

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

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The Urban Sanitary District

OF

FINCHLEY.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the Year 1894,

BY

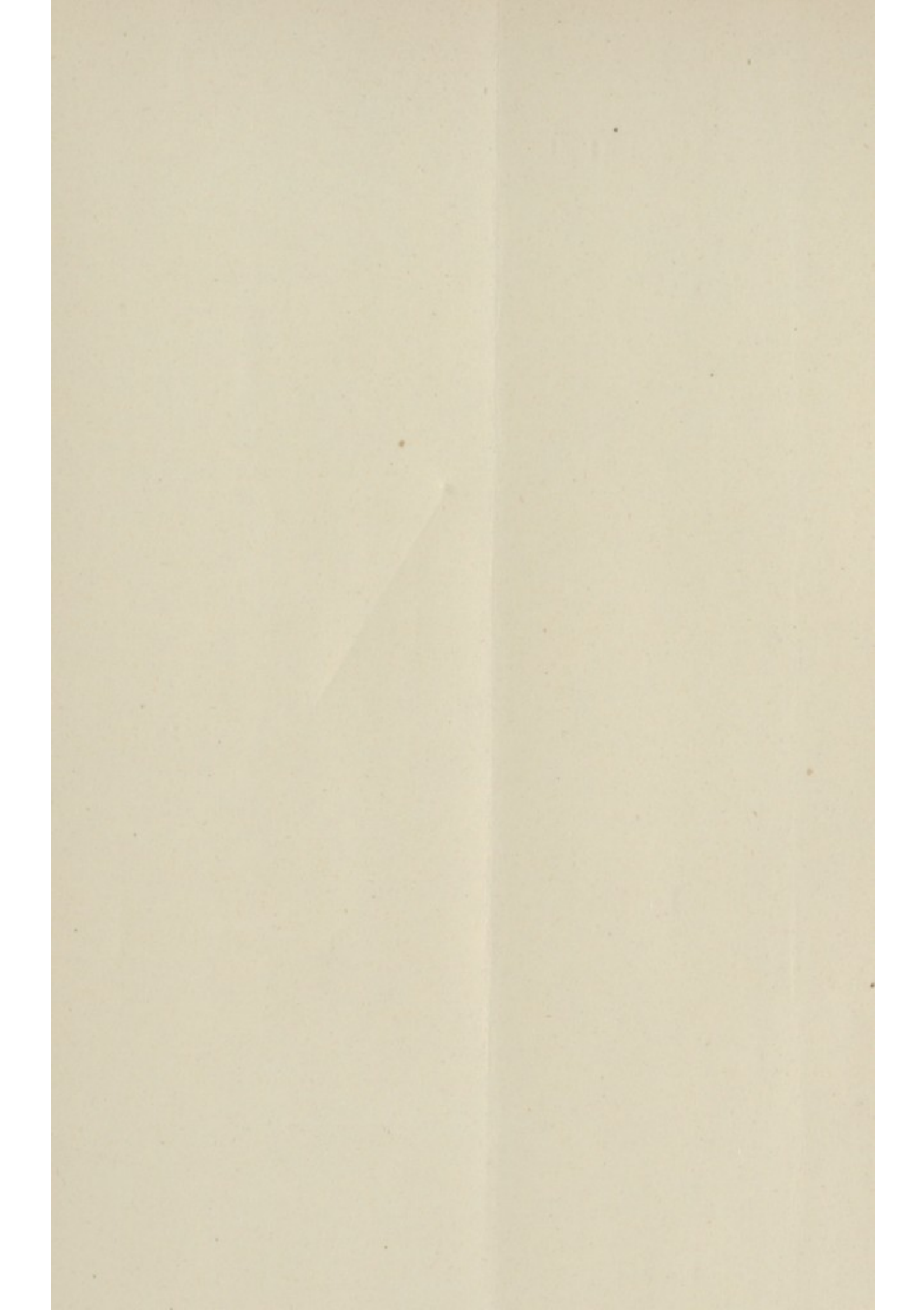
HENRY KENWOOD,

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Member of the Sanitary Institute, Fellow of the Society Medical
Officers of Health.

Medical Officer of Health.

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The Oregon Sanitary District

FINCHLEY

REPORT

HEALTH OFFICER OF HEALTH

FOR THE YEAR 1894

The Urban Sanitary District
OF
FINCHLEY.

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OF THE
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TO THE MEMBERS
OF THE
FINCHLEY URBAN DISTRICT COUNCIL.

GENTLEMEN,

The Year 1894 was noteworthy for low mortality returns in the country generally ; the death-rate from all causes and from each of the infectious diseases—with the sole exception of Diphtheria—were all well below the mean of the previous 10 years. The vital returns of the Finchley District will be seen to compare not unfavourably with those of the preceding year, though they are not quite so satisfactory as those of some previous years. The general death-rate was only 12·8, and this is additionally satisfactory when it is noted that there was for the same period a marked rise in the birth-rate—a circumstance which in itself tends to increase the death-rate.

The year has been somewhat eventful in a public health sense, for the district was once seriously threatened with an epidemic of small-pox, and later we experienced a very considerable outbreak of serious throat-illness, some of which ultimately developed into Diphtheria.

The sickness and mortality from Whooping Cough have both been excessive during the past year and the matter is one which is dealt with somewhat fully in my Report. On the other hand there has been a most remarkable falling off in the amount of sickness from Scarlet Fever and there was no mortality whatever from this complaint ; the sickness from

Measles, and the death-rate from infectious diseases generally, were also markedly less than in the preceding year. It is, moreover, noteworthy that whereas there were more than twice as many cases of Diphtheria as in 1893, there were less than half as many deaths. On the whole the year's returns will maintain the reputation for general healthiness which the District holds.

The general Sanitary work performed during the year by the Sanitary Inspector furnishes a good record, and I am able to testify that it is a record of work that has been most thoroughly and conscientiously done; an important feature of the work was the systematic house to house inspection of several streets with bad health records—made with the result that many menaces to health were effectually dealt with.

In compiling the Report I have been largely indebted to the excellent records furnished by the Reports of my predecessor, DR. TURLE, and I take this opportunity of gratefully acknowledging the valuable assistance and information that he was always so willing to give me when I first commenced my duties.

I am, Gentlemen,

Your obedient Servant,

HENRY KENWOOD.

March, 1895.

Population.

The population of the Finchley District in 1881 was 11,045; in 1891 it had grown to 16,419. The increase of population between 1881 and 1891 amounted, therefore, to 5,374. Now if this rate of increase is assumed to have been maintained up to the middle of 1894 one arrives, by a logarithmetrical calculation, at an estimated population of 18,690. By a careful consideration of all the facts, however, I am led to believe that this would be an over estimation, since the increase which forms the basis of such a calculation may not have been maintained—seeing that it took place during a period when there was a far larger amount of building and consequent immigration into the District than there has been during the past 3 years. I find that a careful perusal of the rate-books bears out my surmise, for the number of occupied houses in the District at the close of the year was 3,075 as against 3,191 in the previous year. Of the 3,075 inhabited houses 1,170 were in the sub-district of East Finchley, 807 in North Finchley, 660 in Church End, and 438 in Whetstone. Now my predecessor, Dr. Turle, ascertained that according to the 1891 census the average number of occupants to each house in East Finchley, North Finchley, Church End, and Whetstone was 5·4, 5·7, 6·1, and 5·2 respectively. I am of opinion, however, that since the census was taken the average number of occupants to a house has increased, and in this belief I am supported by my fellow officers and others. Certainly in East and North Finchley much more of the property has become *tenemented* and let in lodgings than was the case 3 or 4 years ago. By a careful consideration of the matter I estimate that the numbers 5·4 and 5·7 for East and North Finchley respectively should now be raised to 5·7 and 6·0. Further the rate books showed 201 empty houses, and if one individual be accredited to each of these (in order to account for caretakers and their families) we have all the material for making what I believe to be a close estimation of the population. It thus works out to **18,015**, a figure which falls short by 675 of the estimation based upon an assumed increase at the rate which obtained between 1881 and 1891, and I

believe it to be nearer the actual truth than the latter. In any event it is better, since our estimated population is a result arrived at largely by conjecture, by reason of the long period that intervenes between two censuses * —that any error should be on the side of under-estimation rather than of over-estimation, for in the latter event our vital statistics would appear to be more favourable than they actually are.

The estimated population for each of the Sub-districts is as follows :—

EAST FINCHLEY ...	...	...	6,773
NORTH FINCHLEY ...	...	..	4,882
CHURCH END ...	...	...	4,066
WHETSTONE ...	...	...	2,294

THE NATURAL INCREASE OF THE POPULATION by excess of births over deaths during the year 1894 was (515—221) =294, as against 255 in the preceding year.

NUMBER OF PEOPLE TO THE ACRE.—The area of the District amounts to 3,384 acres, and this, split up among the residents, represents only 5·3 PEOPLE TO THE ACRE.

The area of EAST FINCHLEY is 1,219 acres, and the estimate is 5·5 people to the acre.

The area of NORTH FINCHLEY is 788 acres, and the estimate is 6·2 people to the acre.

The area of CHURCH END is 1,002 acres, and the estimate is 4·0 people to the acre.

The area of WHETSTONE is 373 acres, and the estimate is 6·1 people to the acre.

