[Report of the Medical Officer of Health for Sutton UDC 1905].

Contributors

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URBAN DISTRICT (OR PARISH)

OF

Sutton, Surrey.

Medical Officer's Annual Report

With regard to the year 1905.

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- I. PHYSICAL FEATURES.
- II. VITAL STATISTICS.
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- IV. SUMMARY OF OTHER SANITARY PROCEEDINGS, &c.
- V. Appendix, containing Sanitary Inspector's Annual Returns, certain Tables of Sickness and Mortality, and Meteorological Notes.

Prepared in accordance with Sec. 14 of the Local Government Board, dated 23rd March, 1891, regulating the duties of Medical Officers of Health.

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SUTTON URBAN DISTRICT.

Area, 1,836 Statute Acres.

Number of Inhabited Houses at Census 1881, 1,537; at Census 1891, 2,200; at Census, 1901, 2,976.

Population (exclusive of South Metropolitan District Schools) at Census 1881, 8,700; at Census 1891, 12,000; at Census 1901, 15,486.

MEDICAL OFFICER'S REPORT FOR THE YEAR 1905.

GENTLEMEN,

I have the pleasure to present my report for the year 1905.

Although the records in Sutton are usually comparatively good, this year is remarkable by reason of its low infantile mortality, of mortality from zymotic diseases and for the lowest general death-rate yet recorded, viz.: 8.9.

If in a community uninfluenced by immigration and emigration this rate of mortality were maintained it would infer that if 1,000 children were born in a given year, after 80 years 288 would still be living, after 100 years 110, whilst the remainder would not become extinct until 113 years had passed. This is of course improbable under existing conditions. In a residential district like Sutton there is a large number of immigrants such as household servants, shop assistants, etc., who, whilst materially augmenting the numerical value of the population, have but little effect on the rate of mortality, being persons at the middle ages of life, when death is not so frequent, and in most cases also leaving the district for their respective homes when serious illness does overtake them.

Taking, however, all these factors into consideration, the death-rate of the district would be much below the average for the country generally, and compare very favourably with that of many reputed health resorts.

I.—Physical Features.

Sutton in its main direction lies almost due north and south, the High Street continuous on the north with the London Road and on the south with the Brighton Road, intersecting the district in this direction, which is about 23 miles long between the boundaries. From east to west the town is divided by the Carshalton Road and Cheam Road, and at this point is about a mile in width. The whole district has an area of 1,836 acres. The southern portion of Sutton is beautifully situated, sloping up to the noted breezy Banstead Downs, attaining a height of about 300 feet above sea level, and having a subsoil of Chalk. The northern portion also rises from the lower part of the town about Sutton Green (117 feet from sea level) to Sutton Common and Benhilton, both of which are prettily situated and favourite residential districts. This part of the town is mainly situated on the London clay, but dividing this from the chalk, which may be roughly said to extend to a line drawn east to west, about the level of West Street, are two narrow strips of Thanet sand and plastic clay (Woolwich and Reading beds) an outcrop of the lower London tertiaries. The natural or surface water drainage is mainly to the Pyl Brook, a small tributary of the Beverley Brook, and to a small extent on the east side into a brook running into the Wandle. On the north side Sutton is bounded by Carshalton and Morden, on the south by the parish of Banstead, on the east by Carshalton, and on the west by Cheam and Morden.

II.-Vital Statistics: Births and Deaths.

1. Population.—The natural increase of population or the excess of births over deaths during the year 1905 was 257. This, together with the greater number

of inhabited houses warrants us in assuming that the nett population of the district had increased in about the same ratio as shown in the last census to have taken p'ace during each of the previous 10 years, and may therefore be taken at 16,800, as compared with 16,500 in 1904. The addition of the resident population of the Metropolitan Asylum Board's Ringworm School in Banstead Road 468, and of the Belmont Asylum, opened early in the year in the premises previously used as schools by the South Metropolitan District Board, 244, at a census taken in June. 1905, gives the total population of the district as 17,512, as compared with 16,997 in the previous year.

- 2. Births.—395 births were registered during the year, 204 boys and 191 girls, giving a birth-rate of 23.5 per thousand inhabitants, as compared with 22.8 the previous year, and an average of 23.5 during the preceding 10 years. The birth-rate in the whole of England and Wales during 1905 was 27.9. The peculiar constitution of the population as referred to in the introduction to this report as affecting the death-rate is also effective as regards the birth-rate, which would otherwise be over rather than below the average for the country generally.
- 3. Deaths.—There were registered 132 deaths as having occurred within the district, of which 6 were of persons not belonging thereto, viz.: 3 at the Banstead Asylum, 2 at the Metropolitan Asylum Board's School, and 1 at the Sutton Hospital, whilst 18 deaths took place at Epsom Union Workhouse and Brookwood Asylum of persons removed to these institutions from within the district. This gives a total of 150 deaths of inhabitants, of which 79 were males and 71 females, and a death-rate of 8.9 per 1,000 of the estimated population, as compared with 10.0 during the previous year, and an average of 11.4 during the 10 preceding years. The death-rate in the whole of England and Wales during 1905 was 16.2, and in 142 of the smaller towns 15.6.
- 4. INFANT MORTALITY.—The deaths of 34 children under the age of one year were registered, and the infant mortality as measured by the proportion of deaths under 12 months old to the number of births registered during the year was 8.6 per cent. as compared with an average of 10.7 during the 10 previous years. The infant mortality in England and Wales during 1905 was 14.6, and in 142 smaller towns 15.4.

