[Report 1898] / Medical Officer of Health, Chelmsford R.D.C.

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

CHELMSFORD

Rural District Council

FOR THE YEAR 1898.

CHELMSFORD:

PRINTED BY MESSRS. MEGGY AND THOMPSON, 98, HIGH STREET.

MDCCCXCIX.

CONTENTS.

Chelmsford Rural Sanitary District.

REPORT

OF THE

Medical Officer of Health

FOR THE YEAR 1898.

Sub-Registration District.		Area in Acres.	Population Census, 1891.
1. Chelmsford, part of.	One parish ...	692	293
2. Ingatestone.	Eleven parishes	26,541	6,175
3. Writtle.	Six ,,	18,079	5,060
4. Great Waltham.	Eight ,,	19,080	5,133
5. Great Baddow.	Six ,,	15,033	6,513
	Total	79,425	23,174

	Population.	No. of inhabited houses.	No. of uninhabited houses.	No. of houses building.
1881	23,130	5,066	377	6
1891	23,175	5,102	319	17

TO THE CHAIRMAN AND MEMBERS

OF THE

RURAL DISTRICT COUNCIL.

GENTLEMEN,

The preparation of the report for the year 1898 will not, I am afraid, afford me any degree of pleasure or of satisfaction, since it has been a year of trouble and misfortune. The continued illness of your Chairman, Mr. E. Corder, has cast a gloom over your proceedings, and the continued illness of the Surveyor and Inspector has caused the sanitary work to get considerably into arrear, and prevented other works being carried to a satisfactory conclusion.

I had hoped that this year would have seen the extension of our water supply to the parishes of Runwell and Little Baddow, the hamlet of Battles Bridge, and to a portion of the parish of Sandon completed in a satisfactory manner. Had such been the case it would have been a work of which you could have justly been proud. Unfortunately Mr. Smith, our surveyor and the engineer to the scheme, was not able to give it personal attention, and as a result we have had innumerable complaints. Apart from defective workmanship, leading to waste of water, the work was not carried out in accordance with the plans approved by the Local Government Board, and this has been the source of much annoyance. Still more unfortunately the summer was phenomenally dry, leading to a most exceptional demand for water, and also causing the springs to seriously decrease in volume. The result was that when the works were completed there was not enough water to keep the mains full, and a number of houses on the higher portions of the district derived little or no benefit from being connected with the mains. The service reservoir on Rettendon Hill was defective and had to be relined with cement. After repair there was never sufficient pressure of water in the mains to again get water into it, and it remains useless. The low lying portions of the district and the parishes of Danbury and Little Baddow, which are supplied with water by aid of pumps (worked by two oil engines) have had an abundant supply. The serious complaints caused your Council to call in Messrs. Taylor, Sons, and Santo Crimp, to advise. Mr. Brough Taylor accordingly came over and examined the works, and has made the following suggestions :—

1. That certain springs arising on land near should be purchased and connected with the reservoir of the springs now being utilised.

2. That an additional reservoir should be constructed on Danbury Common some 50 or 60 feet higher than the present reservoir, and the present engines used for pumping the water into this higher level reservoir.

By acting on these suggestion a much larger supply of water will be available, and the additional pressure would suffice to supply every part of the district through which the mains ramify.

Every effort should be made to get these additions completed before the ensuing summer, otherwise we shall have a repetition of the very unpleasant experiences of the past year.

The water supply to Ingatestone also failed partly on account of the partial failure of the springs, but also on account of an increased demand for water. A piece of land was acquired, a well sunk, and a portable engine employed pumping the water therefrom into the reservoir. In this way an abundant supply was obtained. The Surveyor prepared a scheme for converting this temporary into a permanent supply, and an application was made to the Local Government Board for permission to borrow the necessary money. I never cared for the scheme, and I was not surprised when the Local Government Board returned the plans, apparently not considering it necessary to hold a public inquiry. An additional supply is imperatively necessary. In fact, I understand that the present springs are only leased, and that the lease having expired, will not be renewed. A deep well into the tertiary sands or the chalk beneath appears to be the only possible solution of the difficulty, and an engineer should be consulted as early as possible.