BIRTHS—BIRTH-RATE.—During the year 1894 there were 515 births registered in the District—of these 268 were male and 247 were females. The birth-rate per 1,000 per annum was 28·5, whereas that for England and Wales was 29·6, and that for the 33 great towns was 30·7.

* A simple population enumeration of Greater London and other large cities once in 5 years, instead of once in every 10, would be of great value in vital returns.

The rate shows an increase upon that for 1893, when it was 26·7, and for 1892, when it was 27·5.

In 3 of the sanitary areas within the Metropolis the birth-rate for 1894 exceeded 40.

The fact that the birth-rate for the District is a little lower than that of England and Wales generally is favourable to a lower death-rate, since it represents the bringing into the population a comparatively smaller number of those among whom the liability to death is exceptionally great. I have made allowance for this in estimating the *corrected death-rate*.

Mortality.

GENERAL MORTALITY.—221 deaths of persons belonging to the District were registered during the year ; 207 of these were deaths that actually occurred in the District, and 14 were deaths in public institutions without the District. Of these deaths 124 were of females and 97 were of males.

THE RECORDED GENERAL DEATH-RATE is, therefore, 12·2, as against 12·7 in the preceding year. This ordinary death-rate, however, cannot be taken as a true index of the conditions affecting the healthiness of the population, nor can it be justly compared to the rates of other districts, unless some allowance is made for the relative proportions of persons of different ages and sexes in the districts compared. Obviously since—apart from health influences—the number of young children and old people in the community will always influence the death-rate, and since the death-rate varies among the two sexes at different periods of life, any comparison of death-rates which does not take these facts into consideration might be most deceiving. For the purpose of making a just comparison, therefore, it is necessary to correct the recorded death-rate by means of a factor which is arrived at, just after census returns are available, from a comparison of the proportions of each sex at each age-period which exist in the different sanitary areas with those proportions which exist in England and

Wales generally. This so-called "Factor for correction" is not available for the Finchley District, but it must be very near the mean of some of the other sanitary areas in which the birth and death-rates come nearest to our own. I think, therefore, that if we apply the factor of 1.05 we shall have obtained a DEATH-RATE CORRECTED FOR AGE AND SEX DISTRIBUTION, and in every respect comparable with that of England and Wales and other sanitary districts. Such a rate would be **12.8 PER 1,000 PER ANNUM.**

MORTALITY IN EACH OF THE SUB-DISTRICTS:—

In EAST FINCHLEY there were 83 deaths, and these furnish a rate of **12.2** per 1,000 per annum.

In NORTH FINCHLEY, with 56 deaths, the rate is **11.4.**

In CHURCH END, with 36 deaths, the rate is **8.8.**

In WHETSTONE, with 32 deaths, the rate is **13.9.**

INFANTILE MORTALITY.—There were 57 deaths registered of infants under 1 year of age, as against 515 births. The proportion which the deaths under 1 year of age bear to each 1000 births is therefore **110**, as against 137 in England and Wales, 152 in the 33 great towns, and 143 in London generally.

The deaths under 1 year of age form **25.7 PER CENT.** of the total deaths at all ages; whereas in London generally they form **24.3** per cent., and in England and Wales, **24.4** per cent. It will be observed (Table A⁴) that the rate shows a slight rise over that of the preceding year.

SENILE MORTALITY.—Of the 221 deaths, 56 were of persons over 65 years of age. The proportion of deaths occurring among those of over 65 years of age to the total deaths is therefore **25.3 PER CENT.**

THE CAUSES OF DEATH.—These are set forth in TABLE A, in which it will be noted the deaths are also apportioned to different age-periods. TABLE A¹ is supplementary to TABLE A, and sets forth the causes of death in each of the four sub-districts a little more fully. TABLE A² shows the deaths registered in the District, distributed over each of the four quarters of the year.

It will be noted that DISEASES OF THE RESPIRATORY ORGANS claim most victims, and that when we include "CONSUMPTION" among these, the deaths from these causes show a very great preponderance over the deaths from any other class of diseases. Situated as the District is, upon a somewhat cold and exposed site, one would expect to find the mortality from this class of diseases relatively high, but as a matter of fact it compares very favourably with that of England and Wales generally.

There is nothing in the TABLES A, A¹, and A², that calls for anything but favourable comment, except the mortality from WHOOPING COUGH and from PUERPERAL FEVER (*vide* p. 25):

Table A. TABLE OF DEATHS DURING THE YEAR 1894, IN THE FINCHLEY DISTRICT, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

TABLE A. — DEATHS IN DISTRICTS.	NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.	Mortality from all Causes at subjoined Ages		Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.		Small-pox.	Diphtheria.	FEVERS.	Measles.	Whooping Cough.	Diarrhea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTAL.				
At all ages.	Undr 1 year	1 and undr 5	5 and undr 15	15 and undr 25	25 and undr 65	65 and up- wards	Enteric or Typhoid.	Puerperal.	Undr 5	5 upwds	Undr 5	5 upwds	Undr 5	5 upwds	Undr 5	5 upwds	Undr 5	5 upwds	Undr 5	5 upwds		
1 EAST FINCHLEY	83	23	7		5	29	19		1	2			2	6	1			7		1	13	33
											1	1			1		3	8	6	2	28	50
2 CHURCH END	36	7	4	1	1	12	11			1				1		3	8	6	2	28	50	
3 NORTH FINCHLEY	56	15	6	2	4	16	13						1	4	1			3			14	23
												3										
4 WHETSTONE	32	12	5	1	1	7	6															
TOTALS ..	207	57	22	4	11	64	49		1	4	1	4	5	11	4		13	36	13	5	110	207
The subjoined numbers have also to be taken into account in judging of the above records of mortality.																						
Deaths occurring outside the district among persons belonging thereto.					1	6	7	Under 5														
								5 upwds									2	1		11	14	
Deaths occurring within the district among persons not belonging thereto.					1	11	5	Under 5														
								5 upwds							1	1		1		14	17	

Table A¹.

CAUSES OF DEATH IN EACH OF THE FOUR SUB-DISTRICTS OF FINCHLEY
FOR THE YEAR 1894.

Causes of Death.	East Finchley.	Church End.	North Finchley.	Whet- stone.
Small-pox	1	..	..	..
Diphtheria	2	1	..	1
Membranous Croup .. ..	..	..	..	..
Typhoid Fever	1	..	..	..
Puerperal Fever	1	..	3	..
Measles	2	..	1	2
Whooping Cough	6	1	4	..
Diarrhoea and Dysentery ..	2	..	1	1
Influenza .. ..	..	..	..	1
Phthisis ("Consumption") ..	3	1	5	4
Other Tubercular Diseases ..	3	5	3	3
Diseases of Respiratory Organs, other than Phthisis ..	16	8	7	6
Diseases of Circulatory Organs ..	9	2	7	1
Diseases of Abdominal Organs ..	11	2	2	1
Diseases of Urinary Organs ..	3	3	5	1
Diseases of Reproductive Organs ..	1	1	..	..
Diseases of Nervous Organs ..	11	9	7	6
(including Apoplexy and Convulsions)				
Gout .. ..	..	1	..	..
Cancer	4	1	4	2
Rheumatism .. ..	..	..	1	1
Premature Birth	3	2	4	1
Senility	3	1	1	2
Wasting and Debility	2	1	2	..
(including Atelectasis)				
Accidents	3	1	1	..
Suicides	1	..	..	1
Alcohol	1	..	..	..
Totals	89	40	58	34

Table A².

CAUSES OF DEATH IN THE FINCHLEY DISTRICT DURING THE FOUR
QUARTERS OF THE YEAR 1894.

Causes of Death.	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Totals
Small-pox	1	..	..	..	1
Diphtheria	2	1	..	1	4
Membranous Croup .. ..	..	..	..	..	..
Typhoid Fever	1	..	..	..	1
Puerperal Fever	2	..	1	1	4
Measles .. ..	..	..	..	5	5
Whooping Cough	9	2	..	..	11
Diarrhœa and Dysentry	4	..	..	..	4
Influenza	1	..	..	..	1
Phthisis ("Consumption")	6	3	1	3	13
Other Tubercular Diseases	3	5	3	3	14
Diseases of Respiratory Organs, other than Phthisis	13	9	4	11	37
Diseases of Circulatory Organs	6	3	3	7	19
Diseases of Abdominal Organs	4	5	3	4	16
Diseases of Urinary Organs	4	1	2	5	12
Diseases of Reproductive Organs	2	..	..	..	2
Diseases of Nervous System (including Apoplexy and Con- vulsions).	12	10	5	6	33
Gout	1	..	..	..	1
Cancer	1	2	3	5	11
Rheumatism	2	..	..	..	2
Premature Birth	3	5	1	1	10
Senility	2	2	..	3	7
Wasting and Debility (including Atelectasis)	2	2	..	1	5
Accidents	4	..	1	..	5
Suicides .. ..	..	1	1	..	2
Alcohol .. ..	..	..	..	1	1
Totals	85	51	28	57	221

THE CAUSES OF INFANTILE MORTALITY.—The comparatively slow rate of decrease of infantile mortality in England and Wales is one of the most unsatisfactory features in vital returns that health officers are called upon to face. There is no gainsaying that despite any improved conditions of life among the poorer section of the community (with whom infantile mortality is always at its highest) and despite improved general sanitation, the rate of mortality under 1 year of age will continue to bear a very high proportion to the general death-rate; but the great discrepancy shown between the rate of different London parishes furnishes abundant evidence that there are many causes at work—acting unequally in the different districts—which are preventable.

