### [Report of the Medical Officer of Health for Hackney].

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# REPORT

OF THE

# SANITARY STATE

OF THE

## HACKNEY DISTRICT,

FOR THE YEAR 1875,

AND FOR THE TWENTY YEARS 1856-1875,

BY

### JOHN W. TRIPE, M.D., L.R.C.P.E., ETC.

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Author of numerous Essays on Sanitary Statistics.

MEDICAL OFFICER OF HEALTH FOR THE DISTRICT.

Printed by Order of the Board,

BY

ANDREW T. ROBERTS, STEAM WORKS, 5, HACKNEY ROAD, LONDON.

# REPORT

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## SANITARY STATE

SHEET TO

## HACKINEY DISTRICT,

FOR THE YEAR 1875,

AND FOR THE TWENTY YEARS 1856-1875.

## JOHN W. TRIPE, M.D., L.R.C.P.E. ETC

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### SANITARY OFFICES,

Town Hall, Hackney, May, 1876.

To the Board of Works for the Hackney District.

GENTLEMEN,

Having now acted as Medical Officer of Health for this District for a period of twenty years, I propose not only laying before you the usual sanitary statistics for the year just passed, but also a summary of the work which has been performed in my department since I held office, and, as far as possible, the vital statistics of the District since the year 1840, as a standard for future reference.

When I first took office the sanitary staff was small, and had to administer two Acts of Parliament only; but since then many other Acts have been passed, which have created new duties and consequently very much additional work, so that it was necessary for several new officers to be appointed. The Act of 1866 introduced an additional element in sanitation, which accounts for the very great increase in the number of nuisances abated in that year, and for every subsequent year up to the present time; but as these and many other matters in connection with the past will be more fully mentioned in a subsequent part of this report, I merely refer to them now, and shall pass them by to discuss the usual statistics and sanitary events of the past year.

Although the mortality for the whole of London exceeded that of 1874 by 1·1 per 1000 population, yet in Hackney this increase was only about one half of that number, viz., 0·6 per 1000. This is decidedly satisfactory, as the density of population in this District is rapidly increasing. Thus, Table 1 shows that in 1866 there were only 25 persons to an acre, but that last year there were as many as 36, and, as I shall point out, when considering the causes affecting the death rate of a district, that this increase in the number of the population must exert, certainly, in many parts of the Parish, a prejudicial effect on the public health.

TABLE I.—Hackney District.

	d Population July 1st,	Density of Population per acre.	Births.	* Deaths corrected.	Marriages.	No. of Births to 1000 Population
1866	103,034	26·2	3508	2282	1149	34.0
1867	107,300	27·3	3858	2135	1021	35.9
1868	111,643	28·4	3976	2129	1123	35.6
1869	116,269	29·6	3913	2520	1109	33.7
1870	120,986	30.8	4029	2356	1102	33.3
1871	125,886		4184	2820	1181	33.2
1872	129,666		4401	2506	1278	33.3
1873	133,560	33.9	4431	2594	1276	33·2
1874	137,571	34.9	4755	2799	1271	34·7
1875	141,621	36.0	4970	2948	1415	35·1

Population at Census 1871	124,951
No. of Inhabited Houses at Census 1871	19,347
No of Families or separate Occupiers at Census 1871	26,045
No. of Persons on an average in each inhabited house	inuply
at Census 1871	6.46

\* Note.—The Deaths are corrected so as to allow for the Deaths in the Small Pox and Fever Hospitals, in the German Hospital and City of London Workhouse, which are situate in the Hackney District, also for the proportion of Deaths in other Metropolitan Hospitals, and by deducting the population in these Institutions.