At length the sanction of the Local Government Board has been obtained to the scheme for supplying Writtle with water, and also for sewering the village. The ecclesiastical parish of Writtle has been made for this purpose into a special drainage area. Messrs. Taylor, Sons, and Santo Crimp have been consulted, and will probably be instructed to carry out the scheme, with any modifications which may be rendered necessary by the erection of houses on Oxney Green.

The parishes of Springfield and Great Baddow are increasing somewhat rapidly in population, and we have had barely sufficient water to meet their requirements during the past summer. Some steps should be taken at once to supplement the supply. There are several admirable springs which could probably be made available. They yield a considerable amount of water, and are fully capable of protection. The present springs are not as adequately protected as one could wish, and an effort has been made to purchase some of the surrounding ground, but apparently with no result. The subject is one which should receive immediate consideration.

The springs at Danbury also require more adequate protection, and I should like to see the springs supplying Great and Little Waltham fenced in, although there is but little risk of pollution, save by cattle grazing near.

A well has been sunk on a bit of waste ground at Galley End, and a supply of water obtained for the cottages there. This is a great boon to the inhabitants.

Improvements have been made in the drainage of a group of cottages on Mill Green in Fryerning parish, and an extension of the sewers has taken place in Ingatestone, allowing a group of cottages to be connected therewith. Previously these cottages drained into a hollow in a field near the Rectory and caused a serious nuisance.

The Writtle sewage has been a serious cause of complaint during the year, and was reported upon specially in November. There are some short sewers which discharge into a small settling tank in Lawford Lane. (An old lane, now closed to the public.) The Writtle Brewery Company have a drain which carries the sewage from the Brewery into the same tank, and this sewage considerably exceeds in amount that brought by the sewers proper. In the late summer there was evidently some neglect at or near the settling tank, for I found that a considerable amount of sewage was escaping into a ditch near the tank and running by a short cut into the river. The drain from the Brewery became blocked. This was soon unstopped, and the sewage diverted into its usual channel, down the side of Lawford Lane. The usual course for the sewage is along this ditch for about half a mile, and during its course much of it percolates into the gravel. The solids deposited are from time to time removed, and but little sewage enters the river. During the summer, however, a considerable amount must have entered the stream by the shorter course above-mentioned, and as the season was exceptionally dry there was no flow whatever in the river and the stream became very foul, the smell reaching the village. Someone surreptitiously raised the Mill Gates which keep back the water, and the whole was sent with a rush into the Cann, which flows through Chelmsford. The result was that the river was rendered foul and many fish killed. Fortunately, it soon passed away, and the river in a few days assumed its normal appearance. The

stream during dry seasons is always a sluggish one, and it is contaminated at several points both within and without our district. Since then, Messrs. Taylor Bros. and Santo Crisp have been consulted with the view of providing a temporary remedy, if such be possible, and of carrying out the scheme sanctioned by the Local Government Board.

During the year some large electrical engineering works have been established in that portion of Writtle parish adjoining Chelmsford; several acres of ground near have been laid out for building purposes, and it is quite possible that during the ensuing year a considerable number of cottages will be erected here. It will be quite out of the question connecting them either with the village water supply or the sewerage system.

At North End, in Great Waltham parish, a new public well has been sunk, a supply of water found, and a pump will be erected. A better supply of water is much needed at Howe Street, Great Waltham, and I have suggested piping a spring which rises near and yields a fair supply of excellent water. This suggestion has not yet been acted upon. The Ford End well has been improved, and an attempt made to prevent infiltration of water from an adjoining garden.

At Great Waltham village some improvement has been made in the sewers, and all the sewage now passes through settling tanks before being discharged into the river. It is doubtful, however, whether this will prevent the pollution of the stream, of which complaint had been made.

Water Analyses. All the public supplies and many private supplies have been submitted to examination. The Danbury, Ingatestone, Great Baddow, and Springfield supplies have been analysed several times. In no instance have I found anything indicative of contamination, but the number of micro-organisms present in the Baddow and Springfield water is very considerable, and appears to be increasing.

Housing of the Working Classes Act. A considerable number of inspections have been made, and several cottages represented as being unfit for human habitation. The following is a list of cottages so represented, together with the result of the representation :—

Feb. Cottage at Good Easter. Since closed.
March. 3 Cottages at Fryerning. One closed. Two repaired. Dec., '97, also May and Sept.
Cottage on Springfield Green. Nothing done.
July. Cottage on Danbury Common. Now occupied.
Sept. Boreham. Now unoccupied.