The excessive mortality from WHOOPING COUGH is the most notable feature in the causes of Infantile Mortality as set forth in TABLE A³.

Table A³.

THE PRINCIPAL CAUSES OF INFANTILE MORTALITY.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.
Diseases of the Lungs ...	6	1	1	8	16
Premature Birth ...	3	5	1	1	10
Tuberculosis ...	1	2	3	2	8
Wasting and Debility ...	2	2	...	1	5
Whooping Cough ..	4	...	...	..	4
Teething ...	1	...	2	..	3
(Convulsions) ..	1	...	...	1	2
Accidents ...	2	...	1	...	3
Diseases of Abdominal Organs ...	...	1	...	1	2
Diarrhœa ...	1	...	...	...	1
Small-pox ...	1	...	..	...	1
Measles ...	..	...	...	1	1
Diphtheria ...	...	1	...	...	1
Total ...	22	12	8	15	57

ZYMOTIC MORTALITY.—Included in the Zymotic Mortality are the Deaths from the seven principal Zymotic Diseases, viz. : small-pox, measles, scarlet fever, diphtheria, whooping cough “fever” (including typhoid fever, typhus fever, and simple continued fever) and diarrhoea ; and since such deaths are in a great measure preventable, the importance of this rate and the advantage of comparing it with other communities, is very high. In TABLE A⁵ our Zymotic Death-rate, and the rate for each of the Diseases comprising it are given ; and comparisons are instituted between these and the corresponding rates for England and Wales, the 33 Great Towns, and London generally. These comparisons are very favourable to the District with the sole exception of the mortality from WHOOPING COUGH. The Zymotic mortality rate, moreover, shows a marked decline from that of the preceding year (*vide* TABLE A⁴).

Table A⁴.

THE PRINCIPAL VITAL STATISTICS OF THE FINCHLEY DISTRICT FOR THE
DECENNIA—1871—80, AND 1881—90, AND FOR THE PAST 4 YEARS.

Years.	Birth-rate	Recorded Death-rate.	Death to Birth-rate †	Rate of Infantile Mortality.	Zymotic Death-rate.
Mean of 1871-80	32·1	15·3	47%	118	2·13
Do. of 1881-90	32·2	12·6	39%	100	1·60
1891	29·6	11·1	38%	87	1·21
1892	27·5	12·2	43%	90	1·41
1893	26·7	12·7	47%	107	2·71
1894	28·5	12·2	43%	110	1·55

† The ratio which the total deaths form to the total births. A useful rate, first suggested by Dr. Turle.

Table A⁵.

COMPARISON OF THE RATES OF THE FINCHLEY DISTRICT WITH THOSE OF
ENGLAND AND WALES, THE 33 GREAT TOWNS AND LONDON GENERALLY,
FOR THE YEAR 1894.

	General Death- rate	Rate of Infantile Mortality.		Birth- rate.	Zymtc. Death- rate.	Small- pox D.R.
		A*	B†			
England and Wales ..	16.6	137	24.4%	‡29.6	1.75	0.027
The 33 Great Towns ..	18.1	152	26.0%	30.7	2.43	0.042
London Generally ..	17.8	143	24.3%	30.1	2.66	0.020
The Finchley District ..	12.2	110	25.7%	28.5	1.55	0.055
	Measles D.R.	Scarlet Fever D.R.	Whoop- ing Cough. D.R.	'Fever' D.R.	Diph- theria D.R.	Diarrh. and Dysnt D.R.
England and Wales ..	0.31	0.16	0.39	0.16	0.28	0.35
The 33 Great Towns ..	0.62	0.21	0.48	0.19	0.38	0.50
London Generally ..	0.76	0.22	0.48	0.15	0.61	0.41
The Finchley District ..	0.26	0.00	0.61	0.055	0.22	0.22

* The number of deaths under 1 year of age to every 1,000 births.

† The percentage which the number of deaths under 1 year of age
from the total number of deaths.

‡ The lowest on record.

THE PUBLIC INSTITUTIONS WITHIN THE DISTRICT furnished
17 deaths, as follows:—

The Woodside Home	...	...	7
The Convent of the Good Shepherd	...	...	8
The Lunatic Asylum	...	...	2

These deaths were among persons who came to Finchley
from other Districts and they have therefore not been reckoned
with in estimating the Finchley Death-rate.

INQUESTS HELD DURING THE YEAR 1894, ON DEATHS IN THE FINCHLEY
DISTRICT.

Sex.			Age.	Cause of Death.
Female	..	..	1 $\frac{3}{4}$ years	Suffocation during an Attack of of Whooping Cough.
Female	..	..	3 $\frac{1}{3}$ "	Acute Congestion of Lungs.
Male	..	..	..	Suddenly born into chamber utensil containing fluid.
Male	..	..	24 "	Apoplexy.
Female	..	..	51 "	Syncope. Heart Disease.
Male	..	..	46 "	Suffocation from Hanging.
Female	..	..	45 "	Apoplexy.
Male	..	.	67 "	Drowning.
Female	..	..	$\frac{1}{6}$ "	Over-laying.
Female	..	..	45 "	Syncope. Epileptic Fit.
Female	..	..	26 "	Drowning.
Female	..	..	$\frac{1}{3}$ "	Syncope.

Infectious Diseases and the Measures taken to Prevent their Spread.

It will be seen from TABLE B that 171 NOTIFICATION CERTIFICATES of infectious disease were received from medical practitioners in the district.

These 171 cases represent infection in 131 different houses, each of which was subsequently disinfected. IN 96 CASES THE DISINFECTION WAS PERFORMED BY THE SANITARY DEPARTMENT and in 75 cases by householders to the satisfaction of their medical attendants. A visit was paid to each house and I find that of the 171 cases 24 of them occurred in houses in which there were "grave" sanitary defects, 32 in which the sanitary defects were "slight," and 75 in which there were no sanitary defects. It is important to know that in arriving at these figures I have been influenced by the consideration as to whether any particular sanitary defect found was of a nature which is known to predispose to or induce the particular disease in question. When this has been the case I have entered the sanitary defects as "grave," and where there has been a sanitary defect which, though it might have been grave in relation to some other infectious illness, but not of a nature likely to give rise to the particular disease associated with it, then such defects have been entered as "slight."

Thus, apart from the immense value of the steps that have been taken in respect of each notification to prevent the spread of disease, the Infectious Disease Notification Act was the means, during the year, of bringing about a sanitary inspection of 131 houses, in which 24 "grave" and 32 "slight" sanitary defects were remedied. The value of the Act in this relation is apt to be lost sight of; it is particularly great because it leads to the discovery of sanitary defects at a time when people are always most willing to recognise their importance and to further our efforts to get them remedied. But for the fullest possible value to be reaped from such notifications it is imperative that the medical attendant sends in the certificate with the least possible delay. I fully recognise how the matter may be temporarily overlooked in the stress of a busy practice, but there can be no excuse for the delay of several days which has, in one or two isolated cases, been noted.

Table B. TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1894, in the FINCHLEY DISTRICT; CLASSIFIED ACCORDING TO DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality coming to the knowledge of the Medical Officer of Health.							Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.		
	Census 1891.	Estimated to middle of 1894.			Smallpox.	Scarlatina.	Diphtheria.	FEVERS.			Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.
								Enteric or Typhoid.	Continued.	Puerperal.				
EAST FINCHLEY				Under 5	1	4	8						2	
				5 upwds	8	10	10	9		1	14	3	3	1
Under 5					5	8					1			
5 upwds					7	15	2			2		1		
Under 5					8	6			1		2			
5 upwds					15	12		1	3	4		9	2	
Under 5					3	2								
5 upwds					5	5	1			1				
TOTALS				16,419	18,015	515	Under 5	1	20	24				1
				5 upwds	8	37	42	12	1	4	21	3	13	3

"Notification of Infectious Disease" has been compulsory in the District since January 1st, 1890. Patients were removed to the Local Scarlet Fever Hospital, Finchley; the Highgate Smallpox Hospital; and the Sick Children's Hospital, Great Ormonde Street.

Table B¹.

TABLE SHOWING THE NUMBER OF CASES AND DEATHS FROM THE INFECTIOUS DISEASES NOTIFIED, FROM AMONG PARISHIONERS DURING THE YEARS 1890, 1891, 1892, 1893, and 1894.																
	Small-pox.		Scarlet-Fever.		Diphtheria		Typhoid Fever.		Continued Fever.		Puerperal-Fever.		Membrane-ous Croup.		Erysipelas.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1890	53	1	31	4	7	1	.....	.....	.....	.....	.....	.....	16	.....
1891	80	.....	32	3	3	1	.....	.....	1	.....	.....	.....	14	.....
1892	125	2	37	6	3	1	.....	.....	2	.....	.....	.....	17	.....
1893	189	3	30	9	14	1	.....	.....	1	.....	.....	.....	38	.....
1894	9	1	57	.....	66	4	12	1	1	.....	4	4	.....	.....	22	.....