The general death-rate in this country having become reduced to the extent of about 25 per cent. since the introduction of our present sanitary laws, and the failure of the infantile mortality to respond in anything like equal degree has been a cause of anxiety and enquiry by those interested in public health matters. A new table, No. V. in the appendix, has been added to this report, showing the deaths from stated causes in weeks and months under the age of 1 year. From this it will be seen that of the 34 deaths registered under that age, 11 occurred within the first 4 weeks of life, 4 due to premature births and the others probably mainly influenced by deficient vitality at the time of their entry into the world, 13 deaths occurred during the 2nd, 3rd, and 4th months, so that 24 out of the 34 failed to survive beyond the 4th month of their existence.

It is generally recognized that infants are very amenable to the influences of sanitary surroundings and the pure air, general absence of slums and of extreme poverty are undoubtedly to a great extent responsible for the more favourable rate of mortality in this district than in most parts of the country. There can be no doubt, however, that more young lives might be saved by an increased knowledge on the part of many mothers as to the proper care of their young, both during health and when afflicted with disease. The undue exposure by some mothers of their delicate young offspring in all weathers, and their incapacity and ignorance of proper nursing when requisite, is familiar to all medical practitioners.

In regard to better nursing, much good is done by the parish nurses during the exercise of their daily vocation by the object lessons given when attending and assisting mothers in the care of their sick children, and I can thus confidently, from a public health point of view, recommend their support to the inhabitants.

I think much benefit may be expected in the future by the increased facilities given for the education of children, especially when combined with the teaching of the rudiments of hygiene as contemplated by the authorities, giving the prospective mothers an insight into some of the evils likely to be caused by neglect of proper hygienic precautions in the care of infants.

- 5. Seventeen deaths were attributed to Phthisis or Pulmonary Consumption, being at the rate of 1.0 per 1,000 as compared with .6 during the previous year, and 10 deaths were due to other lung diseases (Bronchitis, Pneumonia, etc.), or .6 per 1,000 as compared with 1.4 during the previous year.
- 6. Epidemic Influenza was prevalent in the early months of the year, and 2 deaths were attributed thereto.
- 7. Cancer (Malignant Disease).—Thirteen deaths were due to cancerous diseases, the same as in the previous year, the rate per 1,000 of the population being '7.
- III.—Summary of Sickness and Mortality from the Seven Principal Zymotic Diseases, and from certain other Diseases which have to be notified under the Infectious Diseases (Notification) Act, 1899, and of the action taken for preventing their spread.

SMALLPOX. - No deaths or reported cases.

Scarlet Fever.—Thirty-seven cases of Scarlet Fever were reported, as compared with 31, 21, 36, 27, and 127 in the five preceding years respectively, but no deaths were attributed to this disease. Thirty-five of these were removed to the Joint Isolation Hospital at Cuddington for treatment. Fifteen of the cases were notified during the month of February, eight of which occurred in one house, and were due to infection from a mild case which had been previously overlooked by the parents.

DIPHTHERIA.—Fifteen cases were notified during the year, of which 12 were removed to the Isolation Hospital. No deaths.

Enteric or Typhoid Fever.—Two cases were notified, no deaths. One of these was a visitor who had evidently contracted the disease in Paris, in the other case serious sanitary defects were found to exist in the house where it occurred.

Whooping Cough.—This disease was slightly prevalent in the months of May and June, and one death occurred.

Measles.—Four deaths were attributed to Measles. This disease was very prevalent in the spring, and it was found necessary to close the Benhilton, Crown Road, New Town, and West Street Board Schools for one month from May 9th. There was also another slight outbreak in November, chiefly in the south portion of the town.

Diarrhæa.—Three deaths were attributed to Diarrhæa as compared with nine during the previous year. Handbills were distributed as in previous years, calling attention to the causes of this disease which is at times so disastrous to child life during the hot summer months.

ZYMOTIC DEATH RATE.—The total number of deaths from the seven principal epidemic diseases was nine, viz.: three from Diarrhœa, four from Measles, one from Whooping Cough, and one from Membranous Croup, giving a Zymotic Death-rate of 5 per thousand, as compared with 1 1, the average for the preceding 10 years. The rate for the whole of England and Wales during the year was 1.9, and for 142 smaller towns 2.02.

As to the other Diseases which require Notification under the above Act.

Membranous Croup.—One notified case, in which death occurred.

PUERPERAL FEVER .- One fatal case of this disease was notified.

ERYSIPELAS.—Three cases of Erysipelas was notified during the year. No deaths.

CONTINUED FEVER .- No cases were notified.

Summary of further proceedings which were taken to prevent the spread of some of these diseases.

Each house, on receipt of notification of infectious disease existing therein, is immediately visited, and isolation or removal to Isolation Hospital insisted on as may be requisite; the premises are examined, and notice given to remedy any defects that may be found; information as regards the milk supply, laundry, schools, attended by children, etc., is obtained, and necessary steps taken to prevent the disease spreading by these means; disinfectants for use during illness are supplied where necessary; after the recovery or removal of a patient the disinfection of the rooms and contents is required, according to the nature of the case, bedding, clothing, etc., being taken to the Isolation Hospital for disinfection in the Washington Lyon Steam Disinfector.