On Nov. 30th, 1897, a second formal representation was made with reference to a house at Margaretting. This house is still tenanted and has not been placed in repair.

Overcrowding. In previous reports I have referred to the fact that a considerable amount of overcrowding occurs in the district, and that constant supervision is necessary to keep it within limits. Many cases have been reported during the year, and the worst have been abated. It is exceedingly difficult to deal with these cases, since an order to abate drives the young adults out of the district, and the farmers then complain that labour is not obtainable. In the truly rural parishes very few cottages are erected, and as the old ones become uninhabitable the accommodation becomes more and more limited. There is, however, one exception worthy of reference. Good Easter was for many years one of the most overcrowded parishes, but the Messrs. Matthews, who farm most of the land there, have built and caused to be built a number of good cottages, greatly to the comfort and advantage of their labourers.

Factory and Workshops Act. A complaint was received from H.M. Inspector of Factories with reference to the overcrowding of a Washhouse at Writtle, and the insanitary conditions of the surroundings. This I reported to your Council in November. I called on January 7th and found that no notice of any kind had been served and that the conditions remained as before.

Foster Children. An association in London sends down infants into one of our villages, and these are boarded out amongst the villagers. I communicated with the Clerk to the Board of Guardians suggesting that an Inspector be appointed under the Infants' Life Protection Act. The suggestion has not, I understand, been acted upon, but the Relieving Officer of that particular district has been asked to exercise a little supervision.

Complaints Received. Until this year comparatively few complaints of nuisances have been made to me, but this year I have received a considerable number. Some few were unfounded, but the majority were of matters requiring attention. Some have been abated, but others still require attention.

Systematic Inspection. Whatever portion of the district I have recently visit I have found many matters requiring the attention of the Nuisance Inspector. Prior to that officer's illness, although the inspections were not so systematic as is desirable, there was little ground for complaint, but this year, during the whole of which he has been unable personally to attend to his duties, inspection has necessarily been neglected, and the sanitary condition of the district is deteriorating.

As your Council has decided not to renew the present appointment, and to appoint two officers instead of one, I need not say anything more with reference to the matter.

The Building Bye-Laws. In one or two portions of the district, notably Woodham Ferris, land speculators have purchased farms and laid out the land in plots for building purposes. The roads are marked out by aid of a plough, but I believe none have been made, and all kinds of trumpery structures are being placed thereon — wooden huts, railway carriages, corrugated iron sheds, etc., and some of these are used as dwelling houses. A Special Committee visited Woodham Ferris in March last, and as the result some of the worst have become untenanted, but most are still occupied either as dwelling houses or workshops, and no further action has been taken.

PREVALENCE OF INFECTIOUS DISEASE.

The continued decrease in the prevalence of the more serious and notifiable infectious diseases is a matter for congratulation, and is doubtlesss in a great measure due to the use made of the Isolation Hospital. We have had fewer cases notified during 1898 than during any previous year since the Notification Act came in force (1890).

The following table shows the decrease to have commenced with the use of the Hospital :—

		Number of cases notified.
1892	No Isolation Hospital	204
1893	do.	227
1894	do.	191
1895	(Isolation Hospital completed)	107
1896	,,	103
1897	,,	113
1898	,,	99

Roughly speaking, the average number of cases notified since the Hospital was erected is only half that of the preceding years.

At the commencement of the year there were three patients in the Hospital.

During the year the No. of patients admitted was	42
,, ,, ,, discharged	42
,, ,, ,, who died was	2
Remaining in Hospital at end of year	1

The patients who died were suffering from malignant Scarlet Fever, and one succumbed six days after admission, and the other eight days after. All the others made good recoveries. With the exception of a few days in July the Hospital has been occupied continuously during the year. An unusual number of Typhoid Fever patients were admitted (11), and although some of the cases were severe all recovered. I am quite certain that several lives were saved by the removal, as it would have been utterly impossible for them to have received proper care and treatment in the houses from which they were removed. The caretaker was changed during the year, and so far both the present caretaker and his wife have given the greatest satisfaction.

Smallpox. No case has occurred during the year. The tent hospital which is used for such cases was erected on the hospital ground for examination and airing.

