[Report 1906] / Medical Officer of Health, Surrey County Council.

Contributors

Surrey (England). County Council.

Publication/Creation

1906

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Surrey County Council.

ANNUAL REPORT,

-1906,-

OF THE

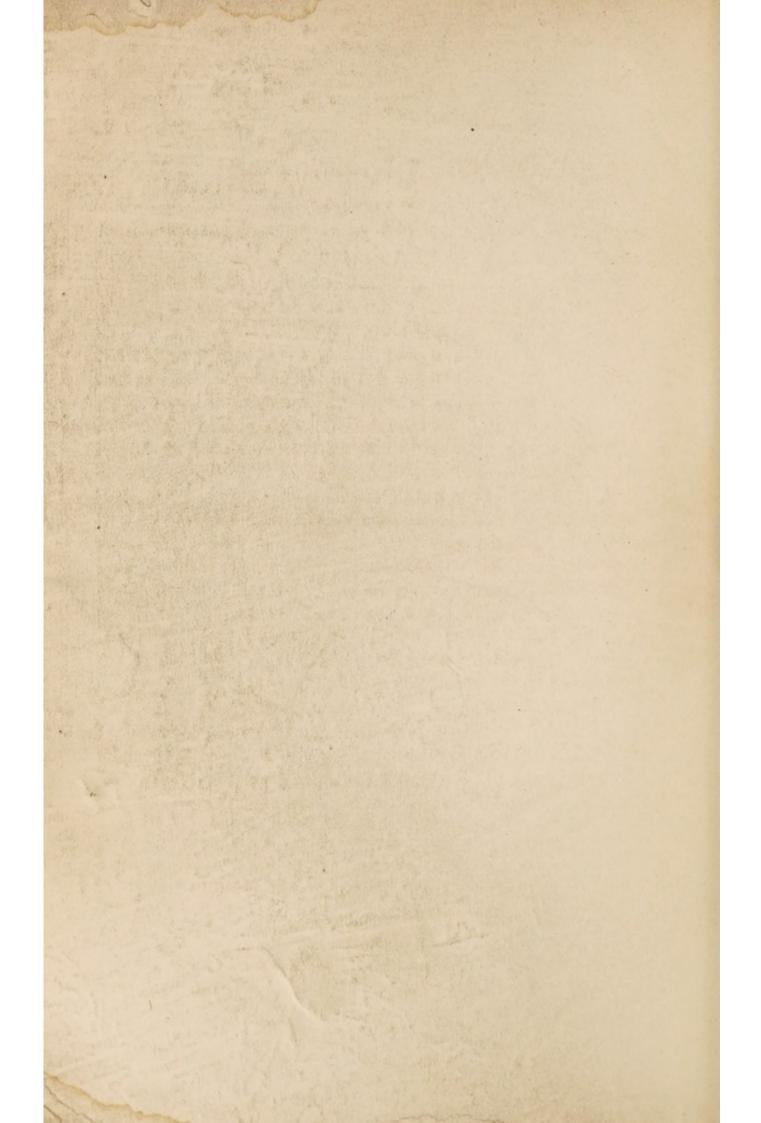
MEDICAL OFFICER OF HEALTH

OF THE

ADMINISTRATIVE COUNTY OF SURREY

WITH

Statistics and Diagrams relating to the Prevalence of Typhoid and the Records of Rainfall for the Twelve Years, 1895-1906.





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Statistics and Diagrams relating to the Prevalence of Typhoid and the Records of Rainfall for the Twelve Years, 1895-1906.

KNAPP, DREWETT & SONS LTD., PRINTERS, KINGSTON-ON-THAMES.

INTRODUCTORY NOTE.

MAJOR COATES, MY LORDS AND GENTLEMEN,

I have the honour to present my Annual Report for 1906:

I have used my best endeavours to have it ready in the month of May, which is earlier than the date at which County Medical Officers' Reports are usually issued. The reason, why County Reports can not usually be issued before June, or even later, is that, although some district Medical Officers get their reports printed and issued in February, others do not succeed in doing this till much later. It would seem that the delay may occasionally be beyond the control of the Medical Officer of Health. For instance, in one district in our County, the report, though it was actually presented on February 7th, 1907, did not reach the County Council till April 4th, 1907. This is not by any means an exceptional case of delay. It makes it exceedingly difficult for me to comply with the wishes of the Council, and is all the more vexatious because it is understood it could be avoided if the District Councils would be good enough to give instructions which would ensure the printing and issue of their reports within a reasonable time. I may add that, in the case of the Guildford Rural District, the complete and excellent Medical Officer's Report for 1906 was issued in book form in February, showing that what I suggest should be the rule is quite feasible.

I have again to express my thanks to Mr. Campbell Bayard for adding to the interest of this report by his instructive account of the Meteorology of the year.

Your obedient servant,

EDWARD C. SEATON.

May, 1907.

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I.—COUNTY SANITARY ADMINISTRATION.

In connection with the changes which have taken place during 1906, I have the sad task of recording the death, in the month of May, of my old and deeply respected friend and colleague, Dr Jacob. It is needless for me to dwell on his merits, which were well recognised in the County during his many years of service. I cannot, however, refrain from adding a few words of my own in appreciation of his work, inasmuch as since 1890. I have had exceptional opportunities of estimating its value. He was remarkably accurate, reliable and painstaking. met him in 1879 at a large scientific gathering at the Society of Arts, presided over by the late Rt. Hon. James Stansfeld, when Dr. (afterwards Sir Richard) Thorne Thorne gave an account of a very remarkable epidemic of typhoid in our County, due to a contaminated water supply. Dr. Jacob's painstaking inquiries in the affected districts went far to establish the connection of the outbreak and its immediate cause, and thus materially assisted in limiting the spread of the local epidemic. His observations, although they were entirely negative in character, may also be said to have contributed to an important advance in Sanitary Science. In order to explain this, I may remind the Council that at a period when Dr. Jacob had already become the recognised Medical Sanitary Authority in Surrey, now more than 20 years ago, the occurrence of milk epidemics of scarlet fever, diphtheria and illness of a kindred nature were invariably put down to human contamination. If the source of such contamination, direct or indirect, could not be found, the failure to discover an accreditable cause was freely ascribed to the want of diligence or perception of the investigators. But Dr. Jacob's inquiries were recognised by the Authorities at Whitehall as being so exhaustive and reliable that when it became evident that even he could not find proof of human contamination in one or more instances an essential step had been taken towards a medical discovery of a novel kind. The discovery referred to was that of Mr. William Henry Power, who, in 1879, first established the connection of milk epidemics with affections of the udders of cows from which the milk supply was derived. We had illustration of the practical outcome of this work three years ago in the County, when Dr. Pierce detected the milk origin of an outbreak of fatal throat illness at Horsell and Woking, and succeeded in demonstrating the microscopic organism by which infection actually took place. Needless to say the stoppage of outbreaks of this kind is among some of the most valuable of our practical preventive measures.

During my sixteen years of office in the County, I have perused Dr. Jacob's reports attentively for purposes of comment, and since his death I have re-examined over 100 of them for the immediate purposes of this report. I am more than ever struck with the scrupulous care with which they were prepared, and with the scientific caution with which he records the results of his investigations of numerous cases of such a "preventible" infectious disease as "Typhoid."

The kindliness of Dr. Jacob's disposition, and the patience and perseverance he showed in advocating sanitary measures of fundamental importance, have been sympathetically referred to elsewhere. I take this opportunity of adding, from my own knowledge, what I believe to be justly due to his memory in other respects.

MEDICAL OFFICERSHIP OF REIGATE (URBAN AND RURAL).

Dr. Porter, of Leeds, succeeded to the two remaining appointments which the late Dr. Jacob held almost to the

day of his death. Although he has only been six months in office, Dr. Porter has already gained a fair knowledge of the district, and contrived to make the two Annual Reports in very good time.

MEDICAL OFFICERS OF HEALTH AND INSPECTORS.

It is necessary to say a few words respecting the terms of appointment of Medical Officers of Health and Sanitary Inspectors, the moiety of whose salaries are required to be contributed from the County Fund, Section 24, 2 (c), as shown in the Surrey County Council Volume of Reports, Yellow Book of February 12th, 1907, p. 457. The sum now amounts (through increases of salaries in certain districts of late years) to £5,250, the half of £10,500. This latter sum is the amount paid by direction of the 34 District Councils in the County for salaries which have been approved of by the Local Government Board.

There are 23 District Medical Officers of Health, 8 of whom are Specialists appointed for fairly large or combined districts. Two of the Specialists have the Isolation Hospital appointments in addition to that of Medical Officers of Health, which brings their remuneration up to a sum of over £800 per annum each.

The County Council has no say whatever in determining the amounts of salaries to be allotted to the several different District Medical Officers of Health, neither has it any control over the District Officials.

There are no inspectors and no staff working directly under the County Medical Officer. But under the Local Government Act, 1888, the District Medical Officers are under obligation to send copies of their Annual and Special Reports to the County Council at the time they are presented. The responsibility of dealing with these reports in a manner that is helpful and advantageous not only to the districts but to the County as a whole rests, of course, with the County Medical Officer. Everything else that has been accomplished in the way of sanitary improvement during the sixteen years since the County Medical Officer's post was first established has been through amicable arrangements with those concerned.

In order to complete the information which it seems desirable to give in respect of finance and remuneration, it should be mentioned that a sum of from £200 to £300 is now expended annually from County Council funds for the purpose of working the Midwives Act, 1902; but this goes entirely to the Officers of District Councils. There is also, I believe, a similar sum which comes to them for work under the Education Committee connected with the Hygiene of Schools and School Children.

Recurring to the District Reports, these have been the subject of review and comment in the several County Annual Reports which I have had the honour to submit during the period of sixteen years. Acting throughout in accordance with the views of the Chairman of the Council and the Sanitary Committee, I have directed attention chiefly to certain matters of broad principle in County Sanitary Administration. The questions taken up have been (1) that relating to the appointments of Medical Officers of Health under terms which make them fairly independent of general medical practice, and (2) that of separating the office of Surveyor from that of Sanitary Inspector. As showing the practical effect of the County Council advocacy and influence, it may be observed that Surrey is the Administrative County in which, in proportion to size and population, the largest number of Medical

Officers are devoted specially to public health work. The result of our work generally is shown by the improvements recorded in the last Report of the County Medical Officer, viz., that for 1905. In addition, considerable progress has been made in the appointment of Sanitary Inspectors, who are now in most districts in a position to attend to the inspection of houses, the discovery of overcrowding, detection of unwholesome food, and general sanitation, apart from the usually engrossing work of the district Surveyors.

There is such evident misapprehension in certain quarters with regard to the system of County Sanitary Administration above described, that I think a recapitulation of the chief facts cannot fail to be useful at the present time.

The recommendations of the Housing of the Working Classes Committee, and certain suggestions which have emanated from the influential League that has been formed for promoting Physical Education and Improvement (and which has taken up the question of the milk supply of Infants) show the necessity for the wider spread of information with regard to County systems of Sanitary Administration and Local Government, especially in their financial aspects.

COUNTY SMALLPOX HOSPITAL COMMITTEE.

During the year under notice the Smallpox Hospital Committee has made such progress with their scheme that there is every prospect that, when the report for 1907 is presented, the unprovided districts, which include a number of populous places, will probably have been rescued from a position which can only be described as hazardous. As long as it was a moot point whether the Government might elect to complete the protection of the country generally against Smallpox on lines which have been

successful in Germany, some reason might be urged for not being in a hurry. But now that it seems clear that an opposite policy in the matter of compulsory vaccination (to be followed by compulsory re-vaccination) is in the ascendant, neglect of District Councils to provide hospital accommodation will surely come to be regarded as wholly Fortunately for themselves, the District inexcusable. Councils of the unprovided districts were enabled in 1902 to transfer their responsibility to the County Council, and thus to free themselves from one of their most difficult though essential duties. On behalf of the Medical Officers of Health of each and all of these districts, I desire to express the gratitude they must all feel to the Committee, presided over by J. Croft Deverell, Esq., J.P., C.C., for what has been done in this matter by the County Committee.

VOLUNTARY LEAGUES AND ASSOCIATIONS.

The Midwives Act continues to absorb a good deal of attention, and to involve much additional correspondence. The procedure as regards "suspension from practice," in order to prevent spread of infection, has been considered and settled. The account of the supervision of midwives appears in a section of this report, but the "Surrey Midwives Roll," which I prepared in the autumn of 1906, will not be reprinted until it has been revised for the purposes of the next report. At the request of Sir Thomas Skewes-Cox, Chairman of the General Purposes Committee in 1905, I attended the meetings of the Associations for promoting the training and supply of midwives, and, during the year under notice, I have served on a Committee which has undertaken the very necessary work of ascertaining how the requirements of the poor in this direction may best be met. To that subject and the allied question, of general nursing and nursing at Isolation Hospitals, regarded from a County point, I have given close attention.

The work of such Associations as the above mentioned and the "League" which is devoting itself at present to the question of infant feeding and the improvement of the milk supply, with which may be included the work of the Sanitary Institute and Tuberculosis Prevention League, is obviously most useful. It bears directly on the duties I have to perform for the Council, and for that reason I have freely given advice and assistance as requested.

NOTIFIABLE AND HOSPITAL TREATED DISEASES.

Some of the most laborious part of the year's work is that which has ensued from the arrangement and digest of the "Infectious Diseases Notification Returns" for the County Council during the 12 years, 1895-1906, a task which I was commissioned to undertake last July. It has involved the classification of returns relating to 15,624 cases of Scarlet Fever and 2,093 of Typhoid. This has necessitated a large amount of clerical assistance, as well as some expert assistance, which has been provided for to some extent by special resolution of the Council.

DISBURSEMENTS.

The subject of my disbursements for all official purposes, excepting printing and stationery, was under consideration in 1906, and the amount was commuted for a sum of £37 10s., a quarter, which represented about the equivalent of an average based on a series of years.

LOCAL GOVERNMENT BOARD INQUIRIES.

The Local Government Board inquiries have chiefly related to loans for purposes of sewerage and sewage disposal, which, as the schemes closely affect the question of river pollution as well as the preservation of public water supplies, are usually attended by me on behalf of the

Council. The Surrey County Council was among the first to move that they should systematically receive notice of such inquiries. The Council commenced to so receive them in 1894, in which year they made a standing order, regulating my attendance at the inquiries. Several other County Councils have taken similar action. It is generally recognised that the system is mutually advantageous both to the Board and to the Council whose objects are identical. The County Councils Association have recently preferred the request that they should further be informed of the decisions of the Board. The information asked for would, in the opinion of the Clerk of the Council, and myself, be an advantage, especially when the County has been petitioned by a District or Parish Council. There appears to have been some hesitation in granting this request, but the President of the Local Government Board recently received a deputation of the County Councils Association on the subject, and kindly consented to look into the matter and see what could be done.

METEOROLOGY OF SURREY, 1906.

REPORT BY

FRANCIS CAMPBELL-BAYARD, Esq.

Secretary, Royal Meteorological Society.

The year may be described as an average one so far as the mean pressure and the mean amount of cloud is concerned, whilst the mean temperature and wind force and the total amount of sunshine are somewhat largely in excess of, the rainfall less so, and number of rainy days slightly below, the average. The corn crops on the whole were good, but the hay was deficient in quantity, whilst the cold winds in April did a great deal of damage to the fruit trees, particularly to the pear blossom, which was in a great measure destroyed. To go more into detail I will take the different meteorological elements, which together make up the climate of a district, separately, and compare them with my own observations at Wallington, a regularly inspected climatological station, which has an average of 20 years, 1886-1905.

BAROMETER.

Pressure was above the average in six months, and it will be noted that in five of these months the rainfall was below the average, whilst in the remaining month, June, it was over the average. With respect to the six months in which the pressure was under the average, in four of them the rainfall was above the average, whilst in the remaining two months, May and December, it was below the average. With reference to September the mean reading, 30·193 in., has not been surpassed in my record, and the mean in June, viz., 30·110 in., has only been exceeded once, in 1887. With respect to the individual readings in my record, 30·591 in. on April 9th and 15th is the highest reading for that month, and 30·626 in. on September the 27th is the highest for that month. The highest reading, 30·670 in., occurred on January 23rd, and the lowest, 28·902 in., on February 11th, which gives a range during the year of 1·768 in.

TEMPERATURE.

With respect to this element the year has been so remarkable that it is very difficult to know where to begin. Possibly the best plan will be to refer to a paper by Mr. William Marriott on "The abnormal weather of the past summer," published in the Quarterly Journal of the Royal Meterological Society, Vol. xxxiii., pp. 5-40. This paper, which gives a full account of the great heat, particularly in the last week of August and the first week in September, of the past summer, and its effect on the death-rate is probably well-known and need not be further referred to, except in so far as it may be necessary for the purpose of comparison. With reference to the Wallington observations, which may be taken as a type of the weather in the County, it will be noticed that the temperature, both of the day and night and also on the grass and also the mean temperature are above the average. To descend to particulars, three months, January, August, and October, stand out as months of great warmth both by day and night, the greatest warmth as compared with the average being shewn by October; then comes January, and lastly August. The months next in rotation as being above the average, so far as warmth is concerned, are November, September, February and July, which differ greatly from the other three months in that the night temperatures of February and November are high whilst the day temperatures are comparatively low, and the day temperatures of July and September are high, whilst the night ones are low. With reference to the months with low temperatures three stand out conspicuously, viz., December with a low day and night temperature, and April and June with a day temperature about the average and a cold night temperature. In the other two months, March and May, which are slightly below the average, the deficiency is occasioned by a low day temperature. It will be noticed that the sequence of months is as follows: January and February warm, March to June cold, July to November very warm, and December very cold. The minimum temperatures on the grass follow the variations of the minimum shade temperatures, except in August and September, fairly well though not in such a pronounced form as they did last year. The highest shade temperature during the year, 92.5°, occurred on 1st September, and the lowest, 33.0°, on the 26th December, whilst the highest shade minimum, 69.2°, took place on the 2nd September, and the lowest, 17.9°, on December 30th. This gives a range of 74.6° as against 59.9° in 1905, and 66.7° in 1904. The highest solar radiation temperature (Black Bulb Thermometer in Vacuo) was 137.7° on August 8th, and the lowest minimum reading on the grass was 12.9° on December 30th.