In all cases where infection seems to point to schools, they are visited and the children inspected, which has been necessary on 16 occasions during the year.

Bacteriological Diagnosis.—For the purpose of assisting in the diagnosis of doubtful cases of Enteric Fever and Diphtheria, the necessary materials for taking specimens are supplied to the medical practitioners by the Sanitary Authority, and may be obtained at the Municipal Offices; the cost of examination of the specimens by the Lister Institute being defrayed by the Council.

Pulmonary Consumption and other Tubercular Diseases.—The disinfection of 12 houses after cases of consumption has been undertaken during the year, as compared with seven during the previous year.

That these diseases are of an infectious nature, communicable from man to man being almost entirely transmitted by the inhalation of particles of the expectoration of consumptive persons, either in its fresh condition or as dust after becoming dried, is not yet thoroughly realized by a large section of the public. The importance of disinfection both of expectoration during the course of the disease, and of the rooms that have been inhabited by consumptives cannot be too strongly impressed on all having control of these patients. Consumption demands a greater toll in this country than all other infectious diseases, and although the natural conditions in this district are so favourable, 27 out of 150 total deaths were attributed to the different varieties of this disease.

The cure of consumption is always difficult, and often comparatively hopeless, but much more might be done in the way of prevention, if, as previously expressed, it were generally understood by the people that it was an absolutely infectious disease, and that its influence on certain families did not imply that the disease itself was inherited, but a constitution more liable to admit the infection.

The disinfection of rooms vacated by consumptive persons is undertaken by the Council on application at the Public Offices, and disinfectants for use during the progress of the case may also be gratuitously obtained.

Mr. Vincent, M.R.C.V.S., veterinary surgeon, is appointed by the Council to make periodical inspections of the cows kept by the registered cowkeepers, so as to prevent, if possible, any milk likely to infect the consumers thereof with tubercular disease, from being used, and in each report made quarterly during the year, the cows, averaging in number about 125, have been certified by him to be in a healthy condition.

IV.—Summary of other Sanitary Proceedings, &c., which were taken during the year.

Housing of the Working Classes.—I have found it necessary during the year to certify two houses as unfit for habitation under the Housing of the Working Classes Act, both of which were caused to be so improved by structural alterations as to be able to comply with the requirements of the law.

The usual systematic house inspection has been regularly maintained during the year, and insanitary conditions where found caused to be remedied.

Two cases of overcrowding were found to exist and the nuisance abated.

Although overcrowding in houses to such an extent as to render the occupants liable to the action of the sanitary laws has not been frequent, there are many dwellings where the number of persons residing therein is more than advisable for the perfect well-being of their inhabitants. This is mainly caused by the inability of many of the labouring class population to find, out of their scanty earnings, the necessary rental to secure a cottage, and who are thus obliged, from financial reasons, to share a dwelling with one or more families.

The question of providing homes for the labouring class population, whereby this tendency may be obviated, is to my mind the greatest social problem to be considered by the community, having regard to its probable influence on the public health of the future. I have referred to this subject in previous reports, and in 1903 observed that "Should private enterprise fail to come to the rescue by providing suitable dwellings, it becomes a matter for the sanitary authority to seriously consider the necessity and desirability of erecting such property, and I am of the opinion that this could be well and profitably done under the favourable terms of repayment of money borrowed for such purposes allowed by the Housing of the Working Classes Act, 1903. By the terms of this Act, money borrowed by a local authority for the erection of workmen's dwellings, as regards the amount payable for the necessary freehold land, 80 years is allowed for re-payment, and for that required for building purposes 60 years." Private enterprise has not availed much up to the present, for although a considerable number of houses have been erected, they are mostly of a class demanding a rental of 10s, per week and upwards, an unreasonable amount for families whose income may be under 30s. per week,

Removal of House Refuse.—This is undertaken by the Council, and is conveyed either to land adjoining the Sewage Farm, or to a shoot off Balaam Lane. I am informed by the Sanitary Inspector that 5,930 loads of the refuse were thus removed during the year, as compared with 5,942 during the previous year.

As to the "supervision which was exercised over places and houses that the Sanitary Authority has power to regulate."

SLAUGHTERHOUSES.—These were frequently visited during the year, and found in a satisfactory condition as regards cleanliness. There were no offences against the bye-laws discovered.

Dairies, Cowsheds, and Milkshops.—A special report on the Milk Supply was presented to the Council in June, showing the importance of this matter to a community, pointing out some defects and suggesting remedies for the same. The dairies and milkshops are generally found to be kept in good condition, and much improvement has been manifested at the premises of the cowkeepers at which, in a few instances, the animals were found to be overcrowded in the cowsheds beyond the limit allowed by the bye-laws. In one instance a new shed has been erected on request.

The necessity of extreme cleanliness at all stages of the milk supply is evidenced by a recent report of the Medical Officer of Health for the City of London, in which he says: "Of 22 samples of milk, covering supplies drawn from most of the southern counties, and submitted by him to Dr. Klein for bacteriological

examination in the month of August, one-third proved to be unclean and unfit for human food, while nine per cent. were found infected with tubercle bacilli."