Scarlet Fever. Most of the cases of this disease which have occurred have been of the mildest form, but on occasions the disease has shown a tendency to a serious type, even becoming malignant. It has been present during the whole year in the Writtle District, and in July showed a tendency to become

epidemic in Highwood. I made a house to house inspection and found several previously unsuspected cases. I promptly removed the whole, 12 in number, to the Hospital, and this I believe prevented an epidemic, as only a few cases have occurred there, and at intervals, since. Some cases which I have recently seen at the request of the M dical Attendant were of so mild a type that it was impossible to be certain of the diagnosis. All such cases, though not notified, have been carefully watched. As they have not been followed by peeling, it is possible that they were cases of Influenza. There were five children so suffering in one house. On some an evanescent rash had been observed, and there was some sore throat. As these cases occurred in a neighbourhood where there were several children suffering from undoubted Scarlet Fever one cannot but suspect that these had the disease in its very mildest form.

Age incidence of Notified Cases :—

	Under 1 year.	1-5	5-10	15-25	25-35	Totals.
Males	0	4	11	4	1	24
Females	1	7	15	4	1	31

Diphtheria and Croup. Only 8 cases were notified during the year, against 14 in 1897 and an average of 52 for each of the preceding 4 years. Not a single death occurred from the disease. This is the first year when such an event has been recorded since I have been in the district, now over 10 years. Bacteriological diagnosis showed 6 of these cases to be true diphtheria, two were, to say the least, doubtful. In not a single instance could the infection be traced to a pre-existing case. One occurred in a very damp house, another patient was attacked two days after pumping out a large cesspool, a third presented the following points of interest. He had had an attack 4 years ago, and 11 years ago two children died from the disease in the same house. At the time he was taken ill, the cottage was being re-roofed. It is possible that the microbe was lurking in the building and became disturbed by the removal of the roof.

Age and sex incidence:—

	Under 1 year	1-5	5-10	10-15	15-25	25-35	Over 35	Totals.
Males... ...	0	1	0	1	1	1	0	4
Females ...	0	0	0	1	1	2	0	4

Typhoid Fever. Nineteen cases were notified during the year, and 4 of these occurred in Springfield parish and 7 in Great Baddow. (*Vide* Table page.)

Great Baddow. *All* the cases occurred in one house. Six persons were attacked, but one child after leaving the hospital had a slight relapse, hence there were 7 notifications. The father of the family was first attacked. He was a thatcher and much away from home. The origin could not be traced. He was ill for some weeks before he would consent to removal, and meanwhile the other members of the family were infected. All were attacked within 14 to 21 days of the first case being notified.

Springfield. The 4 cases have occurred in 3 houses and no connection could be traced. On Oct. 9th the first patient was notified. He was a labourer working upon the sewage farm. Three weeks later his daughter, who had nursed him prior to his removal to the Hospital, was also attacked. About the same time a third case occurred, the patient being a man who weekly indulged in a meal of cheap oysters. No definite cause could be assigned for the attack. The fourth case was that of a boy who stated that he had been made sick by the smell arising from the Sewage Farm; diarrhœa supervened, and seven days after he was notified to be suffering from Typhoid Fever. There were nuisances in and near the house, so that the origin is doubtful.

Of the remaining cases, two, at least, proved to be something other than typhoid.

One patient came home ill from Stanford-le-Hope.

One patient had been at the Battle of Omdurman, and probably contracted the disease at Cairo on his way home.

One patient became infected at an Essex seaside resort.

One was engaged carting manure during the time when he became infected.

One superintended the cleaning of a cesspool (while suffering from influenza) 12 days before the onset of Typhoid symptoms.

And one patient worked outside the district and probably contracted the disease when away from home.

There has, therefore, been no epidemic prevalence. Only one patient died.

The age and sex distribution was as under :—

	Under 1 year	1-5	5-10	10-15	15-25	25-35	Over 35	Totals.
Males... ...	0	0	2	1	1	6	2	12
Females ...	0	1	0	2	1	2	1	7

Measles. An outbreak occurred at Stock in March necessitating the closing of both the elementary schools. The disease spread to several of the adjoining parishes, but, fortunately, it was not found necessary to close any of the schools. In July a number of cases occurred at Ford End, and the schools were closed for a short time.

Mumps. At the end of January this disease was very prevalent in West Hanningfield

Whooping Cough. In Writtle and Margaretting many cases of Whooping Cough occurred early in the year.