RELATIVE HUMIDITY.

This element, derived from the difference between the temperature of the air and that of evaporation, presents this year some peculiarities which cannot easily be accounted for. It will be noticed that so far as the yearly values go, it is, like the rainfall of Wallington, below the average. With reference to the individual months, it is only the average or above in three months, viz., May, June, and November, and in the remaining nine months it is below the average. During the wet months of January, February, October and November it was about or below the average, and it was also below and sometimes very greatly below during the dry months of March, April, July, August, September and December, whilst it was above the average during the dry month of May and the wet month of June. With our present knowledge it is very difficult to account for these anomalies. The departures from the average are not very large except in the months of April, June, July and August.

CLOUD.

The amount of cloud is on the year's mean an average amount. In the individual months there are some very curious anomalies which we should not have been led to suspect. During the wet months of January and October it was below the average, whilst during the other wet months of February, June and November it was the average or above. But during the dry months of March, May, September and December it was the average or above. During the other two months of July and August there was a deficiency both in the cloud and the rainfall at Wallington. It would appear to shew that it does not, as we know from experience, necessarily rain when there is most cloud, though the converse is not often the case.

WIND.

This year will be noted for its windy character which has not been exceeded in the Wallington Record, the year 1886 having exactly the same amount, 2.6. In nine months there was an excess of wind force which was very considerable in January, March, and October. In two months, June and September, the wind force was an average amount, and in only one month, April, was there a deficiency, and even this was not a large one. The influence of wind on rainfall does not this year seem very apparent.

RAINFALL.

It is very difficult to say whether as a whole there is an excess or deficiency in the Rainfall of the County of Surrey. Dr. Mill in his letter to the Times of January 15th, 1907, asserts that 1906 may be considered as an average year regarding the country as a whole, the excess in one part being balanced by the deficiency in another part. From the rainfall returns published by the Croydon Natural History Society, it would appear that there is an excess, if one can take the long record of Greenwich Observatory in the neighbouring County of Kent as a standard, of about half an inch. My own record with a 20 years' average shews a deficiency of 0.36 in., whilst the Greenwich record with an average of 90 years has an excess of 0.42 in. The months of January and November were exceedingly wet, in fact we have to go back to January, 1877, for a wetter January. February, June and October were also wet. July and August were exceedingly dry, and March, April, May, September, and December were fairly so. It will be noted that the dry months include all the holiday months.

With respect to the number of rainy days there is a small deficiency. As may be imagined January, February, October and November, wet months, have excesses in the number of rainy days; but it is somewhat singular to find that March and December, dry months, have also excesses shewing that the individual falls must have been somewhat small. All the other months, with the exception of May, which has the average number, have less than the average number, reaching in the case of August to over fifty per cent., though this month did not have the smallest rainfall.

SUNSHINE.

The amount of sunshine was in excess of the average by 129.8 hours, or three per cent. It is a singular fact that January, February, June, and October, all somewhat wet months, had an excess of sunshine. The sunshine in January has not been exceeded, in April only in 1892 and 1893, and in November the sunshine was less only in 1893, and in December in only 1890. It will be noticed that the most sunny months included all the holiday months. In only four months was there a deficiency, viz., in March, May, November, and December.

	on one of or	-							4			
	Sumshine (Jordan). Possible Duation + A+ avg. p.c. p.c.	28+11 25+2	27-4	35—6	48+7	47+3	51+7	46+4	37 + 7	12_7	7-9	35+3
	Sunshine (Jordan) W(Total). + avg. hrs. hrs.	72·3+26·4 70·7+6·8	97.4—18.0	166-9-32-0	236-7+34-5	234.8 + 19.2	230.6 + 32.5	175-1+15-4	122-1+24-3	31-9-19-0	18-2-19-6	1673-6+129-8
rrey.	Total Rainy ainfall. Ang. of Rainy Days Cotal Ang. ka + avg. Social Ang. ka - avg. In. No. No. No. No. No. No. No. No. No. No	20+3 18+5	17+2	5—5 12avg.	7-4	9-3	7-8	10-2	19+3	20 + 4	19+4	166-1
logical Observations at Wallington, Surrey.	Nean Cloud Wind Total B Roment Force. Rainfall. I Roment Force. Rainfall. Roment Force. Rainfall. Roment Force. Rainfall. Roment Force. Rainfall. Roment Force. Rome	42·2+4·0 6·7—0·9 3·1+1·1 4·46+2·59 39·3+0·6 7·5 avg. 2·6+0·5 2·04+0·52	7.6+0.6 3.3+1.0 1.22-0.78	53.0-0.1 7.8+1.3 2.6+0.5 1.36-0.62	2.71 + 0.48	$63 \cdot 2 + 0 \cdot 5 5 \cdot 7 - 0 \cdot 8 2 \cdot 3 + 0 \cdot 4 0 \cdot 61 - 1 \cdot 92$	$65 \cdot 1 + 3 \cdot 4$ $6 \cdot 5 - 0 \cdot 2$ $3 \cdot 3 + 1 \cdot 3$ $0 \cdot 95 - 1 \cdot 44$	58·9+1·4 6·3 avg. 1·9 avg. 1·47—0·30	54.1 + 4.7 - 6.7 - 0.1 - 2.7 + 0.9 - 3.77 + 0.86	45.9+1.9 8.2+0.5 2.4+0.6 4.15+1.42	37.4—1.8 8.4+0.9 2.7+0.6 1.86—0.44	50.4+1.0 7.0 avg. 2.6+0.6 25.35—0.36 166—
Wallin	Wind Force. Mean 0 to 0 t	3·1+1·1 2·6+0·5	3.3+1.0	2.6+0.5		2.3 ± 0.4	3.3 + 1.3	1.9 avg.	2.7 + 0.9	2.4 + 0.6	2.7 + 0.6	2.6+0.6
ons at	Cloud Amount Meau O to 0 to	6.7—0.9 7.5 avg.	5.0+9.7	7.8+1.3	7.5+0.9 1.9 avg.	5.7-0.8	6.5-0-2	6.3 avg.	6.7-0.1	8.2 + 0.5	8.4 + 0.9	7.0 avg.
Observati	Mean Temp. + avg.	$42 \cdot 2 + 4 \cdot 0$ $39 \cdot 3 + 0 \cdot 6$	42.0-0.2	53.0-0.1	58-1-1-2	$63 \cdot 2 + 0 \cdot 5$	65.1 + 3.4	58.9 + 1.4	54.1 + 4.7	45.9 + 1.9	37-4-1-8	50.4+1.0
ological (Tucan -	33·6+3·9 30·3+0·9	33:1+2:0	42.2+1.6	45.4—2.6	50-2-1-3	50.4—0.1	46-5-0-1	44.3+4.8	37.5+2.4	29·1—1·6	9.0+9.68
f Meteor	Minimum Temp. in Shade. + avg. deg. deg.	37·3+3·9 34·4+1·2	8.0+0.98	44.6+0.9	47-8-2-3	53.1—0.5	55.4+2.7	49.6+0.6	47.7+5.1	40.6+2.0	33-0-1-2	57.9+1.1 43.0+0.9
Abstract of Meteoro		47·1+4·1 44·2+0·1	47.9—1.3	61.4—1.0	68.4—0.2	73.2+1.3	74.8+4.4	68.1+2.1	60.5+4.0	51-1+1-6	41-9-2-2	57.9±1.1
Al	Relative Humid. Humid. Humid. p.c. p.c.	89—1 86—2	81—3	75+3	78+5	9-19	70-7	79—2	85-2	90 avg.	87—3	80—2
	Barometer Relative Maximum reduced, &c. Humid- Temp in Mity. Mean + avg. g + avg. g + avg. In. In. p.c. p.c. deg. deg.	29.954—.074 89—1 .764—.255 86—2	Mar. 29-997+ 099 81—3	29.858-125	30-110+-097	30-023 + 047 67-6	29-989+-031	30-193+-171	29.856068	.871097 90 avg.	29.946002	29-970002 80-2
	1906	Jan. Feb.	Mar.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year

III.—PUBLIC VACCINATION.

The following table shows the state of public Primary Vaccination in the County and its constituent parts.

County Petty Sessional Division of—	Popula- tion, 1901	Births 1906.			Nu	mber exer	of cl		en		
		1906	1898	1899	1900	1901	1902	1903	1904	1905	1906
Chertsev	42,163	1024	8	23	15	31	15	20	29	26	47
Croydon	40,305	1528	34	19	16	18	7	11	17	20	40
Dorking	17,449	406	184	36	63	50	44	51	59	55	75
Epsom	51,642	1326	91	35	25	26	10	13	10	20	29
Farnham	30,769	939	8	23	13	22	3	16	16	24	41
Godstone	27,864	685	13	8	9	8	9	7	9	6	22
Guildford	59,811	1340	89	53	49	55	25	57	53	59	76
Kingston	53,034	1406	13	12	22	23	12	18	14	33	34
Mortlake	17,821	632	5	2	2	2	0	2	2	2	4
Reigate	15,908	399	60	18	26	27	21	30	22	29	34
Wimbledon	46,162	1465	21	37	45	33	18	20	16	20	37
County Total	402,928	11150	526	266	285	295	164	245	247	294	439
Boroughs :											
Godalming	8,748	208	39	10	20	17	6	9	9	13	25
Guildford	15,938	483	357	49	40	68	50	54	57	69	74
Kingston	34,375	941	11	26	26	62	22	30	33	28	26
Reigate	25,993	549	69	70	90	93	57	72	57	92	84
Richmond	31,672	636	6	5	6	5	5	8	4	10	6
Borough Total	116,726	2817	482	160	182	245	140	173	160	212	215
County and Borough Total	519,654	13967	1,008	426	467	540	304	418	407	506	654

A comparison of this Table with those of previous Annual Reports shows that the proportion of exemptions sought for and obtained has considerably increased. For it was 3'2 % in 1903, 3'1 % in 1904, 3'7 % in 1905, and 4'7 % in 1906. This tendency to neglect of Vaccination is very significant indeed, and furnishes an additional argument, if such were needed, for

providing every district with hospital accommodation for Small-pox. Through the goodwill of the Metropolitan Asylums Board, temporary accommodation at a great distance has been available for a large part of the County, during the part of the interepidemic period included in these last four years. But this arrangement only exists for such time as may be necessary to complete the County scheme. The scheme is now in a fair way of being completed in about a year. The County will then be in a sufficiently good position to deal with outbreaks should they arise. At present the conditions are very unsatisfactory and unsafe.

TABLE B.

ADMINISTRATIVE COUNTY OF SURREY.—VITAL STATISTICS, 1906.

respectively in three groups of Districts, viz.:—I.—The Districts Suburban to London; II.—The Rural Town Districts; III.—The Rural Districts. Table B, showing the Populations, Number of Births, Deaths, Deaths of Infants under one year; Deaths from Epidemic Diseases, Phthisis, and Diseases of Respiratory Organs, occurring

		19		
Respiratory Organs Deaths.	439	240	222	901
Phthisis Deaths.	229	114	129	472
Epidemic Deaths.	523	161	182	816
Infant Deaths.	799	321	295	1,415
Deaths.	9804	1662	1813	6,779
Births.	7005	3472	3490	13,967
Population.	291,408	147,577	156,442	595,427
Group.	I.—Suburban Districts including that of Croydon "Rural" **	II.—Rural Towns of Western & Southern Surrey+	III.—Rural Districts excluding that of Croydon "Rural";	Total

*For List of Districts included see p. 56–60.

† "" p. 61–64.

p. 64–66.

TABLE B-Continued.

The Rates calculated on the above in the usual way.

				20		
	Respiratory Organs	Death Rate.	1.5	1.6	1.4	1.5
	Phthisis	Death Kate.	8.0	8.0	8.0	8.0
	Epidemic	Death Kate.	1.8	1:1	8.0	1.4
	Rate of Mortality of Infants under one year to Births	Per 100	11.4	6.5	8.5	101 10.1
-	Rate of Mortality of Infants under one year to Births	Per 1000.	114	92	85	101
	Death Rate per 1000 per-	sons living.	11.8	11.8	11.6	11.4
THE COURT OF THE	Birth Rate	sons living.	24.0	23.5	22.8	23.5
	Groun	· danapa	I.—Suburban Districts including that of Croydon "Rural" *	II.—Rural Towns of Western and South- ern Surrey. †	III.—Rural Districts excluding that of Croydon "Rural";	Total Rates for whole County.

*For List of Districts included see p. 56–60.

† " p. 61–64.

; " p. 64–66.

IV.—VITAL STATISTICS, 1906.

POPULATION OF THE COUNTY.—The total population in 1906, estimated in the usual way, was approximately 615,427. But this figure includes the population of the large London Public Institutions, which amounts in round numbers to 20,000. The deaths at these Institutions are eliminated in the estimation of the County Birth and Death-rates and referred to the districts to which they belong. The populations, therefore, have also to be deducted in the estimation of the District and County rates. The number of the population thus arrived at is 595,427. This figure takes account of a very exceptional increase which it is claimed has taken place in the Croydon Rural District and other parts of the County adjoining, or in easy communication with, the Metropolitan area.

COUNTY BIRTH-RATE.—The births in 1906 being 13,967 in number, the rate per 1,000 of the population was 23.5. This is considerably below the England and Wales Birthrate for the year, which was 27.0.

Among the lowest Birth-rates are those of Weybridge 16.6, Richmond 18.5, Guildford and Dorking Rural Districts 18.7 and 19.7 respectively. The highest rate was that of Woking 29.0; then Molesey 27.8, Esher 27.3, Frimley 27.1, Carshalton 26.8, and Croydon Rural District 26.7. In the last named district the Medical Officer of Health claims that the population has increased so rapidly by immigration (this being one of the first parts of Surrey to receive the overflow of the London population in a southern direction) that in the middle of 1906 it had reached 59,800. In such a population the Birth-rate is usually high. For this reason the district might be expected to occupy the first instead of the sixth place. It may also be noted that in my report for 1905, when the population was taken as

approximately 50,000 instead of 60,000 in round numbers, the Birth-rate of this district was recorded as 28.2, the highest figure for that year.

COUNTY DEATH-RATE.—The deaths in 1906, being 6779 in number, the rate per 1,000 of the population was 11.4.

The England and Wales Death-rate for the year was 15.4. The return for the County continues to be very favourable.

The Weybridge Death-rate was as low as 5.1, and those of Malden and Surbiton 7.8 and 8.8 respectively.

The districts with rates as high as 12.0 and over were as follows:—

Dorking Rural	 	12.2
Reigate Rural	 	12.3
Guildford Borough	 	12.3
Kingston Borough	 	12.3
Wimbledon	 	12.6
Carshalton	 	12.9
Farnham Urban	 	13.0
Chertsey Urban	 	13.7
Dorking Urban	 	14.0

INFANT MORTALITY.—This is calculated in a different way to the other death-rates. Instead of being the rate per 1,000 of the population, it signifies the rate of proportion of deaths "under one year of age" to a given number, 1,000 or 100, of the births in the year under notice. The number of deaths of infants in the County being 1,415, the death-rate for the County is \frac{1,415 \times 1,000}{13,967} = 101 per 1,000 or 10.1 per cent.

Comparing this with the rates of preceding years, the figures are as follows:—

Year.	Number of Births.	Infant Deaths.	Rate per 1,000 Births.	Rate per 100 Births.
1899	12,075	1,556	128	12.8
1900	11,984	1,288	107	10'7
1901	12,126	1,278	105	10.5
1902	12,351	1,255	101	10'1
1903	13,060	1,218	93	9.3
1904	12,208	1,432	108	10.8
1905	13,611	1,115	82	8.5
1906	13,967	1,415	101	10'1

In comparing the rates for 1905 and 1906, the remarkable influence of a hot dry season on the prevalence of Epidemic Diarrhœa has to be taken into account.

Table B, which was introduced for the first time in the Report for 1904, will be found instructive and useful for reference. From this table it again appears that the conditions of the Rural Districts of Surrey are on the whole more favourable to infant life. The death-rate there is 8.5, whereas that of Suburban Surrey is 11.4. The rate of the rural towns, 9.2, occupying an intermediary position.

EPIDEMIC OR ZYMOTIC DEATH-RATES.—These refer to the following seven principal epidemic diseases, as to which statistics appear every week in the National returns of the Registrar-General, viz., Smallpox, measles, scarlet fever, diphtheria, whooping cough, fever (enteric, typhus, or continued), and epidemic diarrhœa. The above list, it will be noted, does not include influenza, and does include epidemic diarrhœa.

It is the last named of the officially included epidemic diseases, viz., epidemic diarrhea, that chiefly affects the death-rate of the epidemic group. This is in consequence of the large number of deaths of infants from this cause that occur annually in the months of August and September. The hot dry summer greatly tended to increase the fatality of this disease, which is, to some extent, due to ignorance or want of care in the feeding, &c., of infants.

The epidemic death-rate for the whole County was 1.4 per 1,000 in 1906. This was nearly double the rate of mortality in 1905, when it was only 0.8 per 1,000.

The following statistics relate to the epidemic diseases, which are notified in large numbers every year:—

D	iphthe	ria.	Scarlet Fever.	yphoid.
Number of Notifications	786		1572	 202
,, Deaths	77		35	 20
Case Mortality	9.8		2.2	 9.9
Death-rate per 1,000 of the				
population	0.1		0.06	 0.03

The case mortality of Typhoid was much lower than that of 1905 and less than the average of the 12 years, 1895-1906.