SMALL-POX.—At the commencement of the year the District^t was threatened by an outbreak of Small-pox. The disease first appeared in an adult female and it was impossible to trace with certainty the source of her infection, although I had some suspicion of a quantity of bedding which she had quite recently purchased of a pawnbroker in Islington. The patient was promptly removed to the Highgate Small-pox Hospital; the premises were thoroughly disinfected; and those who had been exposed and did not possess good vaccination marks were vaccinated, and steps were taken to prevent them from exposing themselves for at least a fortnight. By an unfortunate neglect of the quarantine precautions which were imposed upon the responsible members of the household, and despite their assurance to me that every effort should be made to strictly regard them, an infant child of the patient's was removed by a relative; the result was that the infection was conveyed to two other houses and 9 people in all contracted the disease before we succeeded, by dint of great trouble and considerable expense, in stamping it out. Each of the houses contained a patient under 7 years of age and the authorities at the Highgate Small-pox Hospital refuse to admit such cases. Being without the Metropolitan area we are not permitted to avail ourselves of the Small-pox Hospitals of the Metropolitan Asylums Board, and on applying to the only other Small-pox Hospital around London we were informed that they could not take cases outside their district; we were reduced, therefore, to the necessity of keeping them within their own homes, for at the time there was not a suitable empty house in a sufficiently isolated position which we might have procured and used as a Hospital. There were 3 houses in which it became necessary to isolate Small-pox cases, and all the inmates thereof were absolutely imprisoned—the greatest possible degree of isolation, and every possible precaution, being adopted in order to protect the other inmates. These houses were watched on occasion and food was left at the doors at the expense of the Local Board.

Seeing that there were several other inmates in the 3 infected houses and that each house was in a row of others—mostly let in lodgings—it was a source of great relief to find as each day

went by that our efforts had been successful and that no fresh cases arose. We had then, at one time, within an area of $\frac{1}{4}$ square mile, what amounted to 3 foci of Small-pox infection in two streets of poor class property, mostly let in lodgings and unduly crowded, and the disease did not in either case spread even to the house next door; those people who had caught the infection had each remained for some time in actual contact with those who either had the disease or who were shortly to be stricken down with it. There is no doubt that Small-pox infection can travel through the air for short distances, and it is held by some that it can do so for distances of a mile or more—but this experience at Finchley supports the view that given every possible precaution of strict quarantine of all those occupying the same premises as the patient, or patients, there is little tendency for such infection to spread. If such were not the case it is impossible to understand how it came about that, under exceptionally favourable circumstances (as any one would admit who saw the bulk of the property and the class of residents in the street in which 2 of the infected houses were situated) that Small-pox did not travel right down the street.

I have pointed out that it was manifest early in the outbreak that in common with the bulk of the outer zone of London we possessed no isolation accommodation for Small-pox that could be counted upon. Since the only available Hospital at Highgate could not admit our second case, it was my duty to advise that some provision should be made in our own district to meet the probability of the further spread of the outbreak and also to protect us against future risks. The Board, appreciating the grave danger that threatened the district, fully recognised the necessity of making some provision, for everything pointed to the probability of a considerable extension of the outbreak; and the Surveyor was instructed to lay down a foundation for a small temporary Small-pox Hospital, near the present Scarlet Fever Hospital, with the least possible delay. In the matter of about 4 days from the completion of this a temporary iron building could then be made available for patients.

Fortunately there was no increase in the number of cases and the foundations for the Hospital were alone completed. These will remain in good order for many years, and residents may congratulate themselves that this District stands almost alone among the districts of the outer zone of London in being able, within about 4 days, to take the most important step of completely isolating the first few cases—no matter what their ages—whenever the health and interest of the district are again threatened. This provision is a very positive gain to the District for it almost furnishes a guarantee that we shall be able to successfully cope with the danger of Small-pox spread when it once again presents itself. The actual cost of the outbreak was between £60 and £70. I made an unsuccessful attempt to induce a few neighbouring Authorities to combine, with the view of providing a small permanent structure for Small-pox isolation. The necessity for such provision is growing and will continue to do so ; for with the increased facilities of communication with the Metropolis, and with the growth of the number of residents who daily visit the City, the risks of imported infection to these outlying districts grows greater year by year.

These 9 cases of Small-pox, like each of the others that I have from time to time investigated, testified to the value of vaccination—a value which any one whose actual experience qualifies him to judge has never questioned. It was the old story ; those who had not been vaccinated suffered from a severe attack, and in others who had been vaccinated the attack was remarkably mild. Efficient vaccination is a duty which should be recognised by those who live in the midst of crowded communities, and in my opinion some of the grievous harm of anti-vaccination literature should be met by setting forth some of the facts in support of vaccination (and they are convincing enough!) on a small printed slip which might be given to parents at the same time as the vaccination notice is sent by the vaccination officer. In many respects it would be advantageous if the administration of vaccination were under the Sanitary Authority rather than remaining under the Poor Law.

PUERPERAL FEVER.—This fatal malady is most frequently caused by neglect of cleanly and proper precautions among women who have very recently been confined. In many cases it is found to have arisen from the negligence and ignorance of women who call themselves midwives, but who are untrained, and whose knowledge of antiseptic precautions is frequently nil. Too much care cannot be exercised in the selection of a nurse where ignorance and lack of training may lead to such dire consequences.

The Deaths (4) from Puerperal Fever furnish a rate of **7·7 PER 1,000 REGISTERED BIRTHS**—a figure which is well above that of England and Wales (about 6) for the same period. As this is essentially a disease which by the exercise of proper care by those in attendance upon the patient and by the adoption of proper sanitary precautions in our homes, is so easily prevented, any mortality, however small, is all the more regrettable.

One midwife was responsible for the spread of 2 cases, both of which ended fatally within a short period, and I promptly took such measures as would insure that no further cases should arise through her agency.

MEASLES AND WHOOPING COUGH.—During the year there were two distinct outbursts of sickness from Whooping Cough and, as is frequently the case, the increase in Whooping Cough was on both occasions concurrent with an outbreak of Measles.

It will be noted by reference to **TABLE A⁵** that the mortality from Whooping Cough was exceptionally high,* and I consider that it calls for the adoption of some preventive measure—in which it would be well for many reasons to include measles. There is as you are aware the remedy of including Measles and Whooping Cough among the Diseases that are compulsorily notifiable. I am not one of those who consider that such a step is warranted either by any inherent likelihood of success from such a course, or by the advantages which have been gained in those Districts where it has already been adopted. The highly infectious nature of Measles before it can be diagnosed, and

* In the preceding year the rate for Finchley was 0·55, whereas that for England and Wales was 0·34.

therefore notified, makes it probable that those children who are susceptible to attack are already infected before one can receive and act upon a notification ; and this circumstance partly accounts for the fact that even School closure in epidemic times is frequently inoperative. Notification, moreover, in addition to proving expensive would have its utility further curtailed by reason of the following facts :—Among the majority of the poorer householders anything approaching efficient isolation would be found to be impossible, and it is not practicable for any community to provide sufficient hospital accommodation and nursing for the scores of very young children (the large proportion under 5 years of age) who, during epidemic prevalence, would require such isolation ; and the best fruits from notification could not therefore be reaped. Another argument, and one which I consider the most potent against compulsory notification of these two complaints, is that the poorer section of the community regard the disease as more or less trivial, and on this account do not consult a medical man—at least unless grave symptoms supervene, and even in the latter case the little patients frequently receive no better treatment than from the hands of a dispensing chemist. Obviously these cases which, cropping up in houses generally crowded with other children, are the most potent for harm would not be notified and we should mainly receive and pay for the notification of cases among the better class people who have already called in a medical man and received the benefit of his advice.

Then it has been suggested to enforce on the parents or householder the notification of the malady. I believe this would prove an utter failure in practice, and, even if a *quid pro quo* were given for the information, most parents would carefully balance the pecuniary advantages which they received against the disadvantages and inconvenience which we might find it our duty to put them to before they took action, and as a consequence of this set off I believe they would count the balance in favour of non-notification.

In short, my opinion is that no powers or resources at present possessed by Local Authorities will suffice to secure that large measure of control that is necessary to check the spread of

Measles and Whooping Cough. The true remedy lies in the education of the masses upon the first principles of disease prevention, and more especially with the aim of bringing home to them the danger of these 2 diseases in question, and the duties that they owe to their offspring and to the community, in using every possible means of preventing their spread—seeing that together they generally cause more deaths than Small-pox, Diphtheria, and Typhoid Fever combined ; to point out to them the early symptoms of Measles and Whooping Cough and the necessity of guarding against all exposure to chills ; to impress upon them the necessity in either case of obtaining prompt medical advice ; and more especially in times when Measles and Whooping Cough are prevalent, to urge the advisability of treating children who are suffering only from symptoms of a simple cold—whether it be in the head or the chest, as “suspects” who should be isolated from other children so far as possible, and in any event kept from school.

All this information can only be conveyed through the medium of printed slips of advice, for it is difficult to get the poorer people together in sufficient numbers to lecture to. My recommendation is that in the Finchley District the Medical Gentlemen be asked to co-operate with me to the extent of returning a small form (already stamped and addressed) whenever the number of cases of Measles in their individual practice indicate the commencement of an outbreak. I propose then to make a distribution of small handbills among all the property in the District with a ratable value of £25 and under, for it is among the occupants of this class properly that advice is needed and it is with them that Measles and Whooping Cough find the bulk of their victims.