Chicken Pox. A few cases occurred in Great Waltham in June.

MORTALITY STATISTICS.

The total number of deaths registered in the district during the year was 336, and of these 4 did not belong to the district, two being patients in the Buttsbury Hospital belonging to the Billericay District. In the Workhouse and Infirmary at Chelmsford there were 37 deaths of persons belonging to our district. The total deaths to be credited to the Rural District s therefore 369.

Death-rate. The death-rate for the year was 15·6. This is a higher rate than we have recorded since 1892, and appears to be chiefly due to an excessive mortality amongst infants.

Zymotic Death-rate. The death-rate from the seven principal zymotic diseases was barely 1· per 1,000 (·97). This is below the average. Of the 23 deaths from zymotic diseases, 2 were from Scarlet Fever, 1 from Typhoid Fever, 6 from Measles, 7 from Whooping Cough, and 7 from Diarrhœa.

Infantile Mortality. The mortality amongst infants was much higher than during any other year of which I have any record. The rate was 132 per 1,000 births, whilst our average is about 90. The whole of this excess occurred in January and February, and chiefly in the Writtle sub-registration district.

Table II. gives the death-rates for the various sub-registration districts, together with the rates for the preceding year.

Table III. contains the death-rates for the larger parishes and various groups of parishes, and in calculating these the necessary corrections for deaths in the Workhouse and other Public Institutions have been made.

Table IV. gives the deaths at various age periods and the causes of death in the various sub-registration districts, etc., as required by the Local Government Board.

Table V. refers to the distribution of the cases of disease notified.

Table VI. contains a monthly meteorological summary, together with the Death and Sickness Statistics.

The distribution of the cases of infectious disease notified during the year is given in the subjoined table :—

	Diph-theria.	Typhoid Fever.	Scarlet Fever.	Ery-sipelas.	Totals.
Rettendon	0	0	4	0	4
Widford	0	0	3	0	3
Galleywood	0	0	8	0	8
Writtle	1	1	7	1	10
Great Baddow	2	7	1	3	13
East Hanningfield	0	2	0	1	3
Great Waltham	3	0	4	0	7
Ingatestone...	0	2	3	0	5
Stock	0	0	0	2	2
South Hanningfield ...	0	0	0	1	1
Buttsbury	1	*	0	3	4
Great Leighs	0	0	4	0	4
Springfield	0	4	2	0	6
Margaretting	0	1	0	1	2
Danbury	1	0	0	1	2
Highwood	0	0	10	0	10
Cooksmill Green	0	0	3	0	3
Battles Bridge	0	0	2	0	2
Little Waltham	0	1	0	0	1
Roxwell	0	0	3	0	3
Chignall	0	1	0	0	1
Broomfield	0	0	1	1	2
Little Leighs	0	*	0	0	0
Woodham Ferris	0	0	0	1	1
Total ...	7	19	55	15	97

* A case of Puerperal Fever was notified from this parish.

CONSUMPTION OR PHTHISIS AND OTHER TUBERCULAR DISEASES.

The recent conference held at Marlborough House, and at which the Prince of Wales presided, has done much to direct public attention to the preventive character of these diseases. During the year there have been 20 deaths from Phthisis (consumption of the lungs), and 11 deaths from other forms of Tubercular Disease, a total of 31, or about one-twelfth of the total deaths. These diseases are due to infection of the body by a microscopic organism called the Tubercle Bacillus. In adults, this chiefly attacks the lungs, causing consumption; in children, it chiefly affects the intestines, causing consumption of the bowels. The microbe gets into the system in the following ways—(*a*) with food, and (*b*) with the air we breathe.

FOOD.—A considerable number of milch cows are tuberculous, and if the tubercular disease affects the udder of the cow, the milk will contain tubercle bacilli, and, when consumed unboiled, it is capable of communicating the disease to human beings, especially to infants and young children.

The flesh of a tubercular animal may contain the bacilli, and if these are not killed by cooking, such meat may communicate tuberculosis to the consumer.

Both these dangers may be guarded against by efficient cooking, since the infective organism is very quickly killed by a heat approaching that of boiling water.