From the financial, as well as the Public Health point of view, the diseases treated at rate-supported hospitals are of direct importance to the County as a whole. The following are the four diseases so dealt with, viz.: Smallpox, Diphtheria, Scarlet Fever, and Typhoid.

The first named needs to be quite separately considered. The ordinary isolation hospitals are for Scarlet Fever, Diphtheria and Typhoid. With regard to these diseases, I was commissioned during the year under notice to make inquiry and investigate the causes of their prevalence in the County by the light of the County inter-notification records, which, at the time of writing, are now complete for as long a period as 12 years.

With regard to Scarlet Fever, I have devoted much time and thought to the subject, with a view to a report which I trust will prove useful to the Committee. Their object is to increase, if possible, the good work which may be done by isolation hospitals generally. It is understood the subject is complex and difficult. For that reason it all the more requires the careful and prolonged attention of Medical Officers of Health generally. With the approval of the Committee, I have been continuing this part of my work, and have lost no opportunity of conferring with Medical Officers of Health and hospital physicians and superintendents on the subject. My information is being circulated amongst my colleagues, whose observations and opinions I am collecting.

I have had the valuable co-operation of Dr. John Williamson, of Epsom, and others, in this work.

As regards Typhoid and the conclusions to be derived from a careful study of all the facts and figures in my possession, which I have accumulated during the past 12 years, I give herewith a résumé of my information.

As regards the death-rate form Phthisis (Consumption) the Committee will be interested to know that the rate for surburban parts of the County (Group I.), the Rural Towns of Western and Southern Surrey (Group II.), that of the Rural Districts (Group III.), and that of the three groups together, i.e., the whole County, is exactly the same, viz., 0.8 per 1,000, which is fairly low and almost identical with that of 1905 (see p. 21-22, Annual Report, 1905).

SCARLET FEVER, 1895-1906.

							26								1 1
Epsom Urban.	10,216	Case Rate.	2-26	0.78	4.12	86-0	4.05	2.55	1.28	5.40	0.39	2.25	1.67	1.4	2.73
Epsom	10,	Cases.	23	∞	45	10	41	56	13	99	4	56	17	14	279
rhead.	16	Case Rate.	0.64	4.04	8-94	0.85	4.04	12-98	2.55	0.64	1.49	5.53	2.34	5.0	4.60
Leatherhead.	4,691	Cares.	ಣ	19	42	4	19	19	12	ಣ	1-	56	11	10	217
Epsom Rural.	19,326	Case Rate.	2.54	3.16	2.18	17.1	5.7	5.75	1.92	6.79	1.97	1.30	1.87	2-27	3.72
Epson	19,	Cases.	49	61	42	33	110	Ш	37	131	38	25	36	46	719
Sutton.	15,652	Case Rate.	1-51	2.61	1.78	3.63	7.84	7.35	1.72	2-21	1.34	1-98	2.29	1.62	3.55
Sut	15,	Cases.	19	41	58	22	123	116	27	35	21	31	36	56	555
alton.	46	Case Rate.	2-22	-59	4.15	4.89	4.44	2.37	1.78	68-	1.48	2.07	1.48	2.28	2.88
. Carshalton.	6,746	Cases.	15	.4	58	999	30	16	12	9	-10	14	10	91	194
Urban.	34,375	Case Rate.	2.0	1.5	1.5	1.9	8.4	2.1	4.5	5.4	6-2	5.4	1.7	2-22	3-26
Kingston Urban	34,	Cases.	70	20	51	64	165	72	143	81	213	83	57	80	1129
Urban.	254	Case Rate.	1.94	5.93	4.85	1.54	1.07	4.62	5-59	0.55	16-0	69.0	1.78	3.07	2.93
Reigate Urban.	25,254	Сазеч.	49	150	122	39	27	111	58	14	23	16	45	80	740
Name of District.	Population, Census, 1901.	Year.	1895	1896	1897	1898.	1899	1900	1901	1902	1903	1904	1905	1906	1895-1906

Case Rate = number of cases per 1,000 population.

SCARLET FEVER, 1895-1906—continued.

2,177 12,762 10,329 5,329 7,670 9,779 8,42e Cases Rate. Cases Rate. Cases Rate. Cases Rate. Cases Rate. Cases C	Chertsey Rural.	, Rural.	Chertsey Urban.	, Urban.	Walton.	ton.	Weyb	Weybridge.	Dorking Urban.	Urban.	Dorking	Dorking Rural.	Wimb	Wimbledon.
Casies Cases Cases <t< th=""><th></th><th>177</th><th>12,</th><th>762</th><th>10,</th><th>329</th><th>5,3</th><th>539</th><th>7,6</th><th>70</th><th>9,7</th><th>79</th><th>41</th><th>41.652</th></t<>		177	12,	762	10,	329	5,3	539	7,6	70	9,7	79	41	41.652
9 0.70 11 1.07 28 5.25 13 1.69 20 2.04 42 3.28 18 1.75 12 2.25 11 1.43 1 0.10 17 1.38 15 1.46 6 1.12 — 4 0.41 37 2.89 14 1.36 19 3.56 8 1.04 11 1.12 30 2.35 31 3.01 44 8.25 13 1.69 16 1.63 63 4.92 15 1.46 12 2.25 31 4.03 26 2.65 79 6.17 9 0.87 15 2.81 3 0.39 20 2.65 120 9.37 16 1.75 2.02 2.25 24 3.15 1.22 120 9.37 18 1.75 2.02 3.74 3 0.39 34 3.47 86		Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.
42 3-28 18 1-75 12 2-25 11 1-43 1 0-10 17 1-38 15 1-46 6 1-12 — 4 0-41 1 0-08 7 0-68 11 2-06 1 0-13 3 0-31 30 2-89 14 1-36 19 3-56 8 1-04 11 1-12 30 2-89 14 1-36 19 3-56 8 1-04 11 1-12 48 2-89 1-49 1-46 12 2-25 31 4-03 26 2-65 48 3-75 16 1-56 12 2-25 24 3-12 1-22 120 9-37 18 1-75 20 3-75 15 1-95 2-26 86 6-68 9-82 1-8 2-81 3-12 2-26 3-12 3-12 3-12 86 6-80		1.15	6	0.70	11	1.07	58	5.25	13	1.69	20	2.04	74	1-77
90 17 1·33 15 1·46 6 1·12 — — 4 0·41 5·00 37 2·89 14 1·36 11 2·06 1 0·13 3 0·31 2·71 30 2·35 31 3·01 44 8·25 13 1·04 11 1·12 7·54 63 2·35 31 3·01 44 8·25 13 1·04 11 1·12 0·98 7·9 1·2 1·46 12 2·25 31 4·03 26 2·65 0·98 7·9 6·17 9 0·87 15 2·25 31 4·03 2·6 2·65 6·97 120 9·37 18 1·75 2·2 2·2 3·1 1·2 2·2 2·5 120 9·37 18 1·75 2·3 3·4 3·4 3·4 2·3 8·6 6·61 9 0·82 1		86-	42	3.58	18	1.75	12	2.52	=	1.43	1	0.10	122	2.93
7.4 1 0.08 7 0.68 11 2.06 1 0.13 3 0.31 5.00 37 2.89 14 1.36 19 3.56 8 1.04 11 1.12 9.71 30 2.35 31 3.01 44 8.25 13 1.69 1.63 7.54 63 4.92 15 1.46 12 2.25 31 4.03 26 2.65 0.98 79 6.17 9 0.87 15 2.81 3 0.39 20 2.94 3.52 48 3.75 16 1.56 12 2.25 24 3.12 1.22 6.97 120 9.37 18 1.75 20 3.75 1.95 2.04 6.97 8 6.89 2.92 2.84 3.15 1.95 2.25 5.31 8 6.61 9 0.82 1.9 1.6 2.2	- 11	06-	17	1.33	15	1:46	9	1.12	1	1	4	0.41	154	3.69
5·00 37 2·89 14 1·36 19 3·56 8 1·04 11 1·12 2·71 30 2·35 31 3·01 44 8·25 13 1·69 16 1·63 7·54 63 4·92 1·5 1·46 12 2·25 31 4·03 26 2·05 0·98 7·9 6·17 9 0·87 1.5 2·25 3·1 4·03 2·0 2·0 3·52 48 3·75 1.6 1·56 1·2 2·25 2·4 3·1 1·2 6·97 120 9·37 1.8 1·75 20 3·75 1·5 1·2 2·2 2·4 3·1 1·2 1·2 2·54 87 6·80 2·9 2·82 1/3 2·4 3·1 1·3 1·3 5·31 86 6·61 9 0·82 1·9 1·6 1·6 1·6 1·6 1·6 1·6 <td>600</td> <td>-74</td> <td>-</td> <td>80-0</td> <td>1</td> <td>89.0</td> <td>11</td> <td>2.06</td> <td>-</td> <td>0.13</td> <td>60</td> <td>0.31</td> <td>26</td> <td>2.33</td>	600	-74	-	80-0	1	89.0	11	2.06	-	0.13	60	0.31	26	2.33
9.71 30 2.35 31 3.01 44 8.25 13 1.69 16 1.63 1.63 7.54 63 4.92 15 1.46 12 2.25 31 4.03 26 2.65 0.98 79 6.17 9 0.87 15 2.81 3 0.39 20 2.94 3.52 48 3.75 16 1.56 12 2.25 24 3.12 1.22 6.97 120 9.37 18 1.75 20 3.75 15 1.95 2 2.54 87 6.80 29 2.82 13 2.44 3 0.39 34 3.47 5.31 86 6.61 9 0.82 10 1.66 29 3.63 13 1.3 1.3 3.88 619 4.85 192 1.86 202 3.79 151 1.97 162 166 1.96 1.96		9.00	37	5.89	14	1.36	19	3.56	s	1.04	=	1.12	143	3.43
7.54 63 4.92 15 1.46 12 2.25 31 4.03 26 2.65 0.98 79 6.17 9 0.87 15 2.81 3 0.39 20 2.04 3.52 48 3.75 16 1.56 12 2.25 24 3.12 12 1.22 6.97 120 9.37 18 1.75 20 3.75 15 1.95 2 0.20 2.54 87 6.80 29 2.82 13 2.44 3 0.39 34 3.47 5.31 86 6.61 9 0.82 10 1.66 29 3.63 13 1.3 3.88 619 4.85 192 1.86 202 3.79 151 1.97 1.66 1.66 1.66 1.66 1.66 1.66 1.67 1.66 1.66 1.66 1.66 1.67 1.67 1.66 1.66 <t< td=""><td>65</td><td>2.71</td><td>30</td><td>2.35</td><td>31</td><td>3-01</td><td>44</td><td>8-25</td><td>13</td><td>1.69</td><td>16</td><td>1.63</td><td>113</td><td>2.71</td></t<>	65	2.71	30	2.35	31	3-01	44	8-25	13	1.69	16	1.63	113	2.71
0.98 79 6·17 9 0·87 15 2·81 3 0·39 20 2·94 3·52 48 3·75 16 1·56 12 2·25 24 3·12 1/2 1·22 6·97 120 9·37 18 1·75 20 3·75 15 1·95 2 0·20 2·54 87 6·80 29 2·82 13 2·44 3 0·39 34 3·47 5·31 86 6·61 9 0·82 10 1·66 29 3·63 1·3 1·3 3·88 619 4·85 192 1·86 202 3·79 151 1·97 1·62 1·66 1·66	67	7.54	63	4.92	15	1.46	12	2.52	31	4.03	26	2.65	79	1.89
3.52 48 3.75 16 1.56 12 2.25 24 3.12 12 1.22 6.97 120 9.37 18 1.75 20 3.75 15 1.95 2 0.20 2.54 87 6.80 29 2.82 13 2.44 3 0.39 34 3.47 5.31 86 6.61 9 0.82 10 1.66 29 3.63 13 1.3 3.88 619 4.85 192 1.86 202 3.79 151 1.97 162 1.66 1	CI	86-0	79	6.17	6	0.87	15	2.81	89	0.39	50	2.04	128	3.07
6-97 120 9-37 18 1-75 20 3-75 15 195 2 0-20 2-54 87 6-80 29 2-82 13 2-44 3 0-39 34 3-47 5-31 86 6-61 9 0-82 10 1-66 29 3-63 13 1-3 3-88 619 4-85 192 1-86 202 3-79 151 1-97 162 1-66 1-6	65	3.52	48	3.75	16	1.56	12	2.52	24	3:12	12	1.25	112	5.69
2·54 87 6·80 29 2·82 13 2·44 3 0·39 34 3·47 5·31 86 6·61 9 0·82 10 1·66 29 3·63 13 1·3 3·88 619 4·85 192 1·86 202 3·79 151 1·97 162 1·66	85	6.97	120	9.37	18	1.75	20	3.75	15	1-95	67	0.50	107	2.56
5.31 86 6.61 9 0.82 10 1.66 29 3.63 13 1.3 3.88 619 4.85 192 1.86 202 3.79 151 1.97 162 1.66	31	2.54	87	08-9	59	2.85	13	2.44	60	0.30	34	3.47	110	5.64
3.88 619 4.85 192 1.86 202 3.79 151 1.97 162 1.66	69	5.31	98	19-9	6	0.85	10	1.66	59	.3-63	13	1.3	229	5.33
	472	3.88	619	4.85	192	1.86	202	3.79	151	1-97	162	1.66	1468	3.52

Case Rate = number of cases per 1,000 population.

SCARLET FEVER, 1895-1906—continued.

Name of District.	Richmond	nond.	Barnes.	nes.	Surb	Surbiton.	Esher & Dittons.	Dittons.	Mole	Molesey.	Maldens a	Maldens and Coombe.	Croydo	Croydon Rural.
Population Census, 1901.	31,	31,672	17,	17,821	15,	15,017	6	9,489	6,	6,034	6,	6,233	34	34,514
Year.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Kate.	Cases.	Case Rate.
1895	204	6.44	53	2.98	55	1.47	14	1.48	6	, 1.5	œ	1-28	20	1:45
1896	88	2.93	62	9.0	28	1.87	20	2.10	14	2.33	82	4.50	62	1.80
1897	112	3.53	41	2.30	14	0.93	19	2.00	9	1.00	=	1.80	259	7.51
1898	95	3.00	73	4.10	14	0.93	9	0.63	9	1.00	6	1.45	121	3.51
1899	147	4.64	80	4.46	46	3.07	žĢ	0.53	18	3.00	17	2.73	83	2.41
1900	78	2.46	32	1.80	14	0.93	30	3.16	56	4.33	,0	08.0	112	3-25
1901	53	1.67	31	1.75	22	3.80	1-	0.74	41	6.83	13	2.10	85	2.38
1902	95	2.90	75	4-21	18	1-20	16	1.70	10	1.66	43	06-9	156	4.52
1903	1117	3.69	30	1.60	22	3.80	1	0.74	41	6.83	55	3.53	115	3.34
1904	89	2.14	31	1.75	21.	1.40	=	1.16	19	3.16	27	4.34	1117	3.40
1905	46	1.45	31	1.75	72	4.80	88	3.48	13	2.16	18	2.90	181	5.25
1906	59	1.84	35	1.84	41	2.73	23	5.3	11	1.83	19	3.17	190	5.
1895-1906	1164	3.67	588	3.30	404	5-69	161	2.01	214	3.55	219	3.51	1528	4.43
						-								

Case Rate = rumber of cases per 1,000 population.

SCARLET FEVER, 1895-1906—continued.

bio .	53	Case Rate.	0.87	2.50	1.86	1.80	1.80	3.20	3.53	1.93	2.87	4-27	3.93	2.19	3.05	
Woking.	15,052	Cases.	13	33	87	27	27	48	53	53	43	19	93	35	459	
Rural.	36	Case Rate.	1.70	1.13	1.00	1.56	2.31	2.17	2.08	1.75	3.87	1.75	1.23	1.44	2.18	
Guildford Rural	21,192	Cases.	36	24	21	33	49	46	4	37	85	37	56	56	461	
l Urban.	15,938	Case Rate.	1.31	0.63	2.13	3.63	4.69	1.44	2.94	2.52	1.69	0.19	0.20	3.73	2.66	
Guildford Urban.	15,	Cases,	21	10	34	28	75	53	47	36	27	33	00	85	424	
m.	09	Case Rate.	1	10-27	2.74	١	89.	2.05	1.37	89.	1.37	12.33	ı	1	3-15	
Наш.	1,460	Cases.	0	15	4	0	1	60	67	7	63	18	0	0	46	
on Rural	21,660	Case Rate.	1.43	1.16	0.53	69-0	1.39	1.02	0.65	09.0	0.45	1.16	62.0	3.5	1:31	
Hambledon Rural	21,	Cases.	31	25	10	15	30	22	14	13	6	- 25	17	11	283	
Godstone and Caterham.	25,938	Case Rate.	3.63	2.43	1.08	1-20	2.74	2.01	3.94	2.12	1.43	2.24	2.16	4.54	2.95	
Godstone a Caterham	25,	Cases.	94	63	28	31	71	52	102	55	37	28	99	118	765	
Rural.	16,747	Case Rate.	1.01	1.85	2.88	2.33	4.79	3.71	0.78	1-20	09-0	1.38	1.32	5.	2.38	
Reigate Rurd	16,	Cases,	17	31	48	39	80	62	13	20	10	53	22	34	399	
Name of District.	Population Census, 1901.	Year.	1895.	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1895-1906	

Case Rate = number of cases per 1,000 population.

SCARLET FEVER, 1895-1906—continued.