The Inspector of Dairies, Cowsheds, & Milkshops makes the following return for the year 1905:—

Number of registered cowkeepers, dairymen, and purveyors of milk	
carrying on business at the commencement of the year	18
`umber since registered	1
Number who gave up or transferred their business during the year	1
Number of registered premises inspected during the year	19
Total number of visits paid during the year	85
Number of cowsheds and dairies at which improvements in the	
lighting, ventilation, paving, drainage, means of cleansing, or	
water supply, were made during the year	2
Number of cowsheds or dairies which were found in a dirty state	0
Number of premises at which the milk vessels were found in an	
unclean state	0
Number of new cowsheds erected	1

FACTORY AND WORKSHOPS ACT.

During the year 117 workshops, &c., have been inspected by the Medical Officer of Health and the Sanitary Inspector. The following list shows the various industries as carried on in the workshops:—

Dressmakers and Milliners		****				***	28
Bakers and Confectioners		****					14
Laundries							13
Plumbers, &c							8
Builders, Carpenters, &c.		****		****			10
Bootmakers and Repairers		****			****		6
Cabinet Makers and Upholster	rers	****	****	****		****	5.
Cycle Makers and Repairers	****	****	****	****	****		7
Farriers							4
Tailors and Outfitters							5
Saddler and Harness Makers	****	****	****				3
Coach Builders			****			****	2
Cricket Bat Manufacturer		****	****	****			1
Stone and Monumental Mason	ns	****		****	****	****	3
Printers, &c							3
Shampoo Powder Maker				****	****		1
Watchmakers and Jewellers			****				3
Dyer and Cleaner				****	****		1

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The inspections as a rule showed the various premises to be in a satisfactory sanitary condition; four notices to cleanse under Section 2 were served, and four under the Public Health Acts; in no case were legal proceedings necessary.

Water Supply.—The district is supplied with water by the Sutton District Water Company from wells in the chalk. The supply has generally been of an abundant nature, and has not failed even in the driest seasons, but the rapid increase of the population in the district supplied by the Company caused them to seek for other sources. The site chosen was the Chipstead Valley, and operations have I hear been very successful, ensuring a good addition to the available supply in the future.

Although excellent in other respects, the hardness of the water is somewhat excessive, being over 20 degrees, and has necessitated frequent cleansing of boilers owing to rapid incrustation of deposit thereon, and requiring a large amount of soap

when used for washing purposes, but under the Sutton District Waterworks Act, 1904, this is to be reduced

Section 7 of this Act says:—" From and after the first day of August, 1906, all water delivered by the Company from their works to their consumers within the limits of supply as existing at the date of the passing of this Act, shall be softened to a degree of hardness not exceeding nine degrees, and according to the process known as Clark's process, or such other process as shall be at least as applicable and efficacious, and the Company may enter into such arrangements and generally do all such things as may be expedient for such purpose."

This will undoubtedly be a great boon to consumers, and render the water supply equal to any in the country, both for dietetic and other household purposes.

Sewage Disposal.—The sewage of the district is conveyed by a system of sewers to a farm situated in the north-west portion of the district, and there treated by double contact bacteria beds or filters. The results of this treatment still give great satisfaction, and no complaints have been received of any nuisance arising therefrom.

Bye-Laws Relating to New Streets and Buildings.—The following table shows the work done under these Bye-Laws in 1905, and the ten preceding years:—

1000	In 1896	In 1897	In 1898	In 1899			In 1902	In 1903	1n 1904	In 1905
The number of new buildings, and of additions to buildings, of which plans were submitted for approval under the Bye-Laws, was	132	227	263	257	153	201	174	192	171	855
streets and buildings was	1	none	none	1	none	none	none	none	none	none

No private streets were metalled, channelled, paved, &c, under the Private Streets Works Act, 1892, during 1905.

As To House Drainage, &c.—I am informed by the Surveyor that the drains of 238 premises were connected with the sewers of the district during the year, viz.: 218 house drains, nine stables, and 11 shops.

The Sanitary Inspector reports that the house drains were disconnected from nine cesspools in the chalk, and that these were afterwards emptied and filled up. The attempt to get the cesspools removed on account of a possible danger to the water supply, should they leak to any extent into the chalk formation, has been continued with vigour throughout the year. There are now to the best of my knowledge only 12 houses in this portion of the town still draining into cesspools, four of these are under promise to be disconnected therefrom, whilst two have satisfied the local authority as to the construction of the cesspools being of such a nature as to render leakage improbable. Several have been unable to connect the premises to the sewerage system on account of difficulties in their situation. Of these, the only two now remaining within a quarter of a mile of the waterworks, and situated in Carshalton Road, await the lowering of the sewer in this road by the Council, as promised to be done.

The completion of the new storm-water sewer has been the most important public work executed during the year, and should prevent the flooding which has at

times occurred in the lower part of the district, and been the cause of many complaints. By means of this sewer the surface drainage from the Langley Park district, which had previously been conveyed on to land near the chalk pit, has been disconnected therefrom, thus removing a source of possible pollution of our water supply, which has been the cause of considerable concern in the past.