Then again the attendance at Elementary Schools is doubtless responsible for a considerable amount of spread from both of these maladies, and I propose at the same time to seek the co-operation of the School Teachers in the District in endeavouring to detect cases in their early stages, and in excluding them from school attendance.

**Notes on the Outbreak of Throat Affection resembling
Diphtheria (Follicular—and in some cases
Membranous-Folliculitis).**

A marked epidemic of throat-illness made its first appearance on the 8th and 9th of November. By the courtesy of those medical men who were called in to treat such cases I was permitted to personally examine 17 cases, and we agreed that the disease in question was not Diphtheria, although the appearance of the throat was in some cases markedly diphtheritic. Although the weather during the preceeding fortnight was such as would in itself account for many so-called sore-throats, there was much in the appearance of the throats in question and in the rapid outset of acute symptoms, as well as in the course that the disease ran, to stamp them as something more than simple catarrhal conditions. Further these particular cases of throat affection appeared to possess the property of infectiousness to a marked degree. There were several houses in which the complaint cropped up among as many as 4 or 5 members of the same household under conditions that strongly supported the probability of spread from case to case. There was no question of the undoubted fact that in its origin the disease assumed the characters of a true epidemic; 16 cases occurred suddenly on either Thursday night or Friday morning, and 8 on the Saturday following.

One significant fact in connection with the outbreak was the grouping of these initial cases in and around Hendon Lane; 12 of the first 24 cases were in this street—these 12 cases represented infection in 5 different households, and I was not able to collect evidence of a single case occurring outside of the sub-district of Church End prior to November 11th. Subsequent to November 11th information of fresh cases was received daily, and by November 18th they had numbered nearly 100—which were distributed mainly, in about equal numbers, over Church End and East Finchley; North Finchley was affected only to about one-third of the extent of these, and in Whetstone there were only two cases.

So soon as the outbreak occurred I made an effort to trace its true origin, but the matter was surrounded by many difficulties, and it was not before a week had elapsed that I succeeded in satisfying myself that I had lighted upon the true cause.

In investigating such an outbreak one naturally turns to unhealthy odours—such as may arise from defective sewer ventilation, from sanitary defects in household and from accumulations of dung, manure, and other putrefying organic matter. Although Mr. Stockman and I detected sanitary defects in one or two cases these were rarely of a serious nature, and in the majority of cases we failed to find anything whatever to take exception to—for the houses affected were some of the best, in a sanitary sense, in the whole district. As regard odours from the sewer ventilators I found that there was abundant testimony that these were frequently in evidence, but, on the other hand, testimony was equally as unanimous upon the score that these smells had been less assertive during the proceeding fortnight than they had been any time during the previous 6 months; this was probably due to the heavy and persistent rainfall. I naturally concluded that if the cause were to be found anywhere it would be in Church End, and more especially in and around Hendon Lane, and further that the cause would be one that was, in all probability, not in operation prior to November 1st. In making a careful inspection in the neighbourhood of Hendon Lane I paid particular attention to the ground lying in a westerly direction from the situation of those houses first infected, because in the early part of the preceding week high westerly winds largely prevailed. I failed, however, to find any condition that could have proved operative in the production of serious cases of sore-throat.

The throats undoubtedly presented the appearance of so-called "drain throats," and it was conceivable, that the very marked fluctuations of the sewage level in the sewers for the preceding fortnight might be in some measure responsible for the outbreak, and especially under the peculiarly

favourable conditions that had prevailed during that period. From October 31st to November 9th, inclusive, the conditions of rainfall were very remarkable:—On October 31st there was a heavy fall, on the following day the rainfall was nil, on the next day there was another heavy downfall, followed by 24 hours of dryness, and so this daily fluctuation continued until November 10th. Now this meant a marked fluctuation in the level of sewage in the sewers and in consequence of this the sewers were taking in, vitiating, and forcing out a large quantity of air. The theory, however, did not harmonize with the fact that evil smells from the ventilators had been markedly in abeyance during the preceding fortnight, nor did it satisfy the query as to why Hendon Lane should have been first affected and should have suffered more than any other part of the District.

It was impossible to accept the theory that any climatic conditions could alone have been responsible for the outbreak, although these had been sufficiently remarkable. In addition to the excessive diurnal variations in rainfall the range in the temperatures recorded during the preceding 3 weeks had been 36.9° F, the maximum daily range had been 14.7° F, and the humidity of the air had averaged 90.4% of complete saturation. These atmospheric conditions, especially in the autumn of the year and in a district naturally somewhat cold and damp by reason of its clay soil, would be expected to give rise to sore throat, and it undoubtedly did so—but the sore-throat under investigation was something more than the sore-throat generally brought about by those conditions and moreover it was at first restricted to a small area of the District. For the latter reason it was not judged likely that the excessive diurnal variations in rainfall and the consequent fluctuations in the height of the ground water, following upon a period of drought, could have given rise to the outbreak by reason of the impure ground air which was displaced by the rise and fall of such ground water; and against this theory is the further fact that Hendon Lane and its immediate environs forms a sloping area with a clayey surface.

As the form of sore-throat was infectious, some of the later cases that cropped up might have been due to infection from primary cases; for this reason I continued to search for the cause of the outbreak among the facts and circumstances relating to the actual *commencement* of the outbreak in Church End. Although at the beginning there was no evidence sufficient to even lead one to suspect that the epidemic might have had its origin in milk-infection, I collected evidence under this head from the very first, and, as the cases multiplied, by the fourth day there were good grounds for suspicion. Owing to the fact that the milk-supply of London and its suburbs is getting more and more into the hands of a few large companies and firms with large and irregular areas of distribution, it is getting more difficult year by year to trace the origin of any outbreak to milk-infection. There was of course far less difficulty when small dairymen supplied small and localised areas. The reasons that impelled me to attribute the outbreak to milk-infection were the following:—

I.—It was to my mind easy to exclude all other conditions to which an epidemic of such throat-illness has ever been ascribed.

II.—The Disease cropped up with scarcely an exception in good class property—where of course most milk is consumed.

III.—On inspecting all the cows which furnished milk to the area, I discovered 3 which were evidently out of health, and in each case the teats were slightly ulcerated and one of the cows had a small chronic abscess in the udder. I also carefully examined the throats of those who milked the cows but found them, without exception, healthy.

IV.—I then ascertained that the supply to which these cows contributed was distributed to **17 PER CENT.** of the total houses in the District, but of the number of houses infected it supplied **94 PER CENT.***

V.—The unfavourable climatic conditions had prevailed for at least a fortnight prior to the appearance of these throat-cases which undoubtedly cropped up in far less than a week after

* This important evidence was not available until the lapse of several days.

exposure to the exciting cause ; indeed there were strong reasons for believing that this co-called "incubation period" did not exceed 48 hours. Under these circumstances, and after the other possible causes had been excluded, the sudden outcrop of many cases in a localised area pointed to a milk epidemic.

It may be of further interest to briefly state the main reasons that made me hesitate before I pronounced the milk to be the cause of the infection :—

I.—The outset of the outbreak was not characteristic of milk infection. Instead of there being 5 infected houses on November 9th, and 8 more on November 10th, one would have expected nearer 10 times this amount, seeing that the supply was a large one.

II.—The theory of milk infection did not explain away the very marked and special fall of the outbreak upon Hendon Lane, since we should expect to find the infection carried all along the track of supply of the particular cart and cans that conveyed the milk to Hendon Lane. What really happened was that, at the commencement of the outbreak, of 22 houses supplied in Hendon Lane 5 were infected, whereas of 56 houses supplied in other streets only 6 were infected.

III.—Children were not mainly affected. Among the cases of which I was informed there ^{were} nearly twice as many people over 20 as there were children under 10.

IV.—It is general knowledge that cows may suffer from certain eruptions on teats and udders without conveying any infection to the milk—whereas it is equally established that milk in such cases can convey the infection of Scarlet Fever, if not of Diphtheria—the throat being primarily affected in either case.

V.—I had been able to satisfy myself that in Hampstead, St. Pancras, and Stoke Newington there were at the time many *somewhat similar* throat cases.

The CONCLUSIONS which I came to were :—That the outbreak was favoured by the excessive rainfall and variable temperature of the preceding fortnight, upon a cold, damp soil,

at a season of the year when throat trouble is generally markedly in evidence. Under these favourable conditions a mild infection, probably conveyed in milk, was sufficient to aggravate the throat illness beyond its usual type and to give it the property of marked infectiousness. I therefore recommended the residents in the District, by means of printed posters, to boil all milk during the ensuing fortnight, and in the meantime steps were taken to ensure that the affected cows were adequately dealt with. I could not possibly have had a better vindication of the correctness of my conclusions than from the circumstance that whereas fresh cases had been cropping up at the rate of 10 a day—24 hours after the appearance of the hand-bills no further cases occurred, and the epidemic ended as suddenly as it commenced.

I was called to account in some directions for not acquainting residents of the particular milk supply concerned in the outbreak; I purposely maintained a reticence upon this point for the reason that I could not see what good could result, and it was so easy to see the many directions in which harm might be worked, for it is a general practice among milk vendors, if they run short of milk, to buy of other vendors *en route*, so that if one supply should be infected and named there is no guarantee that others which would be assumed to be safe, are so. All dairy supplies are liable—some it is true more than others—to such a visitation of disease; the supply in question is, in my opinion, an exceptionally good one, and unless there is some very tangible advantage to be gained, one hesitates to take a step that might mean ruin to persons who take the same precaution as others, but who are less fortunate. It was, therefore, judged safer and better in the interests of all to simply advise that *all* milk should be boiled.