Name of District.	Goda	Godalming.	Farnhan	Farnham Urban.	Farnhan	Farnham Rural.	Frin	Frimley.	Eghan	Egham Rural.
Population Census, 1901.	8,7	8,748	6,	6,124	16,	16,951	»ć	8,409	П	11,895
Year.	Cases.	Case Rate.	Cases.	Case Rate.	Cases.	Case Rate.	Саѕея.	Case Rate.	Cases.	Case Rate.
1895	13	1.49	=	1.80	13 .	92-0	13	1.54	15	1.26
1896	21	2.40	14	2.28	23	1.35	13	1.54	19	1.60
1897	11	1.26	50	3.26	œ	0.47	00	0.95	15	1-26
1898	=	1-26	14	2.28	48	2.85	9	0.71	13	1.10
1899	22	2.51	23	3.75	39	2.30	24	2.85	30	2.52
1900	33	3.77	1	1-14	58	1.65	37	4.40	31	2.60
1901	17	1.94	17	2.77	40	2.35	24	2.85	49	4.12
1902	22	2.51	10	1.63	15	88.0	65	7.73	24	2.05
1903	60	0.34	20	3.26	78	4.59	43	5.10	14	1.18
1904	õ	0.57	56	4.54	57	3.35	õ	09-0	53	2.44
1905	œ	0.91	9	86-0	61	3.29	19	2.26	36	3.03
1906	6	·	9	98.	54	3.18	24	2.67	12	·i
9061-2681	175	2.00	174	2.84	464	2.73	280	3.33	287	9.41

Case Rate = number of cases per 1,000 population.

V.—REPORT ON TYPHOID (ENTERIC AND CON-TINUED FEVER), 1895-1906.

When the notification of this preventible disease was first made systematic it was urged that the primary advantages to be derived from the compulsory system would not be confined to the immediate work of dealing with known sources and channels of infection. For, valuable as such action must always be, it was plain that in the course of years the advantages of the system might be extended by collective investigation and comparison of conditions attending the prevalence whether in epidemic form or in the endemic form of sporadic outbreaks. The system once fairly established, Sanitary Authorities might be enabled not only to gain therefrom a better idea of the proportionate importance of any known factor in the causation of the disease, but also to better realise the necessity for directing attention to the large number of cases, occurring year by year, the origin of which is unexplained.

The Committee has succeeded, during the last 12 years, by amicable arrangement between officials of County and District Councils, in carrying out a system of inter-notification, the number of cases of notifiable disease in each District being recorded every month. In addition they have had the advantage of the contribution of monthly rainfall records by a number of gentlemen residing in different parts of the County during the past seven years. In this way the study of the conditions, favourable or otherwise, to typhoid prevalence is further facilitated.

The following is a modest attempt to apply this method of research to a population numbering over half a million, by observations extended over a fairly long time. It is hardly necessary in addressing the Sanitary Committee of the Council to enter into long explanations because most of them are so well acquainted with the subject of typhoid, especially in relation to water supply, it having been dwelt on in the County reports of past years.* But it may be well to briefly recall the leading facts in the etiology and the points connected therewith, which have been most under discussion.

The last published map, showing the rate of prevalence of Typhoid in the several counties of England, is that by Dr. Franklin Parsons, of the Local Government Board. The County of Surrey stood well at the time the map was prepared in the year 1899, and it stands even better now, for there has been a noteworthy decline, as will be shown in the diagrams that accompany this report.

The reduction of Typhoid concurrently with general sanitary improvements, not only here but abroad, has in fact been so marked during the last decennial period that it has come to be regarded in certain quarters rather as a negligable quantity so far as the etiological study of the disease is concerned. I was very much struck with this fact when making some inquiries during the early part of last September at Munich. That city, in former times, when typhoid was exceedingly prevalent, became the seat of the exact study of its relation to water supply and "ground water levels." Since the decline of epidemics, the observations instituted by the former Chief Medical Officer, v. Pettenköfer, seem to have been discontinued, although the questions connected therewith cannot be considered to have been solved, as shown by the attention given of recent years to the subject in the expert reports of the Local Government Board.

^{*} The Reports especially referred to are those for the five years 1896—1900 inclusive.

The old investigations and reports of the Privy Council Medical Department, and afterwards of the Local Government Board, were scientifically conducted, and were so conclusive as regards the causation of the epidemic spread of typhoid on certain occasions that no wonder the impression they created in this country has been deep and lasting. The impression was that typhoid was mainly of waterborne origin. It has been reinforced from time to time of late years by such occurrences as those at Worthing, Maidstone, Lincoln,* and Basingstoke. These occurrences show plainly that there are still conditions attaching, especially to some underground sources of water supply which (although the water of the locality is generally pure) may, under certain circumstances, suddenly render it dangerous.

The experience of the South African Campaign and the frequent writings of Dr. Canney thereon (wherein he constantly urges that the Typhoid of Armies is preventible by water precautions) have further tended to revive the impression that typhoid is commonly waterborne. But as to that sad experience of our Army, whatever the facts may be, the observations thereon obviously do not apply at home.

On the other hand, notwithstanding the above mentioned occurrences, especially the isolated local outbreaks in the four small towns, all of which stood out so remarkably (creating, as they did, so much alarm locally, and attracting universal attention outside), there is, I know, a growing opinion among experts that the share in the spread of typhoid by drinking water has been, and is at the present day, very much over-estimated.

^{*} The Lincoln epidemic was not connected with underground sources of water supply, neither was that of the Tees Valley which some of the best authorities considered to be a typical waterborne epidemic. This last mentioned occurrence took place before the period to which the report relates.

In the whole of the 12 years now under notice, there has not been a single epidemic of waterborne typhoid in the Administrative County. The prevalence of the disease during this long period has been endemic in character, that is to say, chiefly made up of solitary cases or groups of cases confined to one spot—sporadic outbreaks, as they are commonly called.

Taking the whole of the two thousand and ninety-three cases now under review as regards their causation, I think it very doubtful whether as many as 10 per cent. can be said to have been actually caused by the drinking of a polluted or infected water supply, either in Surrey, where the patients fell ill, or at the place where their illness was contracted some two or three weeks before.

I have studied the reports of the late Dr. Jacob, who made particular inquiries on this point in every case, for a number of years. In this part of my investigation I have had the valuable co-operation of Dr. Fox Symons, D.P.H., who had a large experience of Typhoid during the war in South Africa, i.e., from 1899—1904. In conjunction with him, I have gone through nearly the whole series of reports on Dr. Jacob's several districts. We have recorded, independently, our notes on the proportion of cases which that most careful and experienced observer considered attributable to water supply. The results of our exhaustive investigation has certainly not been to support the view that water pollution often accounts for disease.

Coming now to the question of rainfall, and its effect on typhoid prevalence, I have considered the matter separately as affecting the populations supplied from different sources, viz., (1) the River Thames (population 253,000), and those from (2 and 3), Subterranean (sand formations, population 137,000, and chalk formation, population 147,000). The results of the calculations of the relation of typhoid cases to rainfall are set forth in tables which have been gone through most carefully and which are in print for the report.

I submit therewith several diagrams calling attention especially to that which gives a synopsis of the seven years' observations.

I may remind the Committee of the invariable tendency of typhoid to increase in the autumn season. This tendency is shown, whatever the source of water supply may be, and whatever the rainfall may be. As regards the river water supply, it has long been contended by the experts of the London County Council and others that a heavy rainfall, leading to floods and a general washing of manured lands and sewage into the river, and consequent strain put on filtration systems, must increase the risk of typhoid to the river water drinking population. There is, however, nothing to bear out this contention in the diagrams submitted. Indeed, as regards what they tell us, it would seem their information is of a negative character. They show a gradual decline in the sum total of the typhoid prevalence, and they generally show an autumnal increase, which is observed everywhere, whether the water supplies are derived from lakes or rivers. There is no evident relation between the rainfall and consequent floods to typhoid prevalence. But, though negative in character, the evidence of the upper diagram (namely, that relating to river water) is of considerable value. The Committee will remember that about 12 years ago the Medical Officer of the London County Council made a report that suggested that the November incidence of Typhoid in the Metropolitan area synchronized with the occurrence of heavy autumnal rainfall and flooding of the Thames Valley two or three weeks before, that is to say, the interval between "flood" and "incidence" coincided with the incubation period of the disease. The report attracted the notice of experts who have been on the watch for similar occurrences since. Now there is nothing to show that any such connection of possible cause and effect since that time may have taken place in the part of the Administrative County which derives its water supply from the same source as London. For if on the one hand we take the long established official view that typhoid is mainly a waterborne disease, there must certainly have been some indication of the effects of floods in the diagrams. The defences against the effects of pollution by subsidence tanks and increase of filtration areas have been in progress during the last seven years, but they are not yet complete, and were much less so four years ago. If we look back to the year 1903 the evidence appears decidedly against the London "water theory."

If, on the other hand, we consider that it has been too readily assumed that Typhoid outbreaks generally, or even frequently, have their origin in pollution of water supplies we should hardly expect markedly visible evidence of the connection of rainfall and typhoid in any case.

There is indeed no reason for supposing there has been a simultaneous distribution of typhoid in Surrey resembling that to which attention was directed in London in 1904. Neither, so far as I am aware, has any similar occurrence taken place in London since the date referred to above.

In stating these facts as to the non-relationship of Typhoid prevalence to the Thames River Water Supply, I wish to add my strong belief in the great advantages of additional subsidence reservoirs and extension of filtration areas in producing cleaner and purer water chemically and bacteriologically. To secure from the river as clean a water as practicable is what all must desire. I may further remind the Committee that at the instigation of the County Council, and with this desirable object in view, the West Surrey Company have already provided subsidence reservoirs. The only Company outside the jurisdiction of the Metropolitan Water Board whose area is not so provided at present is that of the South West Suburban Company.

As regards the other indications of the diagrams much interest attaches to that relating to the Chalk Water Supplies. There again the evidence with regard to the contamination of the chalk area and its effects on subterranean sources of water supply by the pollution at great distances through fissured chalk, and even through masses of unfissured chalk, seems absolutely negative. The contention of some experts has been that a quickening of the passage of polluting matters through the earth when the springs rise rapidly after periods of heavy rainfall, adds to the chances of pollution. I shall await criticism, but at present I fail to see any evidence of a danger which I regard as purely hypothetical.

Before leaving this part of the subject, I would recur to the warning afforded by certain towns above named, in one of which the Water Authority has lately had to compensate the persons attacked with Typhoid in the epidemic caused by their public water supply. When wells are sunk in a populous area in the chalk formation it is, in my opinion, not only an advisable, but a necessary precaution to adopt the softening process. Along with other advantages the adoption of this process ensures the water not being delivered to consumers "straight out of the earth." Instead of this, in the course of treatment, the water is either exposed to air and sunlight while the subsidence

process is gradually taking place; or else (by another process) it is passed through an efficient system of filtration after the addition of lime, by which the softening process is, in either case, effected.

I will now very briefly refer to the other conclusions I have arrived at as a result of this lengthy investigation.

The one is that polluted and infected foods are a much more frequent source of Typhoid illness than is even now generally supposed. The public have long been apprised of the risks from polluted milk, shell-fish and watercress. The last Annual Report gave an account of the filthy contamination of fish food which gave rise to a considerable outbreak at Wimbledon and Merton. The way in which food of all kinds, milk especially, are stored and prepared for consumption is a most important subject for sanitary supervision. The number of foods which nowadays are suspected of being the vehicles of infection (not only on account of sewage contamination) is shown in the exhaustive Official Report of Dr. Copeman, F.R.S., on the Belmont epidemic last summer.* Investigation into possible causes of outbreaks on these lines may give better results, as regards prevention of illness, than attention to and analysis of water supplies, which are reasonably satisfactory in a sanitary sense.

Then again unwholesome meat, fruit, and other foods are known to cause illness through the action of bacilli which, in some respects, resemble Typhoid Bacilli. The doctrine of specificity of disease germs is sometimes questioned by authorities nowadays, especially by Medical Officers of Health of Rural Districts, who are, after searching enquiry, at a loss to account for the origin of outbreaks. Dr. Charlton Bastian, F.R.S., who has made this subject his life study, has re-published his work. In this

^{*} See note on this epidemic on page 44.

important volume, which has just appeared, he has quoted instances from the reports of medical officers of health in support of his views. I believe that Dr. Pierce, of Guildford, and other careful observers in our County, could Dr. Bastian with examples of Typhoid occurring in isolated country dwellings or under conditions where chances of infection could be definitely excluded. It is under these circumstances, as distinct from those of town life, that the etiology of Typhoid needs closest observation; for it is pure country life that presents the conditions of study promising the best results. Personally, I agree that cases occur from time to time in purely country districts which it is absolutely impossible to connect with any previous case, and which suggest the possibility of new origin (i.e., apart from human infection) through bacilli other than those which are regarded as the invariable specific causes of Tyhoid. To determine the relations of disease germs, such as are found in cases of food infection, and which give rise to illness bearing some resemblance to this "specific" fever, is the most essential part of the problem of causation.

But while urging the supreme importance of inquiry into the origin or source of human infection, I must not omit to remind the Committee that Typhoid is infectious from man to man, even as are Smallpox and Typhus. That it is so, to a far minor degree, is due no doubt to a much less intensity of personal infectiousness rather than to any essential difference in this respect from the now rare disease—Typhus—with which it was confounded before the time of William Jenner. Our Isolation Hospitals are valuable institutions for the suppression of both endemic and epidemic typhoid, and I am strongly of opinon that hospital isolation in cases of this disease should be promoted, where persons are attacked in crowded or insanitary homes.

ADMINISTRATIVE COUNTY OF SURREY.

TYPHOID NOTIFICATIONS.

RATES PER 100,000 ON THE POPULATION ON THE ANNUAL AVERAGE OF TWELVE YEARS. 1895 TO 1906 INCLUSIVE.

		Approximate Estimate of Population.	Total Number Notified, 1895-1906.	Annual Average Number Notified.	Annual Average Case Rate
Barnes	***	19,000	99	8.25	4:34
Richmond		32,000	217	18.08	5.62
Wimbledon		43,000	224	18.66	4.34
Ham		2,000	5	0.41	2.08
Vinceton		36,000	166	13.83	3.84
Esher and Dittons	***	10,000	36	3.00	3.00
Malden		6,000	19	1.58	2.63
Surbiton		15,000	39	3.25	2.16
Molesey, East and West		6,000	41	3.42	5.70
Chertsey Urban		13,000	64	5.33	4.10
Parel		13,000	57	4.75	3.65
Egham		12,000	24	2.00	1.66
Weybridge		6,000	34	2.83	4.72
Walton		11,000	55	4.58	4.16
Farnham Urban		7,000	33	2.75	3.93
Rural		17,000	49	4.08	2.40
Frimley		9,000	15	1.25	1.39
Hambledon		22,000	87	7.25	3.29
Godalming		9,000	32	2.66	2.94
Guildford Urban and R		40,000	104	8.66	2.02
Walring		16,000	74	6.16	3.85
Doubing Dunel		10,000	17	1.41	1.41
IInhan	***	8,000	26	2.16	2.70
Coatharband	***	5,000	28	2:33	4.66
From Dunel	***	20,000	54	4.50	2.25
Huban		10,000	34	2.83	2.83
Zutton	***	16,000	56	4.66	2.90
Carabalton	***	7,000	26	2.16	3.09
Swardon Danel		48,000	193	16.08	3.35
Daimata IInhan		26,000	83	6.92	2.66
D1		17,000	53	4.42	2.60
Godstone and Caterham		26,000	56	4.66	1.79
		537,000	2,098	175	3.3

Tables of Monthly Rainfalls in relation to Typhoid prevalence during the seven years 1900–1906.

DISTICT I. includes: Barnes, Richmond, Wimbledon, Ham, Kingston, Esher, Malden, Surbiton, Molesey, Chertsey Urban, Egham, Walton, and Croydon Rural.*

DISTRICT II. includes:—Chertsey Rural, Weybridge, Farnham Urban and Rural, Frimley, Hambledon, Godalming, Guildford Rural,* Woking,* Dorking Rural and Urban.

DISTRICT III. includes:—Guildford Borough, Leatherhead, Epsom Rural and Urban, Sutton, Carshalton, Reigate Urban and Rural, Godstone and Caterham.

N.B.—The Rates in these Tables are calculated per 100,000 of the Population.

* Water supply in part from Companies deriving their supplies entirely from Chalk formation.

1900.

		istrict 1			istrict 2		D Popuja	istrict a	
Month.	Rainfall.		hoid. Rates.	Rainfall.		hoid.	Rainfall.		ohoid.
January February March April May June July August September October November December Total	3·03 4 ·75 ·88 1·17 2·46 1·17 3·01 ·64 1·81 1·86 2·30 23·08	9 5 8 7 4 11 6 9 13 11 6 16	3·6 1·9 3·2 2·7 1·6 4·3 2·4 3·6 5·1 4·3 2·4 6·3	3·29 4·90 ·99 ·90 1·25 2·44 1·38 2·69 ·76 2·03 2·26 3·00	2 1 1 1 2 3 3 7 4 7 2 3 3 3 7	1·5 ·7 ·7 ·7 ·1·5 ·2·2 ·2·2 ·5·1 ·1·5 ·2·9 ·5·1 ·1·5	3·79 5·38 1·01 1·08 1·21 2·98 1·15 3·31 1·00 2·33 2·99 3·52 29·75	1 - 5 5 1 3 1 5 10 5 2	7 - 3·4 3·4 ·7 2·1 ·7 3·4 6·8 3·4 1·4
]	1901.					
January February March April May June July August September October November December	1:05 1:36 2:08 1:87 :53 1:39 2:03 2 1:18 2:12 :54 3:78	3 16 2 7 5 11 10 7 13 10 8 8	1·2 6·3 ·8 2·7 1·9 4·3 3·9 2·7 5·1 3·9 3·2 3·2	1·26 1·70 1·98 2·06 ·59 1·66 2·48 1·79 1·61 2·42 ·60 3·94	3 4 3 3 2 - 4 8 7 2 5	2·2 2·9 2·2 2·2 1·5 — 2·9 5·8 5·1 1·5 3·6	1:32 1:87 2:80 2:33 :88 1:81 2:03 1:76 2:06 2:79 :81 5:22	4 2 2 2 2 1 4 7 3 6 9 6 6	2·7 1·4 1·4 1·4 ·7 2·7 4·7 2·1 4·1 4·1 4·1
Total	19.93	100	39.2	22.09	41	29.9	25.68	52	35.5

1902.

		istrict 1 tion, 25			istrict 2			istrict 3.	
Month.	Rainfall.		hoid, Rates.	Rainfall.		hoid.	Rainfall.		hoid.
January February March April May June July August September October November December	·73 ·81 1·72 ·74 2·55 4·16 1·22 3·37 2·24 1·66 2 1·32	6 6 5 2 4 16 18 12 10 10 12 7	2·4 2·4 1·9 ·8 1·6 6·3 7·1 4·7 3·9 3·9 4·7 2·7	95 1:12 1:83 1 2:36 3:66 1:49 3:50 :76 1:99 2:41 1:6	- 1 - 1 7 4 5 1 5 4	- -7 - -7 5·1 2·9 3·6 ·7 3·6 2·9	1·11 1·29 2·08 1·23 2·54 3·83 1·47 3·08 ·97 2·36 2·98 1·65	5 5 9 2 4 1 11 4 5 2 7 3	3:4 3:4 6:1 1:4 2:7 7:5 2:7 3:4 1:4 4:7 2:1
Total	 22.52	108°	42.4	22.67	28	20.2	24.59	58	39.5

1903.