This Table shows that the population of the District has probably increased during the ten years by 40,000 persons, and I am informed by Mr. Pursey that the number of assessments have kept pace with this estimated population. The increase of inhabitants of Stoke Newington is probably larger in proportion than that of Hackney, so that I am persuaded that my calculation is not too great,—indeed, it is probably too small. The increase in the number of births also supports the probability that at the middle of the year there were nearly, if not quite,

142,000 persons resident in the District under your sanitary control,—as there were 4970 births in 1875 against 3508 in 1866. The deaths are also more numerous, as in 1866 they were, when corrected for deaths in the City of London Workhouse and in the German Hospital, 2282, and in 1875, after deducting deaths in the City of London Workhouse and in the Small Pox and Fever Hospitals, as many as 2948. In making corrections for deaths of non-residents and of inmates of hospitals, I have, since the establishment of the Small Pox and Fever Hospitals, preferred placing the whole of the deaths in the German Hospital to the District, against the deaths in hospitals in the rest of London, as there is much difficulty in allowing for the population as well as the deaths in the various Metropolitan medical institutions. The number of births to 1000 population has remained pretty constant during the ten years, as the lowest was 32.3 and the highest 35.9; that for last year having been 35.1 per 1000.

TABLE II. 1875.—Births in each Sub-district.

Quarters.	Stoke Newington	Stamford Hill.	West Hackney.	Hackney.	South Hackney.	TOTALS
First	121	62	303 286	474	302	1262
Second	124	61 58	280	452	301	1224
Fourth	134	53	277	444 455	323 318	1237
Totals	519	234	1148	1825	1244	4970
Per cent	10.5	4.7	23.1	36.7	25.0	100

The total number of births registered in the District was 4970; of which 519 took place in Stoke Newington, 234 in Stamford Hill, 1148 in West Hackney, 1825 in Hackney, and 1244 in South Hackney. In 1874 there were 449 births in Stoke Newington sub-district, 218 in Stamford Hill, 1118 in West Hackney, 1804 in Hackney, and 1166 in South Hackney; so that there was a decided increase in Stoke Newington and South Hackney, and a slight increase only in the other sub-districts. The per centage of births to the total number in 1874 and 1875

Newington 9.4 and 10.5; in Stamford Hill 4.6 and 4.7; in West Hackney 23.5 and 23.1; in Hackney 37.9 and 36.7, and in South Hackney 24.5 and 25.0. As compared with 1871, the percentage of births are smaller in all the sub-districts except in Stoke Newington, in which it has increased from 9.7 to 10.5 per cent. of all the births registered in the Hackney District.

TABLE III. 1875.—Deaths in each Sub-District.

Quarters.	Stoke Newington	Stamford Hill.	West Hackney.	Hackney.	South Hackney.	TOTALS.
First	77	29	164	374	161	805
Second	55	38	165	309	153 148	720
Third	77	27	132	260	0.000	644
Fourth	71	21	150	324	213	779
Totals	280	115	611	1267	675	2948

The deaths in 1875, as before stated, were in excess of those in 1874, as 2984 deaths were registered last year against 2799 in 1874. The number of deaths in each of the different sub-districts was as follows: 280 deaths in Stoke Newington against 190 in 1874; 115 in Stamford Hill against 136 in 1874; 611 in West Hackney against 579 last year; 1267 in Hackney and 1275 in 1874; and 675 in South Hackney against 619 last year. The excess of mortality from epidemic diseases in 1875 accounts to a small extent for the much larger number of deaths in Stoke Newington, as there were 36 against 20 last year. The excess of deaths from zymotic diseases was entirely due to deaths from hooping cough and diarrhea, so that there was a large proportion of mortality under 1 year, viz, 76 against 151. larger number of births and deaths registered in Stoke Newing. ton last year, as compared with those registered in 1870, indicates a decidedly greater advance in its population than in any other of the sub-districts. The number of births and deaths in South Hackney also point to a rather large addition to the inhabitants, which is also supported by the diminished number of houses returned as "empty" by the collectors. The population of West Hackney, when judged by this test, has also increased, but probably not to so large an extent as South Hackney; although there have been a considerable number of houses erected in the first-named sub-district.

### TABLE IV.

DEATHS REGISTERED FROM ALL CAUSES DURING THE YEAR 1875,
THE DEATHS OF NON-RESIDENTS IN THE FEVER AND SMALL
POX HOSPITALS BEING EXCLUDED.