After prolonged periods of heavy rainfall, especially in the autumn, it is a wise precaution to make it a practice to boil milk, for it is my experience that cows, in even the best regulated dairies, *cannot* be kept, or even milked, under conditions of sufficient cleanliness to preclude all likelihood of some possible infection. It is usual to find the cowsheds approached by a yard into which all the manure is emptied and allowed to remain for far too long periods—especially is this manure allowed to

accumulate during wet weather in the autumn period, when heavy rain converts it very much into the condition of quagmire. The result is the cows in wading through this quagmire to the sheds where they are milked are almost knee-deep, and their teats get splashed—and there are reasons which make the washing of teats prior to milking an undesirable procedure in the colder months. Further the process of milking is conducted in close juxtaposition to this large accumulation of filth—which is giving off the most offensive odours the while, and there is scarcely a fluid known to chemists that so readily absorbs and retains such odours. It would be a distinct gain to health if at the cost of some extra trouble the refuse from the sheds were in every case promptly removed to a safe distance.

There is a further lesson that the outbreak teaches us :—An epidemic occurs, we find unhealthy cows, and from other very positive evidence we condemn the milk as the source of infection and after 100 people have been exposed to suffering, if not death, we are able to take measures that stamp out the disease. This is not as things should be ! We should aim more at *preventing* the epidemic. To my mind a thorough and systematic inspection of all cows in each district at regular and short intervals should be undertaken, and to that end a veterinary expert should be appointed by several sanitary authorities in combination. It is a monstrous thing that with these milk epidemics cropping up, nothing whatever is done to prevent their recurrence, and that the whole of our action is based upon the lines of preventing the spread of the outbreak after it has already worked a vast amount of harm, when it is an easy matter to proceed upon those lines of true prevention that would aim at removing the possibility of future outbreak. I am aware that it falls within the duty of the Sanitary Inspector and myself to keep ourselves acquainted with the sanitary condition of the Dairies and Cowsheds of the District. All that we had recently done before the outbreak occurred, but what is even of greater importance is that someone acting under the Local Authority and possessing a good knowledge of the diseases of cows should *inspect the animals* at least every fortnight. In the absence of such a preventive measure our only alternative is to stand by with folded arms and await the next epidemic.

DIPHTHERIA.—A few days after the outbreak of throat-illness *i.e.*, on November 13th, I received notification of 4 cases of Diphtheria, and within the course of the following 12 days I had received notification of 38 such cases. These 38 cases represented infection in 28 houses, and 25 of them were patients who had previously suffered from the peculiar throat affection associated with the mild epidemic. I was informed by the medical gentlemen in charge of these cases that the original throat affection had materially subsided in most cases and that after a day, or perhaps two, of comparative convalescence, the temperature suddenly rose and more or less true diphtheritic symptoms supervened. Whether the true explanation of this is to be found in a secondary infection (which in every case seemed most improbable) or by a progressive developement of diphtheria from out of the original throat trouble which I satisfied myself from bacteriological cultivations was not diphtheria, I am not able to state; but it is I believe, a general experience that where there is much throat illness about, cases of diphtheria generally supervene.

The distribution of the cases was as follows :—

CHURCH END ...	...	20 cases in 16 houses.
NORTH FINCHLEY ...	9	5
WHETSTONE ...	5	4
EAST FINCHLEY...	4	3

In the 28 houses in which it occurred there was a complete absence of those insanitary conditions (*i.e.*, defective drainage, evil smells, refuse accumulations, dirt and damp) which undoubtedly favour the appearance of diphtheria. I attributed the predisposing cause in some cases to the exceptional climatic conditions already indicated on a previous page, and in other cases to the throat trouble arising out of the milk infection. The throats were thus prepared for the diphtheritic infection and were in their unhealthy state incapable of resisting it. Whence the diphtheria infection came, however, I was unable to tell. I satisfied myself that it could not have arisen from infection from any pre-existing case in 25 of the 28 cases.

It will be noted (TABLE B) that whereas there were more than twice as many cases of Diphtheria in the District there were less than half as many deaths as in the preceeding year. It is the experience of many other communities that the disease is, generally speaking, assuming a milder type.

The increase in Diphtheria during the past few years, more especially in town districts has been a matter of great concern among health officers. That this increase should grow at the same time that the principles of sanitation are becoming more and more appreciated by the general public, and more efficiently applied by Sanitary Authorities, appears at first sight to be almost a public health paradox, for there is no gainsaying that Diphtheria is a disease, the true origin of which is associated with the insanitary conditions of dirt, dampness, and foul air. The cause of the increase of the disease must doubtless be sought, therefore, in increased facilities of spread from primary cases. I think that the increase in the number of houses which were originally planned and built to accommodate one family, and which now, owing to the exigences of the times, are converted into tenemented dwellings for several families, may in itself, by reason of the overcrowding and the insanitary conditions which are almost inseparable from such a state of things, be responsible for some of the increase in Diphtheria in our large towns; but the main cause for the increase will probably be found in school attendance. Quite apart from any statistical evidence that may be collected to support the latter view, it stands to reason that where a disease is concerned that mainly affects children at ages when they attend school, and which can be communicated in its severest forms by those who are only affected by a mild unrecognised type, that any circumstance that tends to bring large bodies of children in close association with each other must be attended with considerable risk and is presumably responsible for some amount of spread. Mr Shirley Murphy, the Medical Officer to the London County Council, has pointed out in a recent report that while there has been of late an increase in the death-rate from Diphtheria in the Metropolis, this increase has been disproportionately great at ages between 3 and 10, a period which may be taken to represent broadly that of school

attendance. This special liability also dates from the time when increased activity in enforcing attendance at Elementary Schools was brought into play (*i.e.*, about 1871) by the operation of the Elementary Education Act. Dr. Thorne Thorne and Mr. Power, have also, prior to Mr Murphy's Report, demonstrated the influence that school attendance exercises upon the diffusion of diphtheria epidemics.

It seems to me that the dangers of school attendance when Diphtheria is present in the district can only be faced by the adoption of several expedients, and certainly no impediment should be put in the way of securing the maximum benefits of compulsory education. In future when a Diphtheria outbreak threatens the district I intend to take the following steps :—

(a.) To notify to the teachers all cases of infection in houses from which any child attends their school and to request that such children shall be prohibited from attending school unless it is certified by a medical man that there is no risk of infection.

(b.) To ask the co-operation of teachers in the early detection of slight cases of sore throat among children attending the school—such cases to be excluded unless certified by a medical man as free from infection.

(c.) Since the inspection of the scholar's throats can only be satisfactorily performed by a medical man, I shall endeavour at least once a week to gain permission to make such examination myself in respect of the public schools, and shall recommend that a medical practitioner be asked to do so in the case of private schools.

Undoubtedly in the light of our present knowledge of Diphtheria infection it is necessary to treat every case of sore throat as potentially infectious—nor do I consider that even a bacteriological examination, when this furnishes negative testimony—will warrant one in regarding the case as harmless to others. I have, during the year in question, examined the exudation of a severe sore throat (acute follicular tonsillitis) and found no evidence whatever of the germ of Diphtheria (the

Klebs-Loeffler bacillus) whereas I have obtained from the same throat within 48 hours afterwards the Diphtheria bacillus in large quantities.

SCARLET FEVER.—Compared with the preceding year there was a most marked reduction in the number of cases of sickness from Scarlet Fever, and there was no mortality whatever from the complaint (*vide* **Tables A⁵ B¹**).

FINCHLEY SCARLET FEVER HOSPITAL.—The number of cases admitted during the year was only 18, and after an average stay in hospital of 38 days all were discharged quite free from the complaint. Subsequent to the discharge of two children upon September 1st, the hospital remained empty until the end of the year—for the all-sufficient and satisfactory reason that, with the exception of three mild cases notified to me on the 24th December, no case of Scarlet Fever cropped up in the District subsequent to September 4th. Although there were only 18 cases admitted during the year it must not be thought that the measure of good which the District reaped from the Hospital was not quite sufficient to warrant the expense of administration.

In 17 of these cases (1 was admitted as a paying patient and more as a matter of convenience) I satisfied myself that efficient isolation was not procurable in the houses where the disease cropped up, and I have little hesitation in stating that had we not the means of promptly isolating these patients in the Hospital they would certainly have lead to the infection of others in the same household, and that these 17 cases would probably have multiplied into nearly 50.

The small number of admissions to the Hospital may be attributed to the following causes:—

(a.) The amount of Scarlet Fever in Finchley during the year was markedly below that of previous years.

(b.) The fact that during the previous 2 years Scarlet Fever was very prevalent, has had the effect of protecting, by a previous attack, large numbers of children and young adults.

(c.) What cases there were notified in the District were of an exceptionally mild type, and I think it probable that some further cases were unrecognised, or did not receive medical advice and were therefore not notified.