January		2.39	2	.8	2.52	4	2.9	2.68	3	2.1
February		1.31	9	3.6	1.78	1	-7	2.04	_	-
March		2.37	1	.4	2.89	2	1.5	3.54	-	-
April		1.82	4	1.6	2.16	-	-	2.30	1	-7
May		3.49	3	1.2	2.96	1	17	3.27	3	2.1
June		6.87	7	2.7	5.36	1	.7	5.14	2	1.4
July	7	4.20	9	3.6	4.20	6	4.3	4.63	1	.7
August		4.28	8	3.2	4.28	-	-	5.34	1	-7
September		3.35	8	3.2	3.06	3	2.2	3.56	1	.7
October		• 5.94	9	3.6	7.38	6	4.3	7.80	3	2.1
November		2.09	11	4.3	2.12	3-	-	2.75	4	2.7
December		1.94	11	4.3	2.33	2	1.5	2.58	2	1.4
Total		40.05	82	32.5	41.04	26.	18.8.	45:63	21	14.6

1904.

		istrict 1 ition, 25			istrict 2 tion, 13			istrict 3 tion, 14	
Month.	Rainfall.		hoid.	Rainfall.		hoid.	Rainfall.		hoid. Rates.
January February March April May June July August September October November December	2·90 1·44 1·21 2·42 1·12 1·77 1·63 1·48 1·82 1·56	7 6 6 1 3 4 3 8 9 7 10 5	2·7 2·4 2·4 ·4 1·2 1·6 1·2 3·2 3·6 2·7 3·9 1·9	3·91 3·42 1·37 1·37 3·07 ·93 1·40 1·87 1·66 2·05 1·49 2·96	1 1 2 2 1 - 2 4 6 6 6 - 4	7 1.5 1.5 1.5 7 — 1.5 2.9 4.3 4.3 — 2.9	5·10 3·98 1·69 1·55 2·67 1·01 1·23 1·57 1·88 2·40 1·50 3·41	2 -2 - - 1 2 3 2 - - 2 - -	1·4
Total	22.98	69	27.2	25.50	29	21.0	27:99	14	9.8

1905.

January	 1.16	7	2.7	1.14	1	.7	1.41	5	3.4
February	 .79	1	•4	-69	2	1.5	.93	1	.7
March	 3.38	3	1.2	3.92	-	-	4.13	1	.7
April	 1.59	1	.4	1.47	_	_	1.58	2	1.4
May	 .76	9	3.6	.62	3	2.2	.70	_	-
June	 5.08	6	2.4	5.11	1	.7	5.21	2	1.4
July	 .71	7	2.7	.58	3	2.2	.78	. 5	3.4
August	 2.42	20	7.9	2.90	2 7	1.5	2.89	1	-7
September	 1.95	15	5.9	1.94	7	5.1	2.22	3 7	2.1
October	 1.22	13	5.1	1.69	5	3.6	1.58	7	4.7
November	 3.46	6	2.4	3.51	1	.7	4.64	1	-7
December	 .62	6	2.4	.65	-	-	.79	3	2.1
Total	 23.14	94	37:1	24.22	25	18.2	26.86	31	21:3

1906.

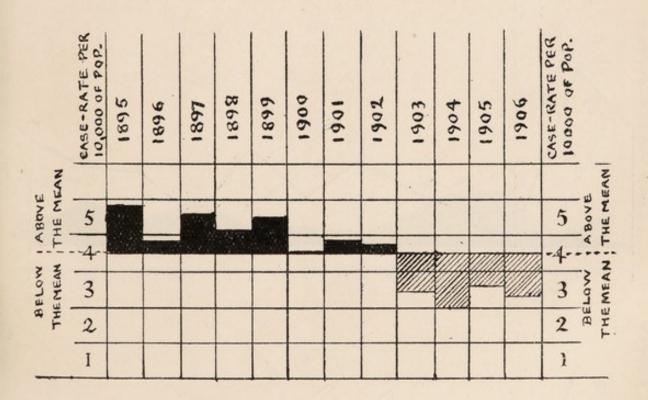
			-	1906.					_
Mandh		istrict 1 tion, 25			istrict 2 tion, 13			istrict 3	
Month.	Rainfall.		hoid. Rates.	Rainfall.		hoid. Rates.	Rainfall.	Typ	hoid. Rates
January February March April May	 4·26 1·82 1·17 ·54 1·62	8 9 2 6 7	3·2 3·6 ·8 2·4 2·7	4·41 2·22 1·46 ·52 1·74	1 1 4 1 3	·7 ·7 2·9 ·7 2·2	5·57 2·43 1·58 ·61 1·46	1 3 1 4 13	2·1 ·7 2·7 2·7 8·8
June	 2.47	3	1.2	2.15	2	1.5	1.41	-12* 45 -44*	30.6
July	 .84	7	2.7	.92	2	1.5	-82	8 -6*	5·4 1·4
August	 -95	8	3.2	.83	-	-	.74	- 3*	=0.0
September October November December	 1.68 3.56 3.86 1.82	18 12 11 2	7·1 4·7 4·3 ·8	1:47 4:60 4:71 2:15	5 5 1 —	3·6 3·6 ·7 —	1.81 4.45 5.04 2.19	2 2 2 2	1.4
Total	 24.39	93	36.7	27.18	25	18.1	28.11	84 - 65*	13:2
	V 199							19	

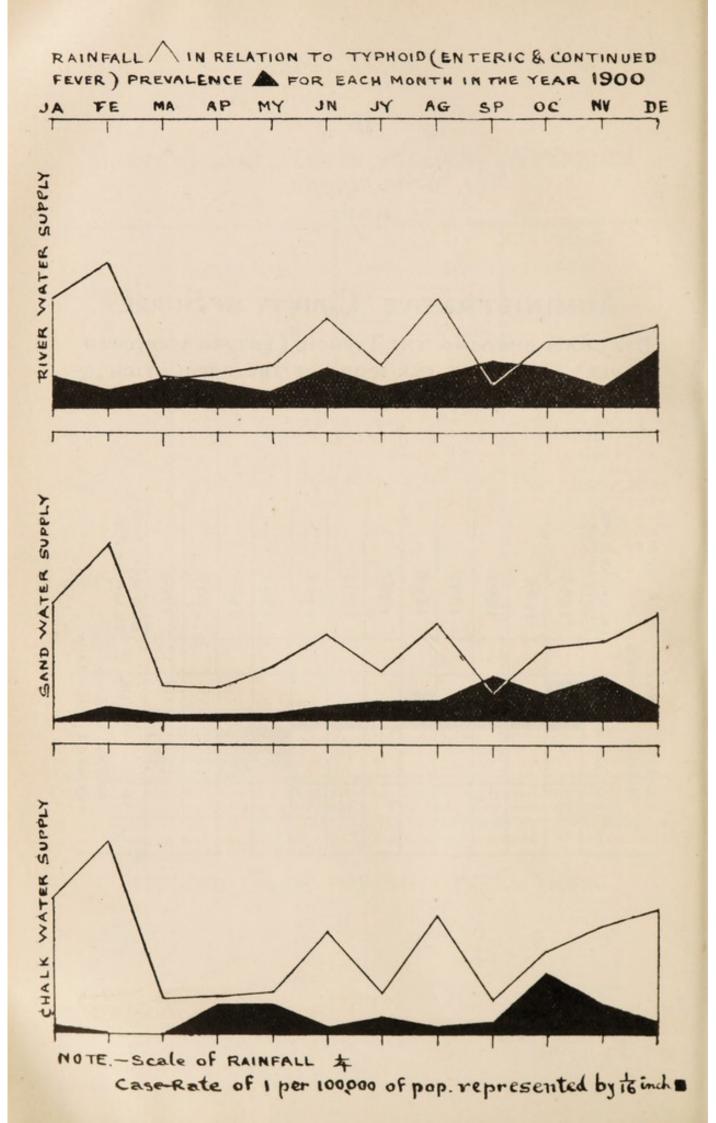
^{*} Belmont Epidemic Cases. These 65 cases occurred amongst the inmates of the Metropolitan Asylum at Sutton. The first cases were imported from Darenth. Dr. Copeman, of the Local Government Board, has shown that this Epidemic was chiefly, if not wholly, due to direct infection. It was confined to the inmates.

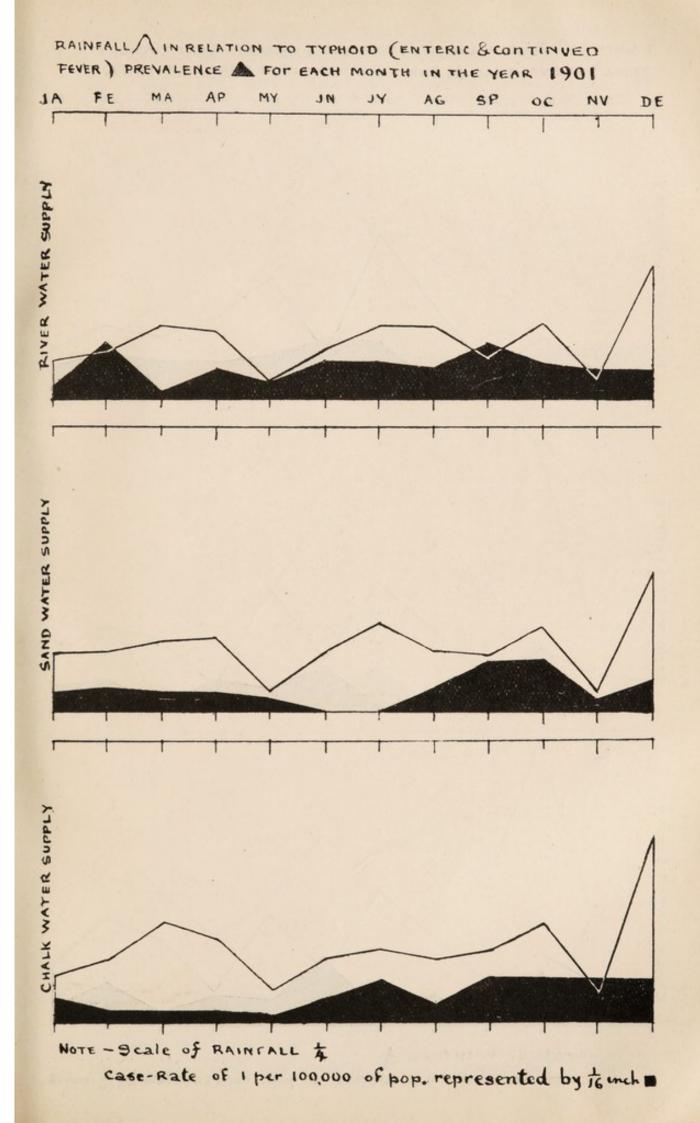
TYPHOID CASES FOR THE YEARS 1900-6.

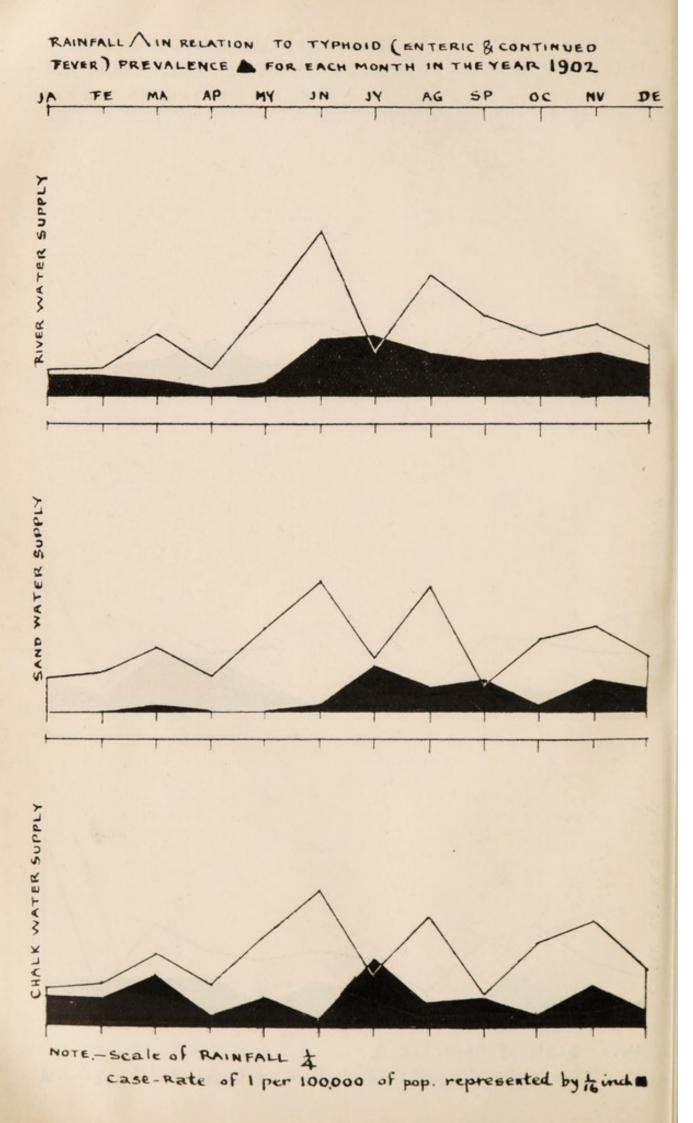
1900	 	 176	1	1904	 	 112
1901	 	 193		1905	 	 150
1902	 ***	 194	1	1906	 	 137
1903	 	 129				
						1091
						-

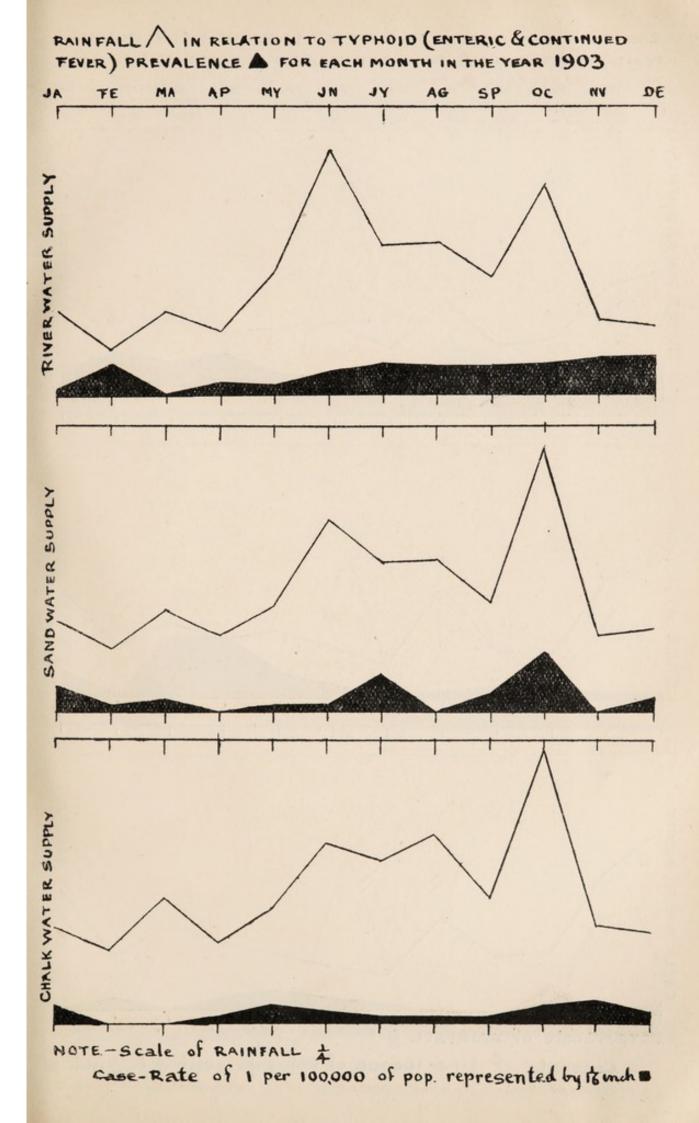
ADMINISTRATIVE COUNTY OF SURREY DIAGRAM SHOWING THE TYPHOID (ENTERIC&CONTINUED FEVER) CASE-RATE PER 10,000 OF THE POPULATION IN EACH OF THE 12 YEARS 1895 - 1906