The spread of tuberculous disease amongst cows is facilitated by overcrowding in badly ventilated cowsheds. Inspection to prevent such overcrowding and to ensure cleanliness is therefore essential. Unfortunately, efficient meat inspection is impossible in rural districts.

AIR.—Persons suffering from consumption expectorate a good deal, and the "phlegm" is usually loaded with bacilli. If the expectoration is allowed to dry on the floors or elsewhere, it ultimately becomes converted into dust, gets blown about, and so may be inhaled and infect others with the disease.

The filthy habit of expectorating should be abandoned, and persons suffering from consumption should either use a special spitting cup or soft rags. The former can be cleansed and disinfected with boiling water, and the latter can be burned. Houses or rooms which have been inhabited by persons in an advanced stage of the disease should afterwards be thoroughly cleansed and disinfected.

It is now fully recognised that consumption in its early stages is curable. The bacteriological examination of the sputum affords the earliest information of the presence of the tubercle bacilli.

In order to afford medical men every facility for this early diagnosis, I (as County Medical Officer of Health) undertake the bacteriological examination of sputum at my laboratory. If the patient be poor no charge is made, otherwise a nominal fee of 2s. 6d. is payable.

The establishment of Sanatoria for Consumptive patients for the open-air treatment with suitable dieting is greatly to be desired, and the National Association for the Prevention of Consumption is about to try the experiment of establishing such Sanatoria, on a self-supporting basis. I should like to see such an establishment on the elevated ground near Althorne, overlooking the valleys of the Blackwater and the Crouch, and another on or near the top of Danbury Hill.

The average number of deaths annually from Consumption of the Lungs in this district is 24, and 8 others die from Consumption of the Bowels and other organs. All these deaths may be said to be preventable, and with the Prince of Wales I ask—If preventable, why not prevented? Much can be done by the education of the public, and as Lord Salisbury thinks Medical men can do more to assist in such education than any other, and that it is to this education rather than to legislative measures that we must look for a diminution in the death-rate from Tubercular disease, and as I agree with his Lordship on this point, I have ventured to refer briefly to the subject in this report.

I have the honour to be, Gentlemen,

Your obedient Servant,

JOHN C. THRESH.

TABLE I.

BIRTH-RATES, DEATH-RATES, AND INFANTILE MORTALITY DURING 1898, COMPARED WITH PREVIOUS YEARS.

Period.	Per 1,000 Population.			Deaths of infants under 1 year per 1,000 Births.
	Birth-rate.	Death-rate all causes.	Death-rate Zymotic Diseases.	
1898	22·1	15·6	·98	132
1897	24·7	14·6	·72	91
1896	24·4	13·0	1·49	88
1895	25·3	13·9	1·03	94
1894	22·7	12·8	·55	72
1893	26·2	14·9	1·65	88
1892	24·5	18·2	1·85	96
1891	26·6	15·5	·95	91
1890	26·8	15·6	2·6	105
1881-90	28·0	15·3	1·65	92

TABLE II.

DEATH-RATES FROM ALL CAUSES, AND FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES AND INFANTILE MORTALITY IN THE VARIOUS SUB-REGISTRATION DISTRICTS.

Sub-registration Districts.	1897.			1898.		
	Death-rate.	Zymotic Death-rate.	Infantile Mortality.	Death-rate.	Zymotic Death-rate.	Infantile Mortality.
Writtle	14·2	·19	66	16·1	1·35	196
Great Waltham ...	15·8	·97	110	16·75	·97	108
Great Baddow ...	13·3	·44	102	17·4	·87	106
Ingatestone ...	15·5	1·29	81	12·95	·81	133

TABLE III.

DEATH-RATES IN THE PARISHES PER 1,000 POPULATION.

Parishes.	Population. 1889.	Death-rate, 1898.	17 years' 1881 to 1897.
Boreham, Little Baddow, Danbury and Sandon	2,890	14·1	13·9
Runwell, Rettendon, Woodham Ferris and the Hanningfields	2,830	13·1	13·5
Roxwell, Chignall, Good Easter, Mashbury and Pleshey	2,155	12·1	15·3
Writtle (including Highwood)...	2,580	18·6	14·2
Great Waltham	2,285	14·8	14·4
Broomfield, Little Waltham, Little Leighs and Great Leighs	2,354	19·1	16·0
Springfield	2,750	20·7	14·5
Great Baddow (including Galleywood) ...	2,200	15·9	15·7
Margaretting and Widford	815	8·6	15·2
Stock and Buttsbury	1,064	16·0	15·2
Ingatestone and Fryerning	1,680	14·3	16·6

In calculating the above death-rates, the deaths of inmates in the Union Workhouse have been added to the parishes to which the persons belonged.

