and by this means introducing milk supplies from unknown sources, and probably from far worse surroundings and conditions, than those we have under our own control.

I am pleased to say there is a tendency amongst milksellers generally, to realise the necessity of improving the conditions under which milk is stored. One cowkeeper has already adopted steam apparatus for cleansing, scalding and steaming the utensils. Also one dairyman and milkseller has done likewise, and I feel convinced that if the milkseller is advanced enough to adopt methods of an up-to-date character, and invite inspection of the conditions under which he supplies the public, there is no doubt the increase in his trade will repay the outlay.

UNSOUND FOOD.

During the year the following unsound foods were seized and condemned :—

2 boxes bloaters.	1 kit hake.
1 box kippers.	1 kit fresh herring.
1 barrel herrings.	1 flat shrimps.
1 pad mackerel.	1 pigs' head.
1 trunk plaice.	6 rabbits.
8 baskets strawberries.	

In the last case, viz., the eight baskets of strawberries which were seized from a stall on the Green, the owner left the district and has not since been seen.

In the case of the rabbits, these had been given to a little boy to make what he could of them. He kept them at home overnight, and when I found him endeavouring to sell them, he was, of course, ignorant of the fact that he was liable to prosecution.

These matters were duly reported to the Sanitary Committee.

Generally speaking, retailers purchase from wholesale dealers, and buy from samples opened for their inspection. In many cases on the articles arriving in this district they have been found unfit for human food.

In such cases the retailers bring the goods to the office, the goods are seized, dealt with by a magistrate, and a certificate given stating the food has been destroyed. This enables the owner to recover the amount paid and prevents the tendency that would otherwise exist to expose such food for sale.

Stalls and shops, where fish, fruit and other foods are exposed for sale for human consumption, are regularly inspected.

COLLECTION OF FISH OFFAL.

The method of collecting fish offal in this district continues to be much appreciated, as it is found that directly a fish-dealer comes into the district he soon makes application for the Council's air-tight receptacles. The number of collections varies with the weather or the supply and demand for fish.

The Council's charge for the collection and loan of each pail is fourpence, and although this does not cover the cost, it has proved very beneficial in assisting to abate the nuisance, inseparable from such business.

The fish offal is treated with lime and buried at your Council's Sewage Farm. In districts where refuse destructors are in use, this offal is destroyed with the refuse.

The senior office clerk calls on the various fish dealers once a week and gives a receipt for monies taken.

Some difficulty is found when fish dealers leave the district to get the pail returned. However, to obviate this, all applicants now have to make a deposit of 2s. 6d.

No. of fish dealers on the Register	...	23
No. of pails collected	...	3125
Amount collected	...	£52 1s. 8d.

DUST COLLECTION.

The whole of the house refuse will in future be deposited at the Council's Sewage Farm, and will be useful in raising or lightening the land, after the rough matter has been removed by sorting.

Screened house refuse, ashes, &c., would also be a valuable commodity to those engaged in the brick industry. Considerable quantities of screened house refuse are being now brought into the district for the purpose of brick making.

It will be necessary to make a permanent road to the shoot.

The time is not far distant when I hope a dust destructor will be in evidence, as judging from the results obtained from the working of destructors in several districts, this would be an advantage and enable a very offensive product to be effectually disposed of.

Forty-four complaints were received of non-removal of dust, but this was due in several cases to the fact that the occupiers were out at the time of call or that it was inconvenient at the time for removal.

New dustbins provided, 186,

BRICKFIELDS.

During the year complaints were received of smells arising from the brickfields. On investigation, it was found that the smells complained of were due to the firing of the waste products of house refuse (*i.e.*, rags, vegetable and animal matter, &c.)

The smells were most pestilential, and undoubtedly a vile nuisance, and occurred at intervals.

A number of visits were paid and the owners gave an undertaking that no refuse in future would be burned. However, a large accumulation of this refuse was subsequently fired, and I was given to understand that this was done by some unauthorised person. The whole of the burning refuse was covered down with earth, and since that time no refuse has been seen burning.

WATER SUPPLY.

Nearly the whole of the district is supplied by the Metropolitan Water Board.

There are at present several houses supplied by pumps from shallow wells. Some of the pumps supply water for dietetic purposes, and also a separate cistern for flushing the water closets.

Some pumps supply water for domestic purposes only, closet accommodation being earth closets.

One factory obtains its water supply from the old River Lea, that for drinking purposes being filtered before use.

Samples of these waters are submitted for analysis from time to time, and during the year three samples have been returned as unfit for drinking purposes, and the Metropolitan Water Board supply laid on.