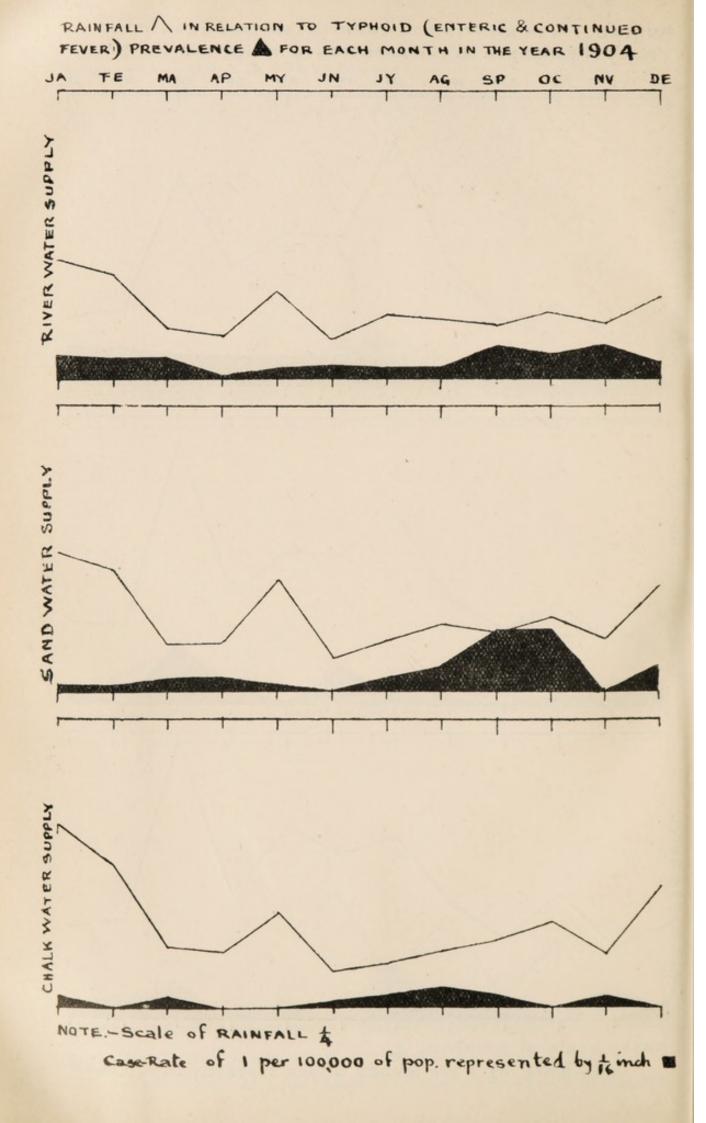


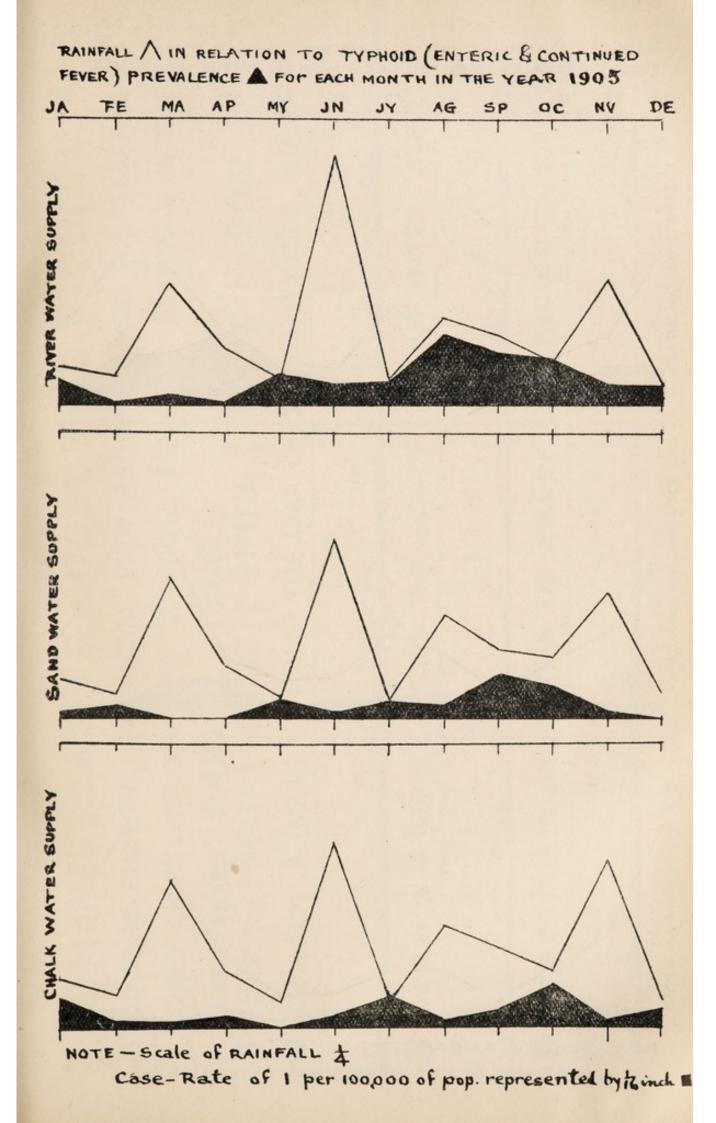


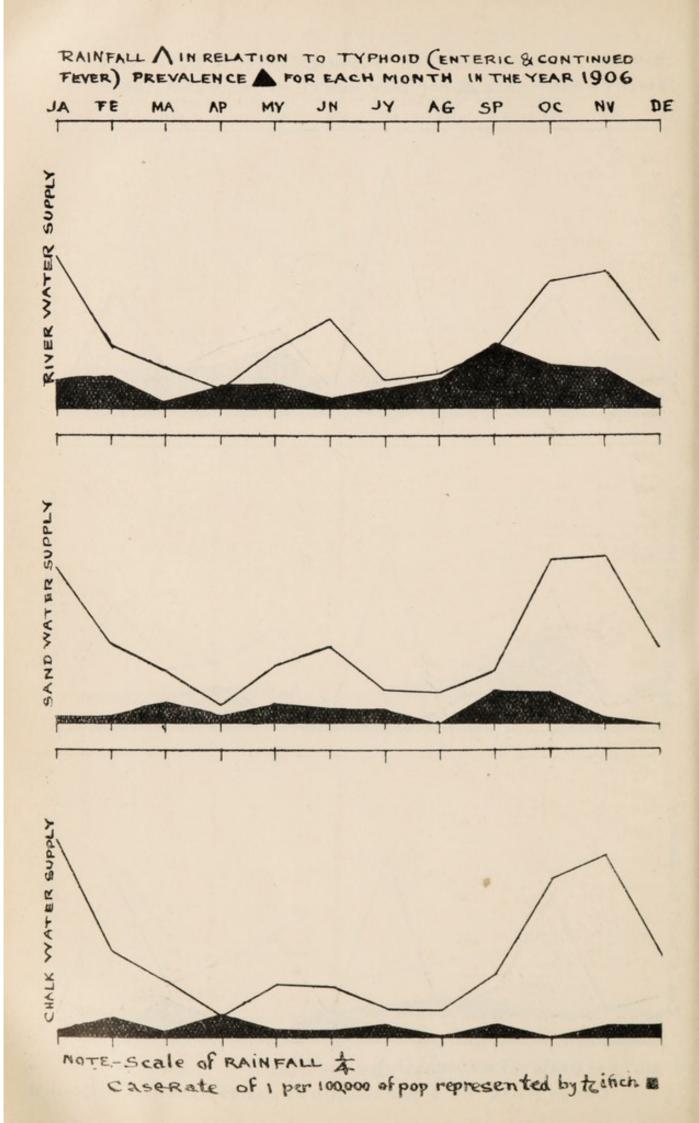












ADMINISTRATIVE COUNTY OF SURREY

YEARLY CHARTS RELATING TO TYPHOID FEVER & RAINFALL IN THE DIACRAM SHOWING A CENERAL VIEW REDUCED FROM THE SEVERAL

SEVEN YEARS 1900 TO 1906 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 -DISTRICT I (MAINLY WITHIN THE AREA OF RIVER WATER SUPPLY)

DISTRICT 2 (MAINLY WITHIN THE AREA OF SAND WATER SUPPLY

DISTRICT 3 (MAINLY WITHIN THE AREA OF CHA'LK WATER SUPPLY

RAINFALL

TYPHOID FEVERA

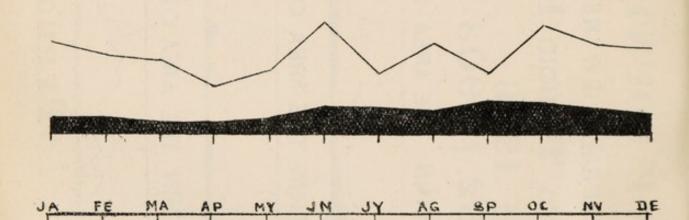
ADMINISTRATIVE COUNTY OF SURREY

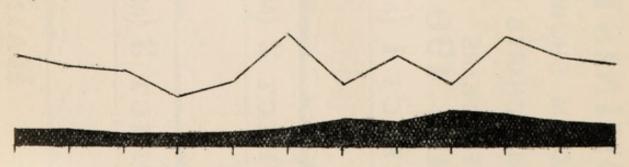
SYNOPTICAL VIEW OF THE SEASONAL PREVALENCE OF TYPHOID AND ITS RELATION TO RAINFALL

RAINFALL A IN RELATION TO TYPHOID (ENTERIC & CONTINUED FEVER) PREVALENCE A AVERAGE FOR EACH MONTH DURING THE SEVEN YEARS 1900 - 1906

N.B. The Epidemic at Belmont (imported in 1906) is included in the upper but not in the lower of the two diagrams

JA FE MA AP MY JN JY AG SP OC NU DE





Case-rate of 1 per 100,000 of pop. represented by tends

ADMINISTRATIVE COUNTY OF SURREY

FROM THE RECORDS OF THE COUNTY MEDICAL 1895 - 1906 INCLUSIVE PER 10,000 OF THE POPULATION OF 1901 IN EACH OF DIAGRAM TO SHOW THE ANNUAL AVERAGE NOTIFICATION RATE TYPHOID (ENTERIC AND CONTINUED FEVER) PREVALENCE THE SANITARY DISTRICTS DFFICER OF HEALTH

WY

FRIMLEY								
DOBKINGE		7	-					
ECHAM								
GODSTONE & CATERHA								
CULLPFORD USR							•	
MAH	-	-		-				
NOTIBAUS			-					
		-		-	-			
EPSON R			-	-				-
Э МАНИЯА				-				-
REIGATE R.	1							-
MALDEN								-
REIGATEU								
DORKING D.								
EPSOM U.								-
NOTTUE								-
CODALMING								-
ESHER								-
САВЗНАТТОМ								
HAMBLEDON								
CROYDON R.	-		-					
CHERTSEY R.								
KINGSTON	-		-					
MOKING								
FARNHAM U.								
CHERTSEY U.								
MALTON								
MIMBLEDON								
BARNES								
LEATHERHEAD								
WEYBRIDGE								
RICHMOND								
WOLESEY								
TE PER 10,000 of POP.	KW	10	10	4	~	C		

VI.—SANITATION OF DWELLINGS. HOUSING OF THE WORKING CLASSES ACT.

For the purposes of this Section the Districts are arranged in three groups, for each of which the vital statistics have been separately estimated in *Table B*.

The Report for 1905 contains a description of the leading features of the Districts from a Sanitary point of view.

There has been comparatively little change in the conditions then recorded. It is, therefore, perhaps unnecessary to repeat the description.

GROUP I.—DISTRICTS SUBURBAN TO LONDON.

Vital Statistics. — Population, 291,408. Birth-rate, 24.0. Death-rate, 11.3. Infant mortality, 11.4. Epidemic death-rate, 1.8. Phthisis death-rate, 0.8. Respiratory death-rate, 1.5.

Barnes.—The Medical Officer of Health reported under Section 4 of the Housing of the Working Classes Act, 1890, that a certain area was an unhealthy area. After consideration of his Report, it was decided to take proceedings under Part II. of the Act, to obtain closing orders with regard to five particular houses, but the proceedings failed on the ground that the necessary representations were not proved to have been made. The Medical Officer is of opinion that the evils connected with this area cannot be removed except by an improvement scheme, and he states that this is not the only area in the district that is in a deplorable condition. Very much was done during 1906 to improve the condition of the houses of the poorer section of the population.

The houses built by the Council under Part III. of the Housing of the Working Classes Act are all tenanted, and continue to be extremely popular. They involve no charge on the rates.

The constant water supply is now general.

RICHMOND.—An enquiry was held in February by Major C. E. Norton, R.E., into an application of the Council for an Order to confirm a Scheme, prepared under the Housing of the Working Classes Acts, 1890 to 1903, upon the Representation of the Medical Officer of Health, for improving the Red Lion Street Area. In July the Local Government Board made an Order confirming the Scheme, and requiring provision to be made for the accommodation of 300 persons. The Town Clerk was instructed to take all necessary steps in the matter. The Council adopted the recommendations of the Street Improvement Committee to authorise the sealing of a Provisional Agreement for the purchase of two acres of land at North Sheen at a price of £2,000 per acre; to apply to the Local Government Board for their approval of the site; to apply for sanction to re-borrow, for an extended term of years, a sum of £4,800 still outstanding from a loan of £6,000 sanctioned in 1902, and to borrow the sum of £37,528, the estimated cost of acquiring the properties comprised within the area, with incidental expenses and cost of sewers and roads.

The 135 houses built by the Corporation have been kept in a satisfactory condition, and are all occupied. Twelve of the dwellings are flats let at rents of 4s. 6d. and 5s. 6d. per week. Applicants with a large number of children are not accepted as tenants for the flats, on account of limited accommodation, but with this exception, no preference has ever been given to applicants on account of their having few children.

An unoccupied house in Perseverance Place was represented by the Medical Officer of Health to be unfit for human habitation, but no further proceedings were taken as the owner gave a written guarantee that the house should not be occupied until put in a satisfactory condition.

Action was taken with regard to the conveniences without flushing apparatus in connection with 133 houses, and a suitable flushing apparatus was fitted in each instance; in nearly every case the drains were found defective, and were relaid or rearranged. Out of a total of 1,503 defects reported, all were remedied before the end of the year.

Houses in Kew and a part of Richmond have not a constant water supply, and the matter is under the consideration of the Water Committee. Wimbledon.—House to house inspection in South Wimbledon was continued; seventy premises in Deburgh Road were examined and various sanitary improvements were carried out. The drainage system of 130 houses was entirely reconstructed, and repairs of a more or less extensive character were carried out at 62 houses. At 14 houses "combined" drains were reconstructed at the Corporation's expense, and the Medical Officer comments upon the anomaly of this liability of Local Authorities. Thirteen groups of houses, which were redrained, are specifically mentioned.

There are now 58 houses let in lodgings on the register. The owner of one of these was fined for allowing a nuisance to continue, after written notice.

On several occasions complaints were received of the dirty condition of the water; the Metropolitan Water Board stated that this was caused by the alteration of mains necessitated by laying the tram-lines. The Medical Officer comments upon the cutting off of water supplies for repairs, before other connections have been made, and also upon the insanitary conditions arising from the withdrawal of supply by the Company in consequence of non-payment of water-rate.

Number of Nuisances abated, 2,870. Legal proceedings, 1.

Ham.—The District was visited by the Medical Officer of Health on 18 occasions; 24 nuisances were abated. The cottages were generally found in excellent sanitary condition.

KINGSTON-ON-THAMES.—The Medical Officer of Health reports that no action was taken during the year under the Housing of the Working Classes Act. Several small blocks of houses were put into tenantable repair. He again refers to the scheme he has already outlined for the Cambridge Road area, and also mentions other small areas that might be dealt with.

Surbiton.—The Sanitary Inspector's Report is appended to that of the Medical Officer of Health. It describes in detail the works that have been carried out to abate nuisances. The drains belonging to 43 houses were examined under Section 41 of the Public Health Act, 1875, and were in each case found to be defective. The "combined" drains of six groups of houses were reconstructed at the expense of the Council. A large number of defective closets and

drains were repaired, dampness of walls and foundations was remedied, 34 yards were paved, and 50 houses were cleansed and whitewashed. Fourteen houses were reported as unfit for habitation, and 12 of them were made habitable. Four cases of overcrowding were abated.

Dr. Owen Coleman, who has had over 31 years' experience of this district, offers some very practical advice as to "Gas Cooking Stoves." He describes them as useful and economical additions to the comfort of the working man's home, the adoption of which, however, brings necessity for care and an added responsibility both to builders and occupiers of houses.

ESHER AND DITTONS.—The Medical Officer of Health states that the erection of a large number of cottages at Upper Long Ditton during the past two years is providing the much-needed accommodation for working men; owing, however, to the high rents it is quite usual to find two families occupying the same house, and this necessitates close supervision.

The Sanitary Inspector's Report, which is appended to that of the Medical Officer, shews that house to house inspections were continued, and that a large number of nuisances were abated, chiefly by cleansing of rooms and repairing of defective closets and drains, and the provision of Sanitary Dust-bins.

The attempts of the Council to obtain a constant supply of water for parts of Thames Ditton and Long Ditton have proved unsuccessful.

Molesey.—The Medical Officer of Health reports that there is now ample house accommodation for the working classes. Numerous insanitary conditions were reported upon and remedied.

Number of Nuisances abated, 128.

Maldens and Coombe.—The Sanitary Inspector's Report is appended to that of the Medical Officer of Health. It gives a full tabular statement of inspections and sanitary improvements, followed by a detailed account of the work done.

Number of Nuisances abated, 194. Legal proceedings, 1.

The Medical Officer again draws attention to the want of a constant supply of water for the district.

Epsom.—The Medical Officer of Health reports that systematic inspections were continued. A cottage, which had been closed as unfit for habitation, was redrained and repaired. The drainage of 34 houses was entirely reconstructed, and 31 insanitary houses were repaired.