TABLE IV.

(A) TABLE of DEATHS during the Year 1898, in the Chelmsford Rural Sanitary District, classified according to Diseases, Ages, and Localities.

Names of Localities. Sub-registration Districts and Hospitals.	Mortality from all causes, at subjoined Ages,							Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.																		
											FEVERS.															
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typh'd.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa & Dysentry	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Heart Disease.	Influenza.	Injuries.	All other Diseases	Total.
Great Waltham	76	13	7	1	5	24	26	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	4	..	1	...	12	20
								5 upwards.	...	...	...	...	...	.	...	..	.	...	..	...	...	1	...	6	7	5	1	2	34	56
Writtle	73	22	4	4	2	14	27	Under 5	...	...	..	...	...	...	...	..	..	...	...	...	3	2	...	...	7		1	1	12	26
								5 upwards.	.	...	.	...	...	...	...	...	...	...	...	1	.	...	...	3	8	2	2	4	27	47
Great Baddow	106	15	12	4	5	36	34	Under 5	...	...	...	...	...	.	...	...	...	...	...	2	1	1	...	...	9	...	..	1	13	27
								5 upwards.	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	8	9	11	2	8	39	79
Chelmsford R.D. Hospital	2	...	...	2	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwards.	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Ingatestone	74	19	5	1	3	13	33	Under 5	..	...	...	...	...	...	...	...	...	...	...	2	...	2	...	.	4	1	1	...	14	24
								5 upwards.	...	...	...	..	...	1	...	...	...	...	...	...	..	...	...	3	8	8	4	1	25	50
Billericay R.D. Hospital	2	...	...	1	...	1	...	Under 5	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
								5 upwards.	.	...	...	...	...	2	...	...	...	...	...	...	...	...	...	..	..	...	...	...	..	2
Widford Parish	3	...	...	...	...	...	3	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	.	...	...	...	...	...	...
								5 upwards.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	3
Totals	336	69	28	13	15	88	123	Under 5	...	...	...	...	...	.	...	...	...	...	...	4	7	5	...	...	24	1	3	2	51	97
								5 upwards.	..	2	.	....	....	3		...	...	...	...	2	...	2	...	20	33	26	9	16	126	239
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.	37	...	...	1	2	3	31	Under 5	...	...	...	...	..	...	...	...	...	..	...	...	.	...	...	...	...	...	...	...	...	...
								5 upwards.	...	...	...	..	...	...	...	...	...	...	...	...	...	...	2	3	8	...	1	23	37
Deaths occurring within the district among persons not belonging thereto.	4	...	...	1	...	3	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
								5 upwards.	...	...	...	...	...	2	..	...	...	...	...	...	...	...	...	...	...	...	...	2	...	4

Of the 37 deaths occurring in the Union and Infirmary, 10 belong to Great Waltham, 8 to Writtle, 13 to Gt. Baddow, and 6 to Ingatestone.

TABLE V.

(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 1898, in the Chelmsford Rural 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.												
									FEVERS.											FEVERS.											
	Last Census.	Estimated to middle of 1898.			Smallpox	Scarlatina.	Diphtheria.	Membranous Croup	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		Total.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup	Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		Total.
(a.)	(b.)	(c)	(d)	(e.)	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
Writtle	5,060	5,160	112	Under 5.	...	5	..	...	...	...	..	..	...	...	...	...	5	...	4	...	...	...	...	...	...	...	...	...	...	4
				5 upwds.	...	19	1	...	...	2	...	..	...	...	2	...	24	...	13	...	...	...	1	...	...	...	...	...	...	14
Great Baddow (H) ...	6,513	6,842	141	Under 5.	...	2	...	1	...	1	..	...	...	...	...	...	4	...	...	...	...	...	1	...	...	...	...	...	...	1
				5 upwds.	...	9	2	...	...	10	...	...	...	...	4	...	25	...	1	...	...	...	7	...	...	...	...	...	...	8
Ingatestone	6,175	6,175	143	Under 5.	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwds.	...	8	1	...	...	5	...	...	1	...	9	...	24	...	6	...	...	...	2	...	...	...	...	...	...	8
Great Waltham ...	5,133	5,133	120	Under 5.	...	4	...	..	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwds.	...	4	3	...	...	1	...	...	1	...	...	...	9	...	2	...	...	...	...	...	...	...	...	...	...	2
Widford Parish ...	293	293	7	Under 5.	...	...	...	...	...	...	...	...	...	...	...	...	.	..	...	...	...	...	...	...	...	...	...	...	...	...
				5 upwds.	...	3	...	...	...	...	...	...	..	...	..	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS	23,174	23,603	523	Under 5.	..	12	...	1	...	1	...	...	...	...	...	...	14	...	4	...	...	...	1	...	...	..	...	...	...	5
				5 upwds.	...	43	7	...	...	18	...	...	2	...	15	..	85	...	22	...	...	...	10	...	...	...	...	...	...	32