Wells closed	...	...	...	3
New cisterns provided	...	...	...	11
Repairs to water fittings	...	...	...	55
Cisterns repaired, covered, cleansed, &c.	...	...	...	111

DRAINS, PAYING OF YARDS AND DAMPNESS.

The following is a summary of the work done in connection with the paving of yards, drainage and prevention of dampness of existing premises. The number of drains—

Examined, tested and exposed was	...	...	442
Unstopped, repaired and trapped	...	...	278
Waste pipes disconnected	...	...	9
Soil pipes and drains ventilated	...	...	74
Disconnecting traps and chambers inserted	...	...	117
Drains reconstructed	...	...	119
Yards paved	...	...	97
Roofs repaired	...	...	98
Guttering and rainwater pipes repaired	...	...	170

The following properties are not connected with the Council's sewer, owing to the sewer not being within the prescribed distance, viz., 100 feet.

Hermitage	...	...	Earth closet accommodation.
Weir Hall	...	...	Cesspool.
Bunce's Farm	...	...	Earth closet.
Jews' Corner Cottage	...	...	Earth closet.
Edmonton Council's Cemetery House	...	...	Cesspool.
Carter Page, Nursery	...	...	Cesspool.
Messer's Nursery	...	...	Cesspool.
Cook's Ferry Cottages, The Marsh	...	...	Pail closet.
Messrs. Ridley Whitley's Factory	...	...	Cesspools and pail system.

SMOKE.

Eleven nuisances from smoke occurred during the year. In two cases the coal used was of a very inferior quality, but the real cause

was from irregular stoking. I took observations on several occasions and found the nuisances greatly diminished.

It is difficult to understand why owners do not pay more attention to this important matter, as by firing lightly and oftener, and by admitting the necessary air to the furnaces to assist combustion, they would save fuel and get a better result.

The most serious nuisance that occurred was from the Great Eastern Railway engines, giving off heavy smoke when running into the station. I communicated with the Great Eastern authorities on the matter and the engine drivers were cautioned, and one of their Smoke Inspectors instructed to take observations, apparently with a beneficial result.

STABLES.

The number of stables on the Register is 44, but the number fluctuates from time to time. These require considerable attention, as owing to the number of small traders, little stables spring up in yards not fitted for the purpose, and have to be dealt with, either by being removed, or by the enforcement of proper paving and drainage.

• Constant supervision is necessary to see that when sheds are erected, they are not eventually used as stables.

The removal of manure is also of much importance, and a great deal of time has been spent in persuading those concerned, to comply with the Bye-laws. There are still some defaulters who will have to be summarily dealt with, unless they pay more systematic attention to this matter.

No. of receptacles for manure provided ...	...	5
No of stables drained...	...	1
No paved ...	...	1
No. of sheds discontinued to be used as stables		
owing to their being unfit for the purpose ...		12

OFFENSIVE TRADES.

There are no offensive trades in the district, as defined by the Public Health Act, and these cannot be established without the consent in writing of the Sanitary Authority.

A small domestic factory has, however, commenced (scalding and trimming whalebone). This comes very near the offensive trade of a bone boiler, and needs to be kept under close observation.

Marine stores and fried fish shops, in my opinion, should not be allowed to be established in the district of any Urban Authority without the consent of such Authority.

HOUSING OF THE WORKING CLASSES ACT.

The houses, No. 10 & 11, Eaton Place, for which the Council instructed notices to be served were put in tenantable repair, thereby preventing any further action under the above Act being taken, but they have been without tenants almost ever since, and the time is not far distant when they will become in such a bad condition as to be again dealt with.

Nos. 188 & 190, Hertford Road are still closed.

Nos. 61 & 63, Hertford Road, and Nos. 1, 2 & 3, Whitehead's Yard, upon which notices were served have been demolished and a better class property is in course of erection.

The property, Nos. 9, 10 & 11, Walbrook Road, are occupied and have caused some considerable trouble. Unfortunately the owner could not be found, and the only alternative is to deal with the occupiers, although this will not affect the empty houses, No. 8, 12 & 13, Walbrook Road, and Nos. 43, 45, 49 & 52, Goodwin Road.

During the year 22 cases of overcrowding were found to exist. These were all abated. I regret to say several of these were old offenders.

PETROLEUM LICENCES.