Having regard to the possible influence on the working of the bacteria beds by the admission into the sewers of the effluent from the new plant installed by the Sutton Gas Company for the manufacture of Sulphate of Ammonia, various analyset have been made by me during the year of the effluent from the lower level beds as the Sewage Farm, at which this portion of the flow from the town sewers is treated. Bacteriological investigations were also made in October to determine the probable influence of the admixture of the effluent from the Sulphate of Ammonia process with sewage, and a report presented thereon. Special reports were also made on the milk supply of the district, which has been previously referred to, and on the drainage of certain premises in the Cheam Road.

Appended are the Sanitary Inspector's report of nuisances abated, etc., various tables of statistics, and meteorological notes compiled from records taken by F. Campbell-Bayard, Esq., of Wallington, and the Surveyor at the Sutton Sewage Farm, to whom I tender my thanks for the particulars supplied.

I am, gentlemen, yours faithfully,

GEO. BOWER, D.P.H.,

MUNICIPAL OFFICES, SUTTON, SURREY.

February 12th, 1905.

Medical Officer of Health.

APPENDIX.

THE SANITARY INSPECTOR'S REPORT

For the Year ending December 31st, 1905.

Number of complaints received in writing	116 460 348 43 305 299
nuisances	158 55
Particulars of Work done by owners or occupiers, for the abatement of nuisances, in compliance with notices:	
Number of privies, cesspools, ditches, pools, water courses, urinals, ashpits, and drains, cleansed, and number of deposits removed Number of new privies or water-closets provided	144
Number of premises at which the drains were re-constructed, ventilated, trapped, or disconnected from the house pipes Number of houses at which the water-closets were provided with water	78
under Sec. 36 of the Public Health Act, 1875 Number of premises from which animals, improperly kept, were removed Number of houses which were provided with efficient ventilation Number of houses at which injurious overcrowding was abated	5 24 2
Legal proceedings taken under Sec 96, for abatement of nuisances (number of times)	
Number of houses at which disinfection was carried out. after notice under Sec. 5 of the Infectious Diseases (Prevention) Act, 1890	47
Number of foul houses cleansed and whitewashed, after notice under Sec. 46 of the Public Health Act, 1875	38 22
Seizure of unwholesome meat, poultry, fish, fruit, vegetables, corn, bread, flour or milk, under Sec. 116 of the Public Health Act, 1875	7
Legal proceedings and convictions, under Sec. 117	-
Water Supply— Number of samples of water sent to the Medical Officer of Health for analysis	-
Number of wells permanently or temporarily closed, after notice under Sec. 70 of the Public Health Act, as unfit for drinking purposes Number of water supply provided by owners of property, after notice under Sec. 62 (number houses)	_

TABLE I.

Vital Statistics of Whole District during 1905 and Previous Years.

		Bra	THS.	Тота	L DEATHS R		KED IN	TOTAL DEATHS	Deaths of Non-	Residents		ALL
	Population estimated to			Unde	or 1 Year of Age.	At all	Ages.	IN PUBLIC INSTITU-	residents registered in Public	in Public Institu-		O THE
YEAR.	Middle of each Year.	Number.	Eate.*	Number.	Rate per 1,000 Births registered	Number.	Rate.*	TIONS IN THE DISTRICT	Institu- tions in the District.	beyond the District.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1895	15,400	319	23-8	22	69	128	9-5	2	2	14	140	10-4
1896	15,800	324	23.4	35	108	133 172	9-6	2 4	4	15 16	146	10-6
1897 1898	16,000 16,400	317	22.5	44	139	160	11.2	5	5	20	175	12-3
1899	16,700	366	24.8	51	139	160	10-9	2	2	19	177	12-0
1900	17,000	380	25.0	31	81	177	11.6	4	4	17	190	12-6
1901	17,310	367	23.5	43	117	175	11.2	8	4	20	191	12-9
1902	17,638	364	22-9	40	109	171	10-7	14	5	29	195	12-2
1903	17,168	388	23-9	32	82	131	8-0	10	3	22	150	9-2
1904	16,997	377	22.8	57	98	154	9-3	11	6	18	166	10-0
Averages for years 1895-1904.	16,641	352	23.5	37	107	156	10-4	6	4	19	171	11-4
1905	17,512	395	23.5	34	86	138	8-2	10	6	18	150	8-9

Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population, excluding residents at

Belmont Asylum and Metropolitan Asylum Board School, Banstead Road,
Note.—The deaths included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums.

Institutions within the District receiving sick and infirm persons from outside the District-Sutton Hospital, Metropolitan Asylum Board's Ringworm School, and Belmont Asylum. Institutions outside the District receiving sick and infirm persons from the District-

Epsom Workhouse, Brookwood Asylum, and Cuddington Isolation Hospital.

Area of District in acres (exclusive of area 1836 covered by water).)

... 17,224 At ... 2,976 Census Total population at all ages . Number of inhabited houses... Average number of persons per house 5.7 of 1901.

Table II.—Showing the Sickness recorded in the district from the undermentioned Zymotic Diseases in each month of the year 1905, and in the ten preceding years.