"Notification of Infectious Diseases" has been compulsory in the District since 1890.

CHELMSFORD. TABLE VI.

TABLE OF METEOROLOGICAL DATA, DEATHS, AND OF INFECTIOUS DISEASES.

YEAR ENDING DECEMBER 31st, 1898.

	Meteorological Data					Deaths from all causes.			Deaths from Zymotic Diseases.								Infectious Diseases Notified.					
	Mean Temperature.	Mean daily range of Temperature.	Relative Humidity.	No. of Rainy Days.	Rainfall.	Total Deaths.	Under 1 year.	Over 65 years.	Scarlet Fever.	Diphtheria and Croup.	Fevers.	Diarrhœa.	Erysipelas.	Whooping Cough.	Measles.	Totals.	Smallpox.	Scarlet Fever.	Diphtheria and Croup.	Fevers.	Erysipelas.	Totals.
January ...	41·7	10·7	92	9	·74	47	10	21	...	...	...	...	...	2	...	2	...	6	...	...	...	6
February ...	38·45	8·95	87·5	9	·80	42	16	17	...	...	...	...	...	2	1	3	...	10	2	1	1	14
March	39·05	15·1	86	11	1·38	32	7	13	...	...	...	...	...	1	1	2	...	6	1	1	2	10
April	46·5	18·9	78	10	1·15	34	5	14	...	...	...	...	...	2	2	4	...	3	1	1	1	6
May	50·4	16·2	80·5	20	1·95	24	3	11	...	...	...	...	...	...	2	2	...	1	...	1	2	4
June	56·2	17·9	82	13	2·21	22	5	5	...	...	...	...	...	...	...	...	...	...	2	...	3	5
July	59·7	21·0	77	6	·64	23	3	9	...	...	...	...	...	...	...	...	...	11	...	1	2	14
August ...	63·37	21·85	75	8	·86	26	1	9	...	...	...	1	...	...	...	1	...	3	1	1	1	6
September ...	60·0	25·14	69·5	3	·29	32	5	15	1	...	...	3	...	...	...	4	...	3	..	5	...	8
October ...	53·05	13·5	84	14	2·30	28	5	14	1	...	...	2	...	...	...	3	...	7	...	4	...	11
November ...	44·66	13·26	94	18	2·03	26	4	13	...	...	...	1	...	...	...	1	...	2	1	6	1	10
December ...	43·95	12·5	87	12	2·30	33	5	13	..	...	1	...	...	...	...	1	...	3	...	...	2	5
Means and Totals. 1898	49·75	16·25	82·7	133	16·65	369	69	154	2	0	1	7	0	7	6	23	...	55	8	21	15	99
1897	48·4	15·55	81·4	152	22·14	343	52	167	1	1	1	6	1	7	0	17	...	72	14	11	16	113
1896	49·01	16·18	81·3	145	24·10	305	50	127	3	11	0	2	1	10	11	38	...	45	31	12	15	103
1895	48·2	17·2	83·8	144	18·43	323	55	149	0	2	3	10	1	5	4	25	...	44	24	12	27	107
1894	47·1	15·7	83·7	197	24·34	300	39	131	1	6	1	2	2	2	1	15	2	81	73	8	27	191
1893	49·8	18·5	81·3	150	20·21	345	55	145	1	11	8	13	0	3	3	39	0	84	80	22	41	227