There are only seven on the Register :—

- (1) The Anglo-American Oil Company, situate Pickett's Lock, have three separate stores for motor spirit, benzoline, &c., and are licensed for 4,000 gallons. The stores are well-situated and every precaution is taken to prevent accidents. The spirit is sold in sealed tins, which are not allowed to be opened on the premises.
- (2) The General Petroleum Company, licensed for 1,200 gallons motor spirit, are about to erect a good, well isolated store, on vacant land near Montagu Road, for the storage of motor spirit, &c.
- (3) Mr. Rayfield Seamer, Bush Hill Park, licensed 150 gallons motor spirit. A good brick-built store, situated some distance from a dwelling house.
- (4) Mr. Cornwall, 441, Fore Street, is licensed to store 40 two-gallon tins motor spirit, and 72 lbs. Carbide of Calcium. The store is a good brick-built building, with an iron door, some distance from the dwelling house.
- (5) Mr. Jarvis is licensed to store 40 gallons motor spirit. The store is of iron, and situated some distance from a dwelling.
- (6) Messrs. Snelling & Co., licensed to store 30 gallons naphtha and benzoline. Small brick-built store, iron door, and away from dwelling house.
- (7) Mr. Nutkins, licensed to store 15 gallons benzoline. Brick-built store, iron door, away from dwelling house.

The Council make a charge of five shillings for a license to all those who store more than 10 gallons, and two shillings and sixpence to those storing less.

SCHOOLS.

These are inspected from time to time, special attention being paid to the latrines, to see that cleanliness is maintained.

The sewage drain of one school has been reconstructed, and additional lavatory accommodation provided at another.

The drains are thoroughly flushed periodically by the Council's flushing hose.

During the holidays, four schools were disinfected.

Total number of visits, including those of the Female Assistant Inspector, 112.

DITCHES AND WATERCOURSES.

The whole of these were inspected at irregular intervals, and as usual, found to be the receptacles for any refuse that persons could not otherwise dispose of. This district having the dual system of drainage, the surface water discharging into the water courses requires constant attention, to see that foul water is not admitted to the surface drains.

During the year, two foul water drains have been disconnected from the watercourses, and 349 articles, consisting of dead animals, old clothes, etc., were removed and disposed of.

GIPSIES.

During the year, 592 gipsies were seen and removed. Two were summonsed and convicted. Other summonses were taken out, but by some unaccountable means the parties summonsed seem to know just when the summonses were to be served, and cleared off until after the time had expired for hearing, so that they could not be served. The few who have to pay the penalty are helped out of their difficulty by a subscription from the whole gang.

Many of the old offenders have cleared out, but only to send in a fresh contingent.

Some of these people are clean, but the majority live under the most wretchedly insanitary conditions, destitute of the very elements of cleanliness and morality. Many of them, to prevent overcrowding, in their vans, sleep in tents on the ground.

The children are taught to prevaricate and to appropriate anything within their reach.

It is almost useless to serve notices on them, for they remove from the district for a few days and return with a new name.

They are a continual source of worry, and cause a large expenditure of time to the Sanitary Department.

Owing to their being continually moved about, a few have taken houses in Brettenham Road, and keep their vans in the back yards during the winter months. Their children then come within the jurisdiction of the School Authorities, but on the approach of Spring they soon vacate the houses and become a constant source of annoyance to respectable citizens; the children no longer attending school.

However, I am hoping some of their favourite haunts will be built upon shortly. Every year the area of their operations in this district becomes more restricted.

RIGHT-OF-WAYS.

There are two passages or rights of way, one leading from Church Street to Chichester Road and known as Winterburns Alley. This passage is made a continual source of nuisance and requires regular cleansing and disinfecting.

Also one leading from Hertford Road to Chiswick Road. This also requires similar attention, but the nuisance is not nearly so bad as in the former case.

The end of the Crescent and back entrance to same has also to be kept under observation or nuisances would soon arise. Many other places need similar supervision, owing to the filthy habits of a certain class of people.

HOUSES LET IN LODGINGS.

When the Council have these Bye-laws settled, and they are in force, it will certainly be necessary to appoint another Assistant Inspector, as this will greatly increase the work of the Sanitary Department.

CANAL BOATS.

During the year, 72 boats were inspected, and 10 contraventions of the Canal Boats' Acts and Regulations were found as follows:—

No certificate produced	...	...	...	5
Dirty cabin ...	...	...	...	1
After cabin defective ...	...	...	...	1
Cabin tops defective ...	...	...	...	2
Name on boat not in accordance with certificate produced	...	...	...	1
Total				10

The number of visits paid to the Canal was 68.

Speaking generally, the Canal Boats registered by districts abutting on the Lea are in good condition, and are seldom occupied other than by males.

The work done under the Act is annually supervised by H. M. Inspector of Canal Boats.

CLERICAL WORK.

This is continually on the increase and annexed will be found a summary of the work done.