Cause of Death.	-					AGE	AT I	DEAT	H.	1280	THOM:	The state of	TO LEAR
Classes.	0 1	1 2	2 5	5 15	15 25	25 - 35	35 45	45 55	55 65	65 75	75 85	85 and upwds.	TOTALS
Zymotic	174	97	118	57	26	12	10	11	16	12	12	4	545
Constitu- }	81	27	33	24	70	84	79	63	58	30	7	The same	556
Local	256	III	82	46	38	69	104	143	180	190	140	33	1392
Develop- mental }	197	9	7	-	5	11	8	1	-	26	71	35	370
Violent ) Deaths )	15	-	9	3	9	9	11	13	5	9	I	ı	85
Totals	723	244	249	130	148	185	212	231	259	267	2 3 1	69	2948
Per-centage ) of Deaths )	24.2	8.3	8.5	4.4	5.0	6.3	7.2	7.8	8.8	9.1	7.8	2.3	100

This Table furnishes a large amount of important information, not only as to the groups of diseases under which all the deaths in the District are placed, but also as to the ages at which the deaths occurred. The first group, which includes the seven chief zymotic diseases, as well as rheumatism, syphilis, and some others, which I think should be classed elsewhere (although they do not materially affect the figures), produced a mortality of 545, or 18.5 per cent. of the total deaths, which is much in excess of those in 1874. The number of deaths from constitutional diseases, such as consumption, hydrocephalus, gout, cancer, &c., was 556 or 18.9 per cent. against 544 in 1874,—the deaths from consumption being 334, from tabes mesenterica 10, and from cancer 69. Diseases having their seat in special organs, as

inflammation of the lungs, affections of the brain, heart, stomach, liver, &c., which are classed under the term "Local," caused a mortality of 1392, or as many as 47.2 per cent., against 1299 in 1874. The number of deaths from brain disease was 357, of which 84 were registered from inflammation, 87 from apoplexy, 51 from paralysis, 92 from convulsions, and the remainder from epilepsy. Diseases of the heart were credited with 187 deaths; of the lungs 622 deaths; of the stomach and abdominal viscera with 118 deaths; of the kidneys with 71, and other local diseases with 37 deaths. By far the most fatal of these were inflammatory diseases of the lungs, as 372 deaths were registered from bronchitis, 199 from pneumonia and 13 from pleurisy. There were also 46 deaths from liver disease, and 35 from nephria or Bright's disease of the kidneys. The deaths placed in Class 4, developmental, which include those caused by premature birth, atrophy and debility, old age, congenital malformation, were not so numerous as in 1874, as they were only 370, or 12.5 per cent. in 1875 against 385 in 1874; and violent deaths were also less, having been 85 against 94.

The ages at death varied rather considerably from the means of the twenty-three years ending 1872, published in my report for 1872, but correspond more closely with those of the ten years-1866-1875, which will be found in Table 15 of the Appendix to this report. Thus we see that out of the 2948 deaths, as many as 723 or 24.5 per cent. happened during the first year of life, the average for the twenty-three years being 21.6, and for the last ten years 24.3. This increase in the proportionate number of deaths amongst infants was to be expected, because they are the first to suffer from increased density of population, and from various other causes, such as bad food and dress; the want of warm rooms in cold weather, and varying amount of comforts. These matters will be referred to again, but they are mentioned here because a large proportion of the new residents are not of so good a class as those who lived here in former years, and many of the children, therefore, do not receive now as much care and attention as formerly. The mortality

between 1 and 2 years amounted to 244 or 8.3 per cent., and between 2 and 5 years to nearly the same, viz., 249 or 8.5 per cent., making a total of 16.8 deaths per cent. between 1 and 5 years of age against an average of 15.7 for the preceding ten years. Between 5 and 15 years there were 130 deaths, or 4.4 per cent. of the whole, and from 15 to 25 years the mortality was equal to 5 per cent., and from 25 to 35 it amounted to 6.3 per cent., all of which are below the average. Between 35 and 45 there were registered 212 deaths, or 7.2 per cent.; between 45 and 55 years of age 231 deaths occurred, or at the rate of 7.8 per cent. Above 55 and below 75 years the largest number of adult deaths were registered, as there were 239, or 8.8 per cent. between 55 and 65; and 267, or 9.1 per cent. between 65 and 75; so that the proportion in the former decennial period was larger, whilst in the latter it was smaller than the