Number of Nuisances abated, 113. Proceedings, 0.

A constant water supply was maintained throughout the year.

Sutton.—The Medical Officer of Health reports that the usual systematic house to house inspection was carried on during the year. Four cases of overcrowding were abated. The house drains were disconnected from three cesspools in the chalk. The Council have laid a sewer at a lower level in the Carshalton Road to take the drainage of the only two houses that still drain to cesspools within a quarter of a mile of the waterworks. A great sanitary improvement has been brought about by the extension of the sewerage system to the Angel Hill district, where nuisance was constantly arising from overflow of sewage into a ditch. Another improvement has been effected by the asphalting of footpaths at the rear of Warwick Road, Crown Road, and Sidney Road.

Number of Nuisances abated, 420. Proceedings, 0.

Carshalton.—The Medical Officer of Health reports that house to house inspections were made in Palmerston Road, Rochester Road, Clark's Yard, and Mill Lane. Thirty-seven insanitary houses were repaired and cleansed, and 26 yards were paved. One case of over-crowding was abated.

CROYDON RURAL.—The Medical Officer of Health reports that 11 houses were dealt with under the Housing of the Working Classes Act, and in seven instances the houses were put into a satisfactory condition, and in four instances the houses were closed on Justice's orders.

A Table is appended to the Report giving a summary of each Inspector's work during the year.

Number of Nuisances abated, 821. Legal Proceedings, 5.

GROUP II.—RURAL TOWNS AND RESIDENTIAL DISTRICTS
OF WESTERN AND SOUTHERN SURREY.

Vital Statistics.—Population, 147,577. Birth-rate, 23'5. Death-rate, 11'3. Infant mortality, 9'2. Epidemic death-rate, 1'1. Phthisis death-rate, 0'8. Respiratory death-rate, 1'6.

CHERTSEY.—The Medical Officer of Health reports that it was not found necessary to make any representations under the Housing of the Working Classes Act. Two houses, which were unfit for human habitation, were closed by the owner thereof when his attention was called to their condition. Other defects were dealt with under the Public Health Act.

An application for registration of one of the Common Lodging Houses was refused by the Council, and there are now three Common Lodging Houses, providing accommodation for 65 persons.

The number of visits and inspections recorded is 1,442.

The connection of houses within the drainage area to the sewers is practically completed.

Walton-on-Thames.—The Medical Officer of Health reports that the nuisances arising from the unloading of trucks of London manure at the Walton Station were abated to a large extent under the instructions of the Railway Company that no unloading of manure was to take place after 10 o'clock a.m. during the months of May to September.

Number of Nuisances abated, 1,160.

Weybridge.—The Medical Officer of Health reports that three wooden cottages at Monument Hill and two wooden cottages at New Road were pulled down and replaced by new buildings erected in compliance with the bye-laws. A house to house inspection of the drainage arrangements of the whole of the cottages in 16 roads, which are specifically mentioned, was carried out by the Sanitary Inspector.

Number of premises at which nuisances were remedied, 69.

Woking.—The Medical Officer of Health reports that it was not found necessary to report any dwelling under the Housing of the Working Classes Act, as unfit for human habitation. A proposal to adopt Part III. of this Act was negatived, chiefly on the ground that no suitable land was obtainable at a sufficiently reasonable price. There is at present no scarcity of dwellings for the working classes, but the high rents lead to the occupation of many of the houses by two families, and so to overcrowding.

House to house inspections were made by the Medical Officer and Sanitary Inspector in Courtney Road and Walton Terrace. The commonest defect noticed was the dampness of back yards from want of paving. The Medical Officer also reported upon 48 cottages known as Rose Bank Cottages, Westfield, draining to cesspools, which overflow in wet weather; he is of opinion that the sewerage of this area is not urgently needed, as there is sufficient garden ground for the disposal of waste matters. A Gipsy Camp in Boundary Road was broken up by the owner of the land upon proceedings being taken, and a great nuisance was thereby abated.

A short series of Bye-laws was adopted in November dealing with the construction of cheap cottages, and exempting from the clauses relating to the construction of walls buildings situated at a certain distance from adjoining streets and other premises.

Number of premises inspected and re-inspected, 1,737. Sanitary improvements carried out, 445.

A constant supply of water was furnished during the year.

FARNHAM.—The Medical Officer of Health reports that three cases of overcrowding were abated, and that nuisances were abated to the number of 22.

The Council, upon the representation of their Medical Officer, drew the attention of the Water Company to the desirability of shutting out from the supply to the town the water derived from a part of the gathering ground, whose surface is said to be seriously fouled by the inhabitants of the surrounding cottages. The Council subsequently met the Directors of the Company, who, however, declined to allow any tests to be applied for the purpose of discovering whether the surface water obtained access to the pipes. This is a matter for future report.

FRIMLEY.—The Medical Officer of Health reports that the Council adopted Part III. of the Housing of the Working Classes Act, and have under consideration a scheme for the erection of dwellings. Fifteen houses formerly draining into cesspools have been connected with the Public Sewer. Two houses were represented to be unfit for human habitation.

House to house Inspections, 321. Nuisances abated, 79.

Godalming.—The Medical Officer of Health reports that systematic inspections of insanitary properties are still being carried on. In seven instances structural alterations were carried out under his instructions, and five cases of overcrowding were abated. Between 40 and 50 house connections were made, and in all cases the old earth closets and insanitary cesspools were abolished.

The Corporation erected a chamber and tank for the collection of a supplementary supply of water.

GUILDFORD.—The Medical Officer of Health reports that the 18 cottages built by the Council in Cline Road were ready for occupation at the end of the year, and were all let at 6s. 6d. and 7s. 6d. per week, the total cost, including land, sewerage and roadway being £4,266. A large number of cottages have been built by private owners, but it has not yet been found possible to build cottages to let at about 5s. a week, so that in this respect the housing problem has not yet been solved.

Two cottages at Slyfield Green were reported as unfit for habitation, and notices were also served under the Housing of the Working Classes Act in respect of premises in the Mount, Milkhouse Gateway, Stoughton Road, and Cook's Passage, Chertsey Street. Notices for carrying out considerable repairs were also served on owners of 16 other cottages. Overcrowding was met with in 19 instances. The Sanitary Inspector's Report, giving details of work done, is appended to that of the Medical Officer.

A constant and sufficient supply of water was maintained throughout the year.

DORKING.—The Medical Officer of Health reports that inspections were carried out in Mill Lane and other parts of the district. There are several groups of old cottages that require frequent inspection. Twenty-two insanitary cottages were repaired. Flushing apparatus was provided for 12 hand-flushed closets.

Number of Nuisances abated, 158. Legal Proceedings, 0.

Leatherhead.—The Medical Officer of Health reports that he made a house to house inspection in Kingston Road, and a re-inspection of houses in the Fairfield. A new surface-water sewer was laid down in Kingston Road to remedy the damp conditions prevailing in that neighbourhood. Number of Nuisances abated, 98.

Reighte.—The Medical Officer of Health reports that there is a considerable tendency for houses in certain districts to be occupied by more than one family, and that one or two obvious cases of overcrowding were met with. During the year the Sanitary Inspector and his assistants have been unable to afford the time for systematic house to house inspection, and the Medical Officer draws attention to the importance of this work.

The Sanitary Inspector's Report is now appended to that of the Medical Officer. It gives details of the work carried out to abate the various nuisances that were discovered. Drains examined and tested, 614; relaid, 132. Rooms cleansed, 423. Dampness remedied, 51. Overcrowding abated, 11.

CATERHAM.—The Medical Officer of Health gives a list of 137 sanitary defects remedied during the year, and mentions that one case of overcrowding was successfully dealt with.

GROUP III.—RURAL DISTRICTS OF SURREY.

Vital Statistics.— Population, 156,442. Birth-rate, 22'3. Death-rate, 11'6. Infant mortality, 8'5. Epidemic death-rate, 0'8. Phthisis death-rate, 0'8. Respiratory death-rate, 1'4.

CHERTSEY.—Area in acres, 24,936. Population, 13,478. The Medical Officer of Health reports that an inspection was made of 58 houses at Broomhall in the Parish of Chobham. A number of nuisances from improperly constructed cesspools and unsuitable means of disposal of waste matters were discovered, and the Sanitary Inspector was instructed to serve the requisite notices.

A special report was made with regard to the administration of the Bye-laws dealing with Tents, Vans, and Sheds, and, as a result, the Council resolved to adopt the Model Bye-laws as issued by the Local Government Board. In the course of the year the Sanitary Inspector paid 112 visits of inspection to these encampments, and he reports in detail upon the conditions found.

A special report was also made in consequence of complaints with regard to the emptying of cesspools in Byfleet, and, in acknowledging the report, the Local Government Board trusted that the District Council would take steps to secure that the scavenging contractor would attend more promptly to the calls made upon him.

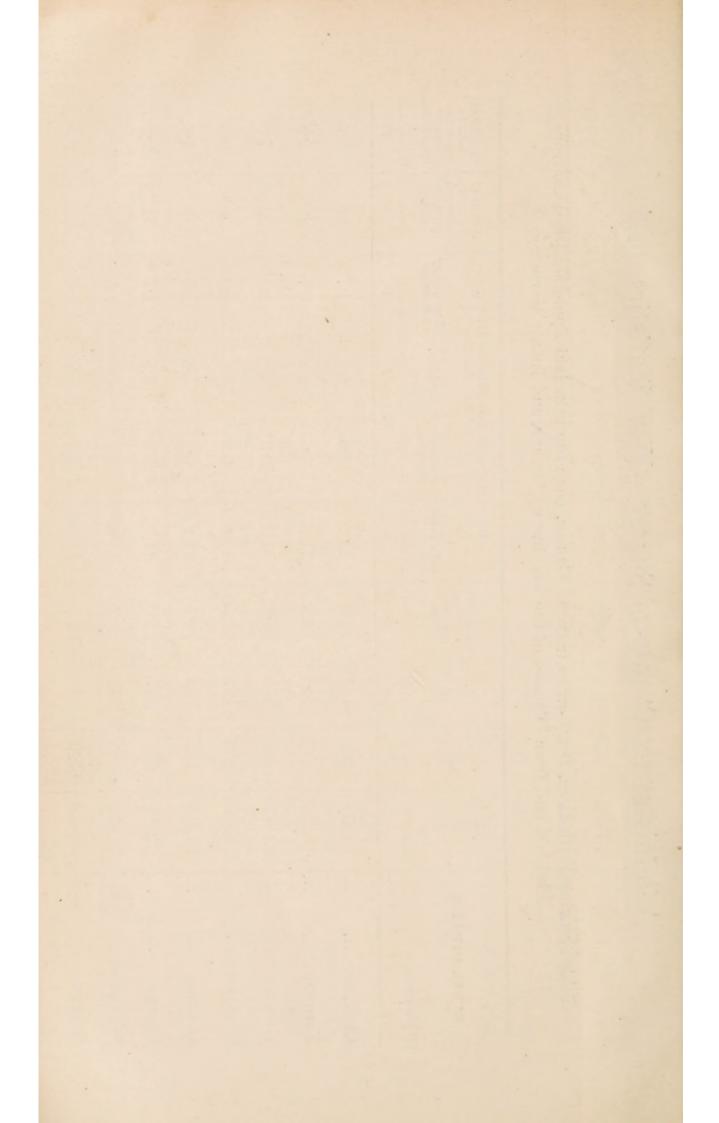
Administrative County of Surrey-Vital Statistics, 1906.

Table showing Birth-rates, Death-rates from all Causes, from the principal Epidemic Diseases, from Phthisis, and from Diseases of the Respiratory Organs, and Infant Mortality.

		lon.	4	2	Birth-rate	DEATH	RATES TO 10	00 PERSONS	LIVING.	Deaths of Infants	Deaths of
RURAL DISTRIC	OV.	Population	Births,	Deaths.	to 1000 persons living.	All Causes.	Principal Epidemic Diseases.	Phthisis,	Respiratory Diseases.	under one year of age.	under one year to 100 Eirths
	Cols.	1	2	3	4	5	6	7		0	10
Chertsey		13,478	327	161	24.2	11-9	0.8	0-7	1.7	28	8.6
Farnham		18,250	480	215	26.3	11:8	1.5	0.9	0.9	47	9.8
Hambledon	***	22,960	484	260	21.1	11:3	0-9	1.0	14	1.4 34 7.0	
Guildford	***	17,800	333	192	18-7	10.8	0.5	0.6	0.6 0.9 36 10.8		10.8
Dorking		10,000	197	122	2 19-7 12-2 0-2 0-6 2-5	9	4.6				
Epsom		22,500	517	267	23.0	11:9	1.0	0.8	1.7	51	9-9
*Croydon		59,800	1,600	679	26.7	11:3	2.3	0:7	1:5	199	12.4
Reigate		18,000	429	221	23.8	12:3	1.2	0.8	1.4	39	9-1
Godstone		20,923	452	237	21.6	11:3	0.6	1.0	1.5	28	6.2
Totals		203,711	4,819	2,354	23-7	11-6	1:3	0.8	1.5	471	9.8

	1	- 2	4	Birth-rate	DEATH	RATES TO 10	00 PERSONS	LIVING.	Deaths of	Deaths of
URBAN DISTRICT	Population	Births	Deaths	to 1000 persons living.	All Causes.	Principal Epidemic Diseases.	Phthisis.	Respiratory Diseases.	Infants under one year of age.	Infants under one year to 100 Births
- c	ds. 1	2	3	4	5	6	7	8	9	10
*Barnes	25,500	632	288	24.7	11.2	2.4	0.5	1.4	71	11.2
Richmond	34,358	636	377	18-5	11.0	0.9	1.0	1.3	53	8.3
Wimbledon	49,860	1,185	631	23-7	12.6	2.7	0.9	1.5	175	14.7
Ham	1,460	24	14	16.4	9.6	1:4	0.7	2.7	3	12.5
Kingston	39,500	941	488	23.8	12:3	1.5	1.0	1.8	113	12.0
Esher and Dittor	s 10,057	275	111	27:3	11.0	0.6	0.7	1.7	22	8.0
*Maldens & Coon	be 9,686	208	76	21.5	7:8	0.5	0-2	0.9	14	6.7
Surbiton	17,367	356	153	20-4	8.8	1.6	0.4	1:3	36	10-1
East & West Moles	ey 6,370	177	74	27.8	11.6	0-9	0.6	2.2	9	5.1
Chertsey	13,622	322	187	23.7	13.7	1.0	0-9	2.0	34	10-5
Egham	12,531	271	138	21.6	11-0	0.6	1.0	1.0	23	8.5
Weybridge	6,242	104	32	16-6	5-1	0.5	0.3	1.1	0	0
Walton	11,780	275	120	23:3	10-1	1.6	0.3	2.4	32	11-6
Farnham	6,850	178	89	26.0	13.0	1.6	0.7	1:3	12	6-7
Frimley	10,352	281	97	27.1	9.3	1.2	0.9	1.7	. 27	9-6
Godalming .	9,079	208	104	22-9	11.5	0.7	0.3	1.4	19	9-1
Guildford	. 22,400	483	277	21-5	12:3	1.2	0.8	1.5	46	9.5
Woking	18,000	523	203	29.0	11.2	1:3	0.5	1.4	59	11.2
Dorking	8,000	209	112	26.1	14.0	0.4	1.1	3.1	12	5.7
eatherhead .	. 5,200	107	51	20.6	9-8	1.2	0.6	1.9	9	8-4
špsom	12,500	329	141	26-3	11:3	1.6	0-9	1.8	29	8.8
Sutton	17,200	434	172	25-2	10-0	1.5	0-7	1.2	45	10-3
Carshalton .	7.750	208	100	26-8	12-9	1.2	1.8	1.6	30	14.4
Reigate	97 920	549	305	20-2	11.2	1:0	1.2	1.3	50	9.1
	0.000	233	85	26-4	9-6	1.2	0.7	0-9		
	391,716	9,148	4,425	234	11:3	14	0.8	1:5	944	9.0

* Local estimates of Population are given where the names are printed in italics.
In the above Table the following Public Institutions have been allowed for as regards Deaths and Populations, viz.: Horton, Banstead, Cane Hill, Caterham and Earlswood Asylums, Caterham Barracks, The Holborn Schools and Workhouse, The Kensington Schools, and some smaller establishments. Brookwood Asylum Deaths have been allocated to the districts to which they belonged.



Administrative County of Surrey-Vital Statistics, 1906.

Showing Deaths from Epidemic Diseases, Phthisis, other Tubercular Diseases and Diseases of the Respiratory Organs.