	Small	Pox.	Scarle	t Fever.	Diph	theria.	Enteri	e Fever.		ranous		peral ver.	Erysi	pelas.
1905.	Cases.	House- in- vaded.	Cares.	House- in- vaded.	Cases.	Houses in- vaded.	Cures.	Houses in- vad-d.	Cases.	in- vaded,	Cares.	in-	Cases.	Houses in- vaded.
January			5	4	2	2	1	1					1	1
February			15	- 6										
March			3	2	1	1					-			
April			2	2	3	2				_	1	1	1	1
May			1	1	2	2					_			
June			1	1	-1	1		-			_		1	1
July			1	1	1	1	-	_	_			-		
August			3	3	2	2		_	_	-		-	_	
September		_	3	1	- 2	- 2		_	_	_	_	_		_
November		-	1	1	3	3	1	1		-	-		-	-
December		-	1	1	-	-0		-	1	1		-		
Total in 1905			37	25	15	14	2	2	F1	1	1	1	3	3
TOTAL IN 1904			31	27	17	17	2	2					1	1
TOTAL IN 1903			21	18	17	17	5	5					5	5
TOTAL IN 1902	2	2	36	31	5	5	7	7					6	6
TOTAL IN 1901	1	1	27	20	11	8	6	6					13	12
Total in 1900			127	78	7	7	2	1			3	3	10	10
TOTAL IN 1899			129	84	38	32	2	2	1	1	2	2	5	5
Total in 1898			59	44	60	46	4	4			1	1	4	4
TOTAL IN 1897			28	18	9	7	11	11					3	3
TOTAL IN 1896	- 195		42	33	7	5	5	5	1	1			4	4
TOTAL IN 1895			20	15	8	3	10	8					8	8

Table III.—Cases of Infectious Disease notified during the year 1905.

		Cases N	OTIFIEI	IN W	nole D	ISTRICI		No. of Case		
Notifiable Disease.	ges.	At Ages—Years.								
	At all Ag	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	TO Hospital. *		
Small pox										
Cholera	0.00		4	6	2	3		12		
Diphtheria Membranous Croup		- 11		1	100	9				
¥3	- 0	- 19	**		i	i	1			
Scarlet Fever	37	i	5	24	7		00000	35		
Typhus Fever				7.00	190	**		77.0		
Enteric Fever	2			i	ï	**				
Relapsing Fever		100						11		
Continued Fever		100								
Puerperal Fever	1	1			10	1				
Plague	1.									
						200				
Totals	59	1	9	32	11	5	1	47		

Isolation Hospital, Sutton, Carshalton, and Leatherhead (Urban) and Epsom (Rural) Joint Hospital at Cuddington.

TABLE IV.
Causes of, and Ages at, Death during year 1905.

		DEATHS	IN OR BEL	ONGING TO	WHOLE I	ISTRICT A	r subjoini	ED AGES.	TOTAL DEATHS IN PUBLIC
CAUSES OF DEATH.		All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	INSTITUTIONS IN THE DISTRICT.
1		2	3	4	5	6	7	8	9
and the second s		**		**	**	**		**	**
		4	1	3	**	**	**	**	**
				**	**	**		**	**
		1	1		*:				**
Diphtheria and Membranous C	roup	1			1	**	**		
		**		**	**	**	2.2		**
			**		**				
							**	**	5.5
		**					5.5	**	**
		2		**		4.0	**	2	**
		**			3.5			**	**
		**		**	**	2.5	**	1.5	
APPROXIMATE CONTRACTOR		3	3	**	**	**	1.5	**	**
		4	4	**		7.7	*:	**	**
a more production of the contract of the contr		1				**	1		1.0
		**	**	**	**	**	**	**	**
Camer column		3	1	**	**	**	2	- 1	1
		17	**	1	**	6	9	1	1
		10	6	3	1	**	15	**	1
Control of the Control		13		**	**	**	5	8	3
APPENDICULATION CO.		7	4	**	**	**	1	2	17
		3	**	**	4.9	**	1	3	1
		**		**	**	**	4.4	**	**
Other diseases of Respiratory	Organs	- 11		**	4.0	1.1	**		**
Aleoholism		3			440		3		**
Cirrhosis of Liver				-		3.5			**
F GARGE SINE SELECTION CO.		17	11	++	1.44	**	1.0	**	
		6	6	**	**	**	.,	**	**
Diseases and Accidents of Par	rturition	1	1		**	12	10	**	
11 COLUMN ACTIONNOS CO.		21	3	**	**	1	10	7	
and the second s		1		**	**		1	11	7.5
		3		12	**	**	2	1	**
All other Causes		46	4	1	1	12	10	30	3
All Causes		150	34	8	3	7	45	53	10

TABLE V.