No. of letters written	...	...	...	1759
No. of letters etc. filed for future reference	...	...	...	2621
No. of notices sent to Schools	...	...	...	705
Ditto Public Library	...	...	...	105
Ditto Technical School	...	...	...	52
Preliminary notices...	...	...	...	1194
Final notices	...	...	...	121

FACTORY AND WORKSHOP ACT.

The number of inspections of bakehouses, workshops, factories, etc., is included in your Medical Officer's report as required by the Factory and Workshop Act, 1901.

Herewith I append the statement of work done, under its various headings, in the form required by the Medical Officer of Health for the County Council of Middlesex.

PROPOSED NEW GENERAL OFFICE, &c.

I trust the Council will be able to give me the increased general office accommodation as speedily as possible, as under the present conditions the work is much hampered.

I also hope the private telephonic communication to Enfield Hospital will soon be in evidence, as it is most important that we should get the daily bulletin of the patients as early as possible every morning, and to let the Matron know of cases of infectious disease being sent into hospital. On Sundays we have no possible communication other than to walk, or go by bicycle, to inform the Superintendent of a patient being sent to hospital.

I am pleased to say that my assistants continue to perform their ^{du}~~ne~~ties with tact and efficiency.

In bringing this report to a conclusion, I desire to express my thanks for the support I have received from my Committee and the Council.

I have the honour to be, Gentlemen,

Your obedient servant,

RICHARD JOHN BUTLAND,

Inspector of Nuisances.

(C II.) DISTRICT OF EDMONTON.—COUNTY OF MIDDLESEX.—SANITARY WORK, 1904.

Sanitary District.	Schools.	Workshops and Work-places.	Laundries.	Bake-houses.	Slaughter houses.	Cow-sheds.	Dairies and Milk-shops.	Unsound Food.	Adulterated Food.	Offensive trades.	Mortuaries.
	Number in District. Periodical Frequency or Number of Inspections. Number found defective.	Number in District. Periodical Frequency or Number of Inspections. Contraventions of Factory Acts.	Number in District. Periodical Frequency or Number of Inspections. Contraventions of Factory Acts.	Number in District. Periodical Frequency or Number of Inspections. Contraventions of Factory Acts.	Number on Register. Periodical Frequency or Number of Inspections. Contravention of Bye-laws.	Number on Register. Periodical Frequency or Number of Inspections. Contravention of Bye-laws.	Number on Register. Periodical Frequency or Number of Inspections. Contravention of Bye-laws. Animals seized.	Articles or parcels seized.	Samples taken, Found adulterated.	Number of premises in District. Periodical Frequency or Number of Inspections. Contraventions of Bye-laws. Accommodation.	Number of bodies received.
EDMONTON	16 112 2	160 323 3 32	82 2 32 171 6	6 97 2 4 30	3 54 129 2	2 boxes bloaters, 1 box kippers, 1 barrel herrings, 1 pad mackerel, 1 trunk plaice, 1 kit hake, 1 kit fresh herrings, 1 flat shrimps, 1 pig's head, 8 baskets strawberries, 6 rabbits.		Samples taken by Middlesex County Council.	— — — —	1 modern mortuary accommodation for 6 bodies.	112

(C III.)

[illegible]

C (IV.) DISTRICT OF EDMONTON.—COUNTY OF MIDDLESEX.—SANITARY WORK, 1904.

Sanitary District.	Disinfection.			Dust.			Dampness.			Sundry Nuisances Abated.			Contagious Diseases of Animals.			Infant Life Protection Act.												
	Rooms fumigated.	Rooms stripped and cleansed.	Articles disinfected or destroyed.	Dust-bins repaired.	New bins provided.	Movable receptacles substituted for fixed.	Periodical frequency of dust removal.	Number of complaints of non-removal received.	Roofs, repaired, &c.	Guttering and rain pipes repaired, &c.	Gardens, Areas, &c., levelled and drained.	Yards paved and drained.	Surface adjoining houses paved.	Dry areas provided.	Ventilation below floor provided.	Basements rendered impervious.	Overcrowding.	Smoke.	Accumulations of refuse.	Foul ditches, ponds, &c., and stagnant water.	Foul pigs and other animals.	Other nuisances.	Outbreaks.	Animals infected.	Animals destroyed.	Number of licensed premises.	Number of children.	Number of deaths.
EDMONTON.	555	147	6085	—	186	—	Weekly	44	98	170	—	97	—	1	1	—	22	11	11	1	16	349 animal carcasses, offensive deposits, etc., removed from waste land, ditches, etc.	—	—	—	Under control of the Guardians of the Poor.		