In investigating the cases that *did* crop up it was very generally found that what I consider efficient isolation could be provided in the homes of the patients. Where this was the case I purposely avoided recommending removal to the Hospital, for the reason that I do not consider that such an institution should be burdened with unnecessary administrative expenses by admitting patients who can possibly and with safety be isolated and treated at home. On the other hand if there is a reasonable risk of spreading infection I have always advised their removal. Such advice has always been accepted and in no instance has it been necessary for me to recommend measures to enforce removal. Where there has been hesitation it has been sufficient to point out to the responsible persons, that by their neglect to adopt my recommendation they are neglecting a duty which they not only owe to the rest of the household but also to the rest of the community, and if by their wilfulness the disease spreads they are morally, if not legally, responsible for the suffering and possible death that might ensue.

Two of the patients admitted were children of the very poorest residents and they entered the Hospital in an extremely filthy and ragged state. When the period for their discharge came there was absolutely nothing to adequately clothe them with and their parents were appealed to in vain. Under the circumstances the matron had to make some necessary garments out of some cheap material which I authorised her to buy. I record this because it serves to point out to those who have been kind enough to send books and toys to the Hospital, that a little discarded children's clothing would also have proved very acceptable in two instances at least, during last year.

On application by the Friern Barnet Local Board, the Finchley Local Board consented to receive an occasional Scarlet Fever patient from that District into the Scarlet Fever

Hospital, on conditions that no case should be admitted from that District when there was any reason to believe that the bed might be required by a patient in the Finchley District, and that all expenses of maintenance, nursing, &c., should be defrayed by the Friern Barnet Local Authority.

Re CASES OF INFECTION AMONG PAUPERS.—On two occasions during the year it was found necessary to employ Nurse Cresswell to nurse patients who were, by reason of their illness, destitute of the means of support; and the bulk of such expense has fallen upon the Sanitary Authority. I am informed by the Relieving Officer that "The Local Authority is responsible for all cases of Infectious Disease whether they are paupers or not." There is no doubt that in such cases the duty of looking after infectious persons in the sense of securing their isolation is one that properly falls within the duties of the Sanitary Authority, but when these cases are destitute of all means of support during their illness then surely it should be the duty of the Guardians to make provision for sustenance, and to provide a nurse where necessary, or else to refund the Sanitary Authority for any expenses thereby incurred. The fact that a destitute individual happens to be suffering from an infectious disease does not shift the responsibility of maintenance and nursing from the shoulders of the Guardians, and I contend that the Parish should be able, in cases of emergency to supply a nurse for infectious cases.

THE SPREAD OF INFECTIOUS DISEASE BY TRAMPS.—There is abundant evidence forthcoming from all parts of Great Britain that tramps play an important part in disseminating disease, and there is a strong feeling among health officers as to the necessity of some measures to check this source of danger.

Many outbreaks of small-pox have been traced to this nomadic class—which for any practical purposes is under no sort of sanitary supervision; indeed, it is calculated that nearly 50 per cent. of the primary invasions of districts by small-pox are the result of tramp-spread infection.

In July of last year you were asked in common with a large number of other Sanitary Authorities to appoint delegates to attend a Conference, held under the auspices of the London County Council, to consider the ways and means of coping against the danger. The resolutions carried at the Conference were as follows :—

1. That common shelters which are not subject to the law relating to common lodging-houses should be made subject to such law.

2. That there should be power to the local authority to require medical examination of all persons entering common lodging-houses and casual wards, and that each inmate of a common lodging-house or casual ward should on admission have a bath of fresh water.

3. That the local authority should have power to order the keeper of a common lodging-house in which there has been infectious disease, to refuse fresh admissions for such time as may be required by the authority.

4. That the local authority should be empowered to require the temporary closing of any common lodging-house in which infectious disease has occurred.

5. That the local sanitary authorities should have power to require the detention of any inmate of a common lodging-house or casual ward who may reasonably be suspected of being liable to convey infectious disease.

6. That means should be provided for the detention and isolation of any vagrant found wandering in a public place, if reasonably suspected of being liable to convey infectious disease.

7. That the local authority should have full power to require the disinfection of the person and clothes of any person in a common lodging-house or casual ward, whether infected or exposed to infection.

8. That arrangements should be made by which the occurrence of infectious disease in common lodging-houses or casual wards should be made known by the local authority of the district to the local authorities of other districts.

9. That local authorities should be empowered to require the vaccination or re-vaccination of persons in common lodging-houses or casual wards who are exposed to the infection of small-pox.

TENEMENTED HOUSES. — HOUSES LET IN LODGINGS. — There are many houses in the Finchley district that have, of recent years, become tenemented or let in lodgings. Their great drawback is the circumstance that they were not built for the purpose to which they are now put. They were planned to accommodate one family and not several ; and the consequence is that for the latter purpose the water supply and sanitary arrangements generally are inadequate. A house which possesses every convenience for decent and healthy living where one family is concerned has under the altered circumstances, its sanitary provisions overtaxed, with the result that apparatus frequently gets out of order and it is difficult—in some cases quite impossible—to keep the premises in a sufficient state of cleanliness.

In addition to presenting conditions which are favourable to the appearance of disease, these tenemented houses, by reason of the overcrowding in them, favour its spread when the disease is of an infectious nature ; and the difficulties of dealing efficiently with such cases is very great indeed. For these reasons it is important that we should pay particular regard to the sanitary condition of such premises and use our best efforts to prevent the occurrence of infectious disease and to diminish the facilities for its spread. As a Sanitary Authority we are empowered to secure the registration of houses let in lodgings and we already possess Bye-laws dealing with these houses. Full advantage has not hitherto been taken of our powers in this respect, and I recommend that a register be kept and that the Bye-laws be enforced. The advantages which would be reaped from such a course will well outweigh the trifling increase in work that it would entail.

Meteorology in and around London for the Year 1894.

JANUARY.—First 8 days extremely cold ; the remainder of the month was generally mild, rain being frequent.

FEBRUARY.—With the exception of the period from the 13th to the 23rd the weather was generally fine and warm, though the fall of rain was slightly above the average.

MARCH.—In the first fortnight there was frequent rain, but during the rest of the month the weather was remarkably bright and genial.

APRIL.—The first half of the month was genial and spring-like ; the remainder of the month was mild, and there was frequent rain.

MAY.—The weather was generally dull and cold, with frequent rain.

JUNE.—The first three weeks were cold and wet, but subsequent to this the weather was bright and warm.

JULY.—The weather during a great part of July was generally wet and dull, though in the first week, and for some days at the end of the month it was fine and bright.

AUGUST.—Generally unsettled, with very little sunshine and frequent rain.

SEPTEMBER.—Cold and dull, and there was frequent rain during the month.

OCTOBER.—Generally dull, with frequent rain during the greater part of the month : rainfall particularly heavy during the last week.

NOVEMBER.—A mild month. Much rain during the first 16 days, resulting in serious floods, after which the weather was generally fine.

DECEMBER.—Mild and generally sunless, there being frequent rain in the middle of the month.

METEOROLOGICAL OBSERVATIONS TAKEN DURING THE YEAR ENDED 31ST
DECEMBER, 1894, AT GAS WORKS, NEW BARNET.

The Observations have been reduced to mean values by Glaisher's Barometrical and Diurnal Range Tables, and the Hygrometrical results from the sixth edition of his Hygrometrical Tables.

Month.	Temperature of Air.				Mean Temperature Air.	Rain.		Mean Degree of Humidity. Sat. 100.
	Highest.	Lowest.	Mean.			No. of Days it Fell.	Amount Collected.	
			of all Highest.	of all Lowest.				
January ...	52.5	4.0	42.1	30.9	37.1	21	2.745	87
February ...	56.9	16.5	47.1	32.6	40.5	15	1.892	86
March ...	66.8	22.5	53.8	31.6	43.4	9	1.445	79
April ...	71.1	27.5	59.5	35.4	48.2	13	2.095	84
May ...	72.1	29.8	59.7	37.8	48.8	9	1.730	80
June ...	81.6	39.0	66.9	45.9	56.7	11	1.860	78
July ...	85.0	41.8	71.2	49.1	61.0	15	2.661	86
August ...	79.9	39.0	67.6	48.6	58.5	15	3.215	80
September ...	72.5	31.5	61.6	44.0	53.4	10	1.070	88
October ...	63.0	26.1	56.1	41.4	49.2	18	3.774	90
November ...	64.0	24.8	51.7	37.2	45.1	13	3.165	85
December ...	51.5	25.2	45.7	35.1	41.1	15	2.235	85

Notes upon Sanitary Work performed during the Year.

NUISANCES.—During the year 1894, 460 inspections were made for “nuisances,” and 471 insanitary conditions were dealt with. Of this number only 115 inspections were the result of complaints by householders—and if one subtracted from this number those complaints that were lodged against nuisances alleged to exist on *other people's premises*—many of which complaints were not actuated by pure concern for health—a much smaller number would remain. It is a pity that so few direct complaints are made. It is a common experience on visiting a house to be told of defects which are obviously recognised by the tenants to be injurious or dangerous to health, and yet such defects are not, when other steps fail, brought before the notice of the Sanitary Authority. It is not difficult to ascribe, in some cases, some motive for this reticence, but is a pity that householders do not more generally appreciate the fact that it is both prudent and economical to

place the value of a healthy home above all other considerations, and that by suffering such menaces to health to exist they not only neglect a duty that they owe to themselves but one which they also owe to those around them. I may state that any complaint is always received in the strictest confidence and that in no case is the name of the person lodging the complaint ever divulged.