INFANTILE MORTALITY DURING THE YEAR 1905.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUS	SE OF	DEATH	I.			Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
ALL CAUSES — Certified						7	1	2	1	11	6	2	5.		1 1	2	1	1	1	2	33
Uncertified		**												-	1						1
0 100 0											П			Т	П	П					
Common Infectious Dise Small-pox									- 1					Ш							
493.3.3.		**	**	**					-	**		200	1	910	155						**
Measles		**	**	**			:			**	-									1	1
FT 1 4 TT		**	**	**	**				-	**	* *									1	
Diphtheria: Croup	**	4.6	**	**	**				-	**	**				-					**	
222		**	**	**			**		-	**											i
Whooping Cough	**		**	**				-		**		**	1	1				**	**		
Diarrhoal Diseases—									- 1					1							
Diarrhea, all forms	0000		4.0	- 23	-	l				1100	7.5	1	1.		1 1						4
Enteritis (not Tuber									-				1.								2
Gastritis, Gastro-int											1					100	100				1
Congenital Defects	k	 	::	::		2	1	1		4 3 2			1								5 3 5
Tuberculous Diseases-						П			-1						Н						
Tuberculous Mening										100							1	1			2
Tuberculous Peritor			enterica	++																	
Other Tuberculous	Diseases		**																		
									-1						Н						
Erysipelas		4.4.	1.1	4.5					-		_		51 5	-	-					_	**
Syphilis	++						-		-		-			-							**
Rickets		**	**	**					_		-									**	**
Meningitis (not Tubercu Convulsions		**	* *	**																	4
The state of the s		**	**							1			2								2
		1.0		**				_	_	4.4											
The state of the s		**	**	**			••		-	**				-						_	2
C. St time	**	**	**	**					_	1										_	
Other Causes	**	**	**	**	**				_	**											2
Other Causes		1.1		**						**				71.		1					-
						-			_			-	-		-	-	-	-	-	-	

Births in the year-395.

Deaths from all Causes at all Ages 150.

Population-Estimated to middle of 1905, 16,800.

TABLE VI.

Shewing the Number of Deaths in the District (exclusive of those in the South Metropolitan District Schools), from each of the seven principal Zymotic Diseases, during the twenty years, 1885—1905, and the Zymotic Death-rate for each of those years.

						Cont	TNUED F	SVER-		TO	TAL.
Year.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhs.	Enteric or Typhoid	Other	D'rrhosa.	Number	Rate per 1000 of the population
1885 1886 1887 1888 1889 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904		20 4 4 3 11 5 1 4 6 3 4	1	1 2 2 2 1 1	16 14 4 3 3 9 1 1 2 6 5 5 13 5 2		2 1 1 3 1 1 	1	4 7 4 3 3 3 2 2 8 10 1 6 23 11 9 5 6 6 9 3	7 44 6 3 25 9 4 13 20 19 4 20 35 28 14 11 25 18 10 12	0·7 4·2 0·5 0·3 2·2 0·7 0·33 1·0 1·6 1·5 0·3 1·5 2.5 1·9 0·9 0·7 1·5 1·1 0·6 0·7

METEOROLOGICAL NOTES, 1905.

	January.	February.	March.	April.	May.	June.	July.	August.	Septemb'r.	October.	November.	December.	Total for year 1905	Total for year 1904.	Total for year 1903.
Rainfall as recorded at— Sutton Sewage Works	inch 1-15	inch ·87	inch 3-59	inch 1.68	inch	inch 5.21	inch -81	inch 2·72	inch 1-62	inch 1.07	inch 3-60	inch -61	inch 23-61	inch 22.88	inch 39-40
Hours of sunlight (recorded at Wallington)	87.8	85.1	141-4	114-7	257-9	165-9	245-2	190-1	114-2	90-5	54-4	35-3	1582-5	1651-8	1575-6
Mean temperature (recorded at Wallington)	38:3	42.8	45.5	47-2	54:1	59-5	65.8	60-3	55-6	44-9	41.6	40:5	Aver. 49.8	Aver. 49.5	Aver. 49-9

RAINFALL FOR 1905

AT

SUTTON SEWAGE FARM,
As compared with that of previous years.

Year.	Total Depth.	Greatest Fal	Greatest Fall in 24 Hours						
		Depth.	Date.	which '01 or more fell.					
1897	24-11 Inches.	1.48 Inches.	Sept. 30th.	142					
1898	19:31 do.	1:11 do.	Dec 6th.	136					
1899	22:76 do.	1:50 do.	Nov. 5th.	140					
1900 1901	24·21 do. 21·27 do.	-90 do. 1-12 do.	Feb 15th.	165					
1902	21·27 do. 21·03 do.	1·12 do. ·97 do.	Dec. 12th. Sept. 10th.	144 183					
1903	37:64 do.	1.78 do.	June 10th.	190					
1904	22·89 do.	·82 do.	Dec. 6th.	184					
1905	23.61 do.	1 12 do	June 6th.	177					

January.—The month has been fairly warm, that is, with warm sunny days and rather cold nights, very sunny, and very dry. It has also been an unhealthy one, catarrh and influenza being extremely prevalent. The rainfall is about three-quarters of an inch below the average. The mean temperature of the month is about half a degree above the average, and was at Wallington 38·3 degrees. There were recorded 87·8 hours of sunlight, which is the highest value in the record, and is 45·6 hours, or 18 per cent. above the January average of the 15 years 1886-1900; and the 7·7 hours on the 29th is the greatest daily value in January.

February.—The first half of the month was fine and dry, whilst the latter half was cold and stormy. There were N.E. winds from the 20th to 23rd. The month has been a very dry one, the rainfall in many places being only one half of the average. It is the driest February since 1896. Slight snow fell on many days, but more particularly between the 19th and the 23rd. The mean temperature of the month is about three degrees above the average, and was at Wallington 42·3 degrees. There were recorded 85·1 hours of sunlight, which is 23 hours, or nine per cent. above the February average of the 15 years 1886-1900.