								PHYMISTS	11	N.
SANITARY DISTRICTS.	Metales.	Whooping Cough,	Diphtheria.	Searlet Fever.	Typhoid	Diarrhea.	Total Epidemic Diseases.	FILLIAN	HARIA TARIA	DISE
Cols.	-	64	100	4	2	9	7	0	6	01
Barnes, Urban	16	6.	13	1	1	555	62	13	1	36
Richmond, Urban	0.5	.0	20	0.5	1	17	30	34	11	46
Wimbledon, Urban	19	4	6	5	2	95	137	43	91	92
Ham, Urban	0	0	0	0	0	03	03	1	0	-11
Kingston, Urban	1	11	20	्य	-	38	200	39	20	71
Esher and Dittons	0	οž	00	0	0	+	9	1	c ×	17
Maldens & Coombe	0	0	0	0	0	5	2	0.3	1	6
Surbiton	03	4	1	1	1	18	27	7	00	23
Molesey, Urban	00	-	0	0	0	C.S	9	+	1	14
Chertsey, Urban	65	0.5	1	+	6	*	13	12	00	27
Chertsey, Rural	1	0	0	0	62	œ	11	6	10	23
Egham, Rural	0	25	1	0	0	7	1	12	60	120
Weybridge, Urban	0	0	01	1	0	0	60	es.	O.S	7
Walton, Urban	0	*	O1	1	0	12	19	4	25	28
Farnham, Urban	01	0	0	0	0	6	11	2	01	6
Farnham, Rural	0	1	10	33	O.S	12	88	17	1	17
Frimley, Urban	1	10	0	1	-	4	12	6	7	18
Hambledon, Rural	1	6.	0	50	1	9	06	65	3	33
Godalming, Urban	0	60	0	1	0	01	9	60	2	13
Guildford, Urban	1	9	कर	60	0	14	56	19	5	34
Guildford, Rural	0	0.5	0	0	0	1	6	10	60	16
Woking, Urban	0	25	0	0	0	21	23	6	9	36
Dorking, Rural	1	0	1	0	0	0	62	9	4	25
Dorking, Urban	0	0	0	0	0	60	60	6	1	25
Leatherhead, Urban	1	0	≎र	0	0	60	9	60	1	10
Epsom, Rural	25	+	० २	0 .	0.5	12	55	19	11	38
Epsom, Urban	es.	21	0	0	0	16	20	11	25	553
Sutton, Urban	0	00	1	0	0	17	26	12	12	20
Carshalton, Urban	0	2	0	0	0	*	6	14	5	12
Croydon, Rural	20	00	15	9	O.S.	25	135	43	25	88
Reigate, Urban	11	०१	+	1	1	6	28	33	10	35
Reigate, Rural	9	60	60	0	0	6	21	14	00	36
Godstone, Rural	0	+	0	0	0	00	12	30	C3	35
Caterham	00	0	0	0	0	00	11	9	60	∞
		Ì								



EGHAM.—Area in acres, 7,621. Population, 12,531. The Medical Officer of Health reports the inspection of 310 premises, 130 of them in detail. Nuisances abated 136, formal notices served 96, proceedings in 1 case. He made a special inspection, with a Committee of the Council and the Sanitary Inspector, of low-lying houses in Milton Road, with reference to the drainage arrangements, and a detailed report was presented shewing that no satisfactory solution of the matter was practicable until proper sewage was provided.

FARNHAM.—Area in acres, 28,251. Population, 18,250. The Medical Officer of Health reports that several meetings of a Special Committee were held to consider the modification of the existing Bye-laws.

Hambledon.—Area in acres, 63,154. Population, 22,960. The Medical Officer of Health reports that house accommodation, especially for the working classes, is much needed in several parts of the district. He also comments upon insanitary conditions which he discovered in the course of his enquiries into cases of infectious disease. The Sanitary Inspector's report is appended to that of the Medical Officer. Nuisances abated, 162. Overcrowding abated, 3.

Guildford Rural.—Area in acres, 55,000. Population, 17,800. The Medical Officer of Health reports that the connection with the new sewers of all the houses in George Street, Farncombe, and of practically all the houses in Ripley was carried out during the year. The formation of a scheme for the sewerage or systematic scavenging of the village of Pirbright still requires the attention of the Council.

The Local Government Board stated that they would be prepared to give favourable consideration to the Council's application for repeal of the Bye-laws in force in Artington and Pirbright, provided that the Council were willing to substitute a code limited to the matters contained in the Model Code for Rural Districts. The Medical Officer of Health commends to the notice of the Council the desirability of extending such modified series when formulated, to the whole of the Rural District.

The Medical Officer reported that the water supply of East Horsley and Grove Heath, Ripley, was generally unsatisfactory, and agreements have been signed with the Woking Water Company for the extension of their mains to the village. The Council pressed for the laying of mains in the parish of Compton, and the Corporation of Godalming are about to apply to the Local Government Board for sanction to borrow the money for the required outlay.

DORKING.—Area in acres, 39,385. Population, 10,000. The Medical Officer of Health reports that inspections of cottages were carried out in each parish in the district, including a detailed inspection at Westcott and Holmwood. An insanitary cottage at Abinger was closed by the owner.

Water was laid on to 24 premises at Ockley and to 16 at Capel, from the mains of the Dorking Water Company, which had been extended to these parishes in the previous year.

At Westcott, 142 houses were connected with the new sewers, leaving 21 to be connected, and at Holmwood 23 houses only remain to be connected.

Inspections, 674. Nuisances abated, 134.

Epsom.—Area in acres, 31,057. Population, 22,500. The Medical Officer of Health reports that systematic inspections were made in every parish. A cottage at Ewell was closed by the owner and three other dilapidated cottages in the same parish were pulled down; 157 insanitary cottages were repaired and cleansed. At Cheam some offensive privies were pulled down and replaced by water closets, and the work of relaying the drains of the cottages at Tartar Hill, Cobham, and of connecting them with the sewer, was completed.

Inspections and re-inspections, 1,659. Nuisances abated, 698.

Reighte.—Area in acres, 44,506. Population, 18,000. The Medical Officer of Health reports that he inspected a group of cottages at Ironsbottom, Sidlow, all of which were in need of repair, and two were in a dilapidated condition. On receipt of notices, the owners stated that they intended to demolish some or all of the buildings. He also examined the cottages at Kingswood, in the course of an enquiry into the water supply; on the whole their condition was found to be satisfactory. At Nutfield Marsh and at Walton-on-the-Hill a number of nuisances arose from the sewage of cesspools backing up the drains in wet weather, and percolating beneath the floors of the cottages.

The Report contains a summary of the work done by the Sanitary Inspector. Nuisances abated, 287. Overcrowding, 11.

Godstone.—Area in acres, 49907. Population, 20,933. The Sanitary Inspector's Report is appended to that of the Medical Officer of Health. It states that the total number of inspections and re-inspections made on all matters amounted approximately to 2,985, resulting in the re-drainage of a number of houses. In November the Council instructed their Sanitary Inspector to make a house to house inspection of all cottage property in Limpsfield.

VII.—THE MIDWIVES' ACT, 1902.

The following report was presented to the Sanitary Committee at their first meeting in 1907. It subsequently appeared as an Appendix to the Committee's report in the Yellow Book of February, 1907.

The Surrey Midwives' Roll, referred to in the report, was prepared some months ago and is now undergoing revision. It does not therefore accompany this reprint.

I need only very briefly refer to the County Reports for 1904 and 1905.

The former contained an account of the main provisions of the Act, and of our system for carrying it out in the administrative county of Surrey. It was accompanied by elaborate tables of information, all of which were before the General Purposes Committee of the Council, and all of which are in safe keeping.

The Report for 1905 followed on the same lines; the work of classification was further developed; the minimum amount of information required in the first instance in the Medical Officers' Reports was repeated, and it was indicated that, in the Reports for 1906, further arrangements were to be made for the convenience of the District Medical Officers in preparing their Reports. The transference of the working of the Act from the General Purposes to the Sanitary Committee was duly recorded.

The experience of the last two years has enabled me to enlarge the scope of this Report, and to add much reliable information which will probably be found useful now.

County Roll and Register.—In the first place, having received from the Clerk of the Council a communication addressed to him by the Medical Officer of one of the largest districts, I consulted the Chairman of the Committee thereon, and, in accordance with his instructions, forthwith set to work to compile a Local Register of enrolled Midwives living in Surrey. In doing this I had the courteous co-operation of the Secretary of the Midwives Board. We have now got in pamphlet form a list of Midwives in the County brought up to recent date, i.e., November 30th, 1906. We shall pre-

sently be able to distinguish those intending to practise, and shall then have a valuable official record. Its usefulness is already much appreciated by the District Medical Officers. It will require to be brought up-to-date at fairly frequent intervals, as Midwives change their residence more often than other practitioners.

I also sent out to the Medical Officers at the time of issuing this Official List, a brief summary of particulars which the Committee would require to be included in their Reports, so that my colleagues had the notes at hand at the time of preparing their Reports. This has proved a great advantage in securing definite information from almost all the districts on a few essential points.

In addition, at my invitation, some of the Medical Officers of large districts have supplied very valuable information, for which I would express my thanks on behalf of the Committee.

DISTRICT REPORTS.—I lay before you the Reports for 1906 on the 34 Sanitary Districts of the County, from the 23 Medical Officers of the separate and combined districts referred to on pp. 2 and 3 of the Surrey Midwives Roll, 1907. They vary in completeness and quality; but on the whole are more comprehensive than those for 1904 and 1905.

TABULAR STATEMENT.—A Table has been prepared in which essential information is given as under:—

- (1) Names of the Midwives, indicated by initials.
- (2) Residence.
- (3) Approximate age.
- (4) Cleanliness of the house.
- (5) Cleanliness of the person.
- (6) Knowledge generally, and particularly as to sending for medical help.
- (7) Number of cases attended.
- (8) Still births, number and particulars.
- (9) Inspections, number and date.
- (10) As to whether Notice (Form XII) has been sent to the Local Supervising Authority (i.e., the County Council) of intention to practice.

This table, presented by me to the Committee, together with the District Reports, furnishes the material for the following summary of particulars, and will afford the basis for the accounts and fees due to each Medical Officer of Health, which I shall have to present to the next meeting of the Sanitary Committee.

The total number of persons living in Surrey and enrolled on the roll of the Central Midwives Board is 369. Of these 65 have the special qualification of the Board indicated by the letters "C.M.B."* 195 are trained Midwives who have had hospital or special training, and the remainder, namely 109, are practising in virtue of their having been in bona fide practice previous to July, 1901. Many of these are old and very ill-qualified persons. But although the number 369 is given as the total number on the roll, a considerable reduction has to be made for those who are not intending to practise. This reduction will amount to at least 120, leaving some 250 practising, which means much less than 1 per 2,000 of the population.

As regards the condition of their dwellings and immediate surroundings, as well as of the persons, the facts were recorded in 191 instances.

The number of which the cleanliness and sanitary condition of the house is recorded:—

As	good (sometimes	very	good)	is	 	145
As	indifferent is				 	33
As	distinctly bad, i	s			 	13

Then as regards the cleanliness of the *person*, these particulars are of the greatest importance. They include statements as to the wearing of washable dresses, and the use of the nail brush, which is most important in this kind of practice. They also take into account the conditions of the "Midwives Bag," and the few articles most of these poor women use in pursuing their calling.

The number of which the cleanliness of the person is recorded:—

As	good (sometimes	very	good) is		 	141
As	indifferent is				 	36
As	had is			10000		14

As regard the ages of these same Midwives, 39 owned to over sixty years. It is significant that out of these the number whose houses were recorded as bad or indifferent in cleanliness was 21, and those whose dress and hands, etc., were inferior in point of cleanliness was 25.

As regards general knowledge of their business, and especially when to send for medical help:—

^{*} Signifies that the Midwife has passed the Examination of the Central Midwives Board.

The particulars are not given in many cases, or, when given, the information is not easily tabulated. But as far as stated it would appear that of 158 Midwives 127 were satisfactory or fairly satisfactory, and 31 unsatisfactory (sometimes very much so).

The heading "Knowledge" includes the book-keeping or record of cases, as to which there is much difficulty with the illiterate "bona fide" class. Consequently the columns relating to cases attended and the number and particulars of still-births are admittedly defective. The number of births recorded as attended by Midwives in 1906 would thus appear to be only 4,756, the number of births in the whole County being probably nearly 14,000 for that year. This does not, however, take account of the births attended by the uncertified persons who are by no means all under supervision, and from whom it is difficult to get reliable information. It is quite likely that nearly half the births in the County are attended by Midwives, including the uncertified midwives who practise "habitually and for gain," and who should be required to give up practise in 1910.

The number of inspections by the 23 District Medical Officers is generally given in each case for each district.

In addition to the above points, which are taken from the Tabular Statement, I have acquired a large amount of information with regard to some of the districts in the county upon the following points:—

Instruction, Training and Supply of Midwives.—Some of the most important part of the work carried on under the Committee is distinctly of an educational character inasmuch as the visits of Medical Officers are, as they were intended to be, largely for the purpose, not only of detecting faults and irregularities on the part of Midwives and reporting them, but also to secure their improvement as far as practicable. The need and value of this side of the Medical Inspecting Officer's work is shown by the large proportion of Midwives who, though still ignorant and but poorly qualified, are becoming better by being under the frequent supervision of Medical Officers well acquainted with their districts.

The evidence of this improvement is forthcoming in the Reports of several of the Medical Officers; those of Wimbledon, Chertsey, Croydon and Guildford, for example. In Wimbledon, Lectures have been given under the Technical Education Committee, and the benefit derived from these is referred to by the Medical Officer of Health. But the main part of the improvement effected in the County

has been by the personal direction given to the Midwife by the Medical Inspecting Officer during his visits. It must be remembered that these visits have related to some of the unqualified Midwives as well as to those who have the nominal qualification referred to in the Roll of the Central Midwives Board as "bona fide" (see p. 3 of the Surrey Midwives Roll, 1907).

In the majority of cases the women are of the old school, and it is plain that what is wanted in cases such as these is to secure improvement in some of the most essential parts of their practice.

Firstly.—Cleanliness of the person, and especially the need for attention to the hands. It has been estimated that if the women's nails were only kept short and good nail brushes properly used, the number of cases of puerperal fever might at once be reduced by 50 per cent. There has been improvement in this respect, and it is a great thing that the Medical Officers have been able to induce many women by advice and warnings to wear washable dresses.

Secondly.—To teach them how to use the clinical thermometer, so that they may know when to send for medical help.

By securing these simple and most important improvements, a very great practical advance will have been made under the head of instruction and teaching which we trust to effect.

I will not now discuss the necessity of teaching by lectures or greater facilities for the training of Midwives, but after very careful inquiry I would say that it is the supply rather than the training of Midwives that is the urgent need. I must not anticipate information which will be published by the Special Committee on this subject very shortly, but I may inform you that it is the question of the residence in localities where trained women can earn a living that is the difficulty.

That is to say, there may be at the present time a sufficient or even an excessive number of well trained Midwives, and yet there may be no such positions for them to take up as would enable them to earn a living wage in the districts where good Midwives are wanted. There can be no doubt about the desirability of gradually replacing the Midwives of the old school by those who have an up-to-date training, but the essential thing is to consider how the new Midwives can obtain a living.

This brings me to my next point.

EARNINGS OF MIDWIVES .- I have obtained some very interesting information on this subject from the Medical Officers of Health for Barnes, Richmond-on-Thames, Epsom, Sutton, Surbiton and Croydon, which represent the suburbs of London, as well as from Reigate, Guildford, Woking, Dorking, Godstone and Egham, urban and rural districts. From this it appears that near London the Midwives' fee varies from 10s. 6d. to 15s., which sum includes payment for attendance for some ten days after the confinement. The fees for Guildford town may be as good as the above, but for most of the country districts are no more than 10s. for the same length of attendance. Consequently, in small urban and all rural districts a Midwife would need to have a practice of at least 150 cases a year for a fair living, if she is to be self-supporting; and in the country districts, where the population is scattered, it is difficult to see how she can be entirely self-supporting. In several of these districts I have particulars as to how many of these Midwives are married women adding to their husband's incomes, and how many are subsidized by District Nursing Associations. All these particulars are very interesting as bearing upon the question of the supply of Midwives, and as to how it is going to be met.

In this connection I may remind you that in the year 1910 a further change will take place, inasmuch as a large number of uncertified persons who have been for many years carrying on the business of Midwifery "habitually and for gain," will come under a penal clause which renders their practice illegal. There is, therefore, some doubt and anxiety as to what will be the position at that time.

As a matter of fact it may be mentioned that many of the persons who are obtaining the qualification of the Central Midwives Board, by Examination, appear to be finding in what is called maternity nursing, i.e., monthly nursing under a doctor's supervision in well-to-do houses, a much more lucrative and comfortable employment than would be possible to obtain in the pursuit of Midwifery, especially in rural districts.

In connection with the scarcity of Midwives in some parts of the county, I may especially refer to the large parishes of Horley, Charlwood and Burstow, which have no one practising in their districts.

With regard to the question of the efficiency of the Midwives, especially as regards their cleanliness; attention to their dress and their hands; knowledge of how to use a thermometer so as to recognise danger to the patient and knowing when to send for medical help; and generally, as to reporting themselves to their District Medical Officers

of Health, many of the Reports show gratifying evidence of improvements. In support of this statement I may refer to the Reports from the large districts of Croydon and Chertsey combined, Epsom and Dorking, Richmond, Surbiton, Kingston, Wimbledon, and especially Guildford combined, where the Medical Officer has taken very great pains in all his Inspections and Reports.

Complaints of Midwives.—As to special incompetence, four cases have been under the notice of the Committee. These four cases were reported on the ground of neglect of the Rules laid down by the Midwives Board for observance by all Registered and Enrolled Midwives, and these cases appear in the Minutes and Reports of the Committee. Other cases brought to my notice by the annual report will be referred to the Committee, and duly reported to the Central Midwives Board if found necessary.

I append copies of the chief circular letters issued to District Medical Officers during the year 1906, including one drawn up in consultation with the Clerk of the Council as to the Suspension of Midwives in accordance with the resolution of the Council in November.

Re SUSPENSION OF MIDWIVES IN ORDER TO PREVENT SPREAD OF INFECTION.

MEMORANDUM.

Addressed to the Medical Officer of Health of each District in the County.

Adverting to the report of the Sanitary Committee of the Surrey County Council presented on November 13th (a copy of which has been sent), you will have noted that I am authorized to issue notice of "suspension" on behalf of the Local Supervising Authority. In cases of puerperal fever notified to you I would be glad of early and sufficient information to enable me to form a judgment, or for further investigation, if necessary. You may think it well at the same time yourself to inform the midwife that you are going to report the case to me, and, as is the custom, you will of course immediately caution her against further attendance on cases until such time as she is freed from infection as provided for under the Rules of the Central Midwives Board.

(Signed) EDWARD C. SEATON.

County Medical Officer of Health.

November, 1906.

TABLE A 1.
TABLE A 2.

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