There are few sources from which foul and dangerous odours rise more generally than from the large dilapidated DUST-BINS which are still in use in considerable numbers ; the animal and vegetable matter so frequently mixed with the ashes is kept for dangerously long periods in these receptacles, which not infrequently also receive infectious rubbish. I have no doubt that the general substitution of galvanised iron moveable dust-bins, made of such dimensions as will necessitate a weekly clearance, and kept constantly covered, would have a favourable influence upon the public health, and more especially upon the health of children who so generally use the back-yard or garden as their playground.

During the year a HOUSE TO HOUSE INSPECTION of several streets was made—those streets being selected which were found to furnish the worst records from infectious illness. Poor-class property—invariably “jerry-built”—so frequently lapses into an insanitary condition that it seems almost necessary that a *systematic inspection at least every six months* should be undertaken by the Sanitary Authority. In a district such as Finchley, where there is comparatively little of this class property, this routine inspection would not be a difficult matter to accomplish, and such a step is additionally desirable when it is considered how invariably overcrowded such property is and what a large proportion the young children (who are particularly susceptible to the effects of insanitary conditions) bear to the total occupants. It has often occurred to me such house to house inspections are not made so frequently as they should be ; the large bulk of our sanitary work follows upon the outbreak of some disease and we then discover and remove insanitary conditions in order to

prevent the *recurrence* of the disease ; in house to house inspections we are enabled to discover and remove these conditions and thus frequently *prevent disease occurring*.

THE SEWAGE FARM.—The effluents from the Sewage Farm have been satisfactory throughout the year ; much improvement is required however in the filter beds, and steps are being taken to improve them.

BAKEHOUSES.—These have all been duly inspected and in general they were found exceptionally satisfactory, and the same remarks apply to the DAIRIES AND COWSHEDS and SLAUGHTER-HOUSES in the District. A full list of these will be found appended to the Report.

LEGISLATION AND BYE-LAWS.—The following Adoptive Acts are in force :—

Infectious Diseases (Notification Act), 1889.

Infectious (Prevention Act), 1890.

Public Health Act Amendment Act, 1890.

The following Bye-laws are in force :—

The cleansing of footways and pavements ; the removal of house refuse ; and the cleansing of earth closets, privies, ash pits, and cesspools.

The prevention of nuisances arising from snow, filth, dust, ashes, and rubbish, and the keeping of animals on any premises so as to be injurious to health.

Common lodging houses.

New streets and buildings.

Slaughter houses.

Houses let in lodgings.

Offensive trades.

Analyses performed during 1894.

10 samples of well water; with the result that 3 were condemned.

5 samples of other waters; all of which were considered potable with safety.

1 sample of pond water; found to be very polluted and to contain sewage.

A large number of (about 30) of effluents from the sewage farm; all satisfactory as sewage effluents and below the limit accepted by the Thames Conservancy Commissioners.

2 samples of milk; both good and pure.

2 samples of mortar; both poor and ill adapted for the purposes to which a mortar is put.

In every case where analysis showed the samples to be bad successful action was taken to remedy matters.

LIST OF DAIRIES AND MILK SHOPS IN THE FINCHLEY DISTRICT.

Name.	Address.	Dairy.	Milk Shop
Allison	22, Hamilton Road ... ..	...	1
Austin	Furzby Farm, Nether Street ...	1	...
Copps, Geo.	Fredericks Place	1	...
Copps, Mrs.	Friern Barnet Lane	1	...
Coldthorpe	High Road, East Finchley ... ..	...	1
Cress	High Road, East Finchley ... ..	...	1
Cress	High Road, East Finchley	1	...
Express Dairy Co. .	Regent's Park Road	1	...
Express Dairy Co....	Kenwood Farm, Hampstead ...	1	...
Gunning	East End Road	1	...
Hunt, Mrs.... ..	Market Place	1	1
Jersey Farm Co. ..	High Road, North Finchley ...	...	1
Jersey Farm Co. ...	Court House Farm, Nether St.	1	..
Lane	The Broadway, Church End ...	...	1
Lane	High Street, North Finchley ...	...	1
Nix	Queen's Terrace, Church End ...	...	1
Nix	College Field, Church End ...	1	...
Pidgeon	Long Lane	1	...
Tooley	Ballards Lane	1	...
Wilkinson	High Street, North Finchley ...	1	1
Totals		13	9

LIST OF SLAUGHTER HOUSES IN THE DISTRICT OF FINCHLEY.

Name.	Address.	Slaughter House.
Coldham	Market Place	1
Foskett	Red Lion Hill	1
Griffin	High Street, North Finchley ...	1
Galpin, W.	Albert Place, Church End ...	1
Galpin, J.	Market Place	1
Pulham	Wellington House, E. Finchley	1
Randall	Church End, Finchley... ..	1
Timewell	Hendon Lane	1
Tinsley	High Street, North Finchley ...	1
Wright	High Road, Whetstone	1
Watson	High Road, North Finchley	1
Ware	High Road, North Finchley ...	1
Whiteley... ..	East End Road, Church End...	1
Total		13

LIST OF BAKEHOUSES IN THE DISTRICT OF FINCHLEY.

Name.	Address.	Bakehouse.
Burgess	High Road, East Finchley ...	1
Clifton	Queen's Terrace, Church End	1
Cook, Mrs.	High Street, North Finchley ...	1
Cook, A. F.	Friern Barnet Lane, Whetstone	1
Coldham... ..	Market Place	1
Cooper	High Street, North Finchley ...	1
Gibson	High Street, North Finchley ...	1
Green	High Street, North Finchley ...	1
Harper	High Road, Whetstone	1
Hayes	Albert Place, Church End ...	1
Janes	Market Place	1
Priest	High Road, East Finchley ...	1
Ramsey	Bull's Lane, East Finchley ...	1
Smith	High Road, Whetstone	1
Stiff	Bull's Lane, East Finchley ...	1
Total		15

**Return of Sanitary Work executed in the District during
the year ending December, 1894.**

	No. of Houses.
Cesspools Cleansed	15
Cesspools Abolished	8
Closets Cleansed, Repaired, Altered, and Amended ..	38
Water Supply to W.C's. Laid on or Amended ..	147
New W.C's. Constructed	24
Sinks and Baths Disconnected	28
Water Supply (Domestic) Amended	46
New Lids to Cisterns	43
Water Laid on to Houses under Section 62	16
Drains Tested	147
Defective Drains Examined and Repaired	27
Defective Drains Abolished and New Constructed ..	40
Bell Traps Removed and Proper Gullies fixed	59
Drains Ventilated and Ventilators Amended	97
Dust Bins Provided and Repaired	88
Foul Ditches Cleansed	3
Heaps of Manure removed	4
Pig Styes Abolished	10
Samples of Water taken for Analysis	16
Wells Cleansed	2
Rainwater Pipes Disconnected	93
Drains Unblocked	8
Cellars Cleaned out	1
Sundry Nuisances Abolished	101
Premises Disinfected by Sanitary Department (No. of Rooms)	96
Bedding and Clothes sent for Disinfecting (No. of Rooms)	11
No. of Inspections Made	460

No. of Notices Served—

Section 93, Unhealthy Premises	203
Section 94, Foul Ditch	1
Section 94, Abatement of Nuisance	48
Section 94, Keeping Anacinal	1
Section 23, Connect to Sewer	1
Section 36, Water to W.C's., and Dust Bins	163
Section 41, Execute Works	9
Section 46, Whitewash and Cleanse Premises	6
Section 47, Cesspools	15
Section 47, Water from Cellar	1
Section 62, Water Supply	23
Total number of Notices Served	471
Total	2099

**Return of Sanitary Works executed in the District during
the Years below referred to.**

	1889	1890	1891	1892	1893	1894	Ttls.
Cesspools cleansed ..	8	3	4	4	11	15	45
Cesspools abolished	6	9	19	11	9	8	62
Closets cleansed, repaired, and amended	20	18	14	78	45	38	213
Water Supply to W.C.'s laid on and amended	128	119	130	257	173	147	954
New W.C.s constructed	12	22	20	16	20	24	114
Sinks and Bath wastes disconnected ..	74	32	19	48	39	28	240
Water Supply (Domestic) amended ..	4	3	11	58	12	46	134
Water Supply to Houses under Section 62	10	21	12	28	24	16	111
Drains tested	15	25	55	70	194	147	506
Defective Drains examined and repaired	22	18	43	105	68	27	283
Defective Drains abolished and new constructed	112	51	41	103	63	40	410
Drains Ventilated and Ventilators amended	52	92	60	75	62	97	438
Dust Bins provided and repaired ..	5	13	79	110	85	88	380
Foul ditches cleansed	4	4	3	5	4	3	23
Heaps of Manure removed	9	3	3	3	4	4	26
Pig Styes abolished	5	2	0	0	5	10	22
Samples of Water taken for analysis ..	15	17	10	17	20	16	95
Sundry nuisances abolished ..	43	49	39	41	95	101	368
Premises disinfected by Sanitary Department (No. of Rooms) ..	110	58	50	104	168	96	586
No. of Inspections made	299	282	295	319	476	460	2131

F. C. STOCKMAN,

Sanitary Inspector.