March.—The month has been an extremely wet one for March, more especially the first 17 days. In the long record of Greenwich it is the wettest March since 1851, and in other places since 1897. The month has been a warm one, also fairly sunny. Thunderstorms occurred generally throughout the district on the 12th and 15th, and snow showers in many places on the 1st and 2nd. The rainfall is greatly above the average, and the percentage varies from 234 at Greenwich to about 175 at Croydon. The mean temperature of the month is between 3.5 degrees and 4.0 degrees above the average, and was at Wallington 45.5 degrees. There were recorded 141.4 hours of sunlight, which is 26.4 hours, or seven per cent. above the March average of the 15 years 1886-1900.

APRIL.—The month has been of about the average temperature and rainfall, but subject to great variations. Snow fell generally on the 7th, 8th, and 18th, and hail fell on the 18th and 19th throughout the district, and there was a somewhat severe thunderstorm on the 16th, the centre of which seemed to be over Wallington, for a house was struck about 2.45 p.m., and two men were also injured about the same time. There were recorded 114.7 hours of sunlight, the smallest April value in the record, which is 45.2 hours, or 10 per cent. below the April average of the 15 years 1886-1900.

Max.—The month has been a very dry one, the rainfall being about three-quarters of an inch below the average. The wind was, with the exception of the last week, from a northerly quarter. There were three very hot days during the month, viz.: the 17th, 18th, and 29th, and maximum temperature of the month then occurred. The warmth of the last week brought up the mean temperature to about six-tenths above the average. It was very cold between the 20th and 23rd, and

the ground frosts did great damage in some parts to vegetation. A thunderstorm occurred throughout the district on the 30th. The mean temperature of the month was 54·1 degrees. There were recorded 257·9 hours of sunlight, the largest amount for May in my record, which is 57·9 hours, or twelve per cent. above the May average of the 15 years 1886-1900.

JUNE.—The month has been exceedingly wet in fact, the wettest June except 1903 for many years, with a temperature slightly above the average, and somewhat deficient in sunshine. From the 4th to the I2th inclusive was an exceedingly wet period, and in it were two days, viz.: the 5th and the 10th, with a rainfall in many places over an inch. Thunderstorms occurred on the 10th and 15th generally throughout the district. The mean temperature of the month is slightly above the average, and was at Wallington 59.5 degrees. There were recorded 165.9 hours of sunlight, a very low value, which is 40.1 hours, or eight per cent. below the average of the 15 years 1886-1900. The sunless days were six in number, the greatest number in June in the Wallington record.

JULY.—The month has been extremely dry, in fact, the driest July since 1899, and the rainfall is only about one-third of the average. The temperature has been very high, owing to the very high night temperatures, the day temperatures have been somewhat low. Thunderstorms occurred on the 5th, 9th, and 27th, in several parts of the district. The mean temperature of the month is between three degrees and five degrees above the average, and was at Wallington 65.8 degrees, it has for many years only been exceeded in July, 1899 and 1900. There were recorded 245.2 hours of sunlight, which is 35.1 hours, or seven per cent. above the July average of the 15 years 1886-1900.

August.—The month has been cool, wet, and somewhat sunless. The mean temperature is about one degree below the average, whilst the rainfall is about half an inch above. Thunderstorms occurred on several days, those on the 22nd, 27th, 28th, and 29th being rather severe. The mean temperature of the month was at Wallington 60·3 degrees. There were recorded 190·1 hours of sunlight, which is 8·2 hours, or two per cent. below the August average of the 15 years 1886-1900.

September.—The month has been cloudy and cool, with very low day temperatures, the lowest in September during the past 20 years, with the exception of the years 1887 and 1894. The night temperatures, though showing large fluctuations, are about the average. The rainfall is slightly above the average. The mean temperature of the month is between 1.5 degrees and 2.0 degrees below the average, and was at Wallington 55.6 degrees. There were recorded 114.2 hours of sunlight, which is 46.0 hours, or 13 per cent. below the September average of the 15 years 1886-1900.

OCTOBER.—The month has been exceedingly dry and cold. It is the driest October since 1897, and the coldest for over 20 years. The greater part of the rain fell in the last four days, and the month is remarkable for having five consecutive days in which the shade minimum was below freezing, viz.: 17th to the 23rd. The rainfall is about 1.75 inches below the average. The mean temperature of the month is about 4.5 degrees below the average, and was at Wallington 44.9 degrees. There were recorded 90.5 hours of sunlight, which is 9.9 hours, or two per cent. below the October average of the 15 years 1886 1900.

November.—The month has been very wet and cold. It is the wettest November since 1899, and the coldest since 1901. The rainfall is nearly one inch and a quarter above the average. The mean temperature of the month is very low, being deficient by nearly two degrees, and was at Wallington 41.6 degrees. There were recorded 54.4 hours of sunlight, which is 3.1 hours, or one per cent. above the November average of the 15 years 1886-1900.

DECEMBER.—The month is very remarkable for its very high mean barometer, and its very small rainfall. The barometer is the highest mean value for December for certainly over 20 years. The rainfall is the smallest December value since 1873. The month has been a warm one, and the mean temperature is about a degree and a half above the December average. The temperature at Wallington was 40.5 degrees. There were recorded 35.3 hours of sunlight, which is 3.6 hours, or two per cent. below the December average of the 15 years 1886-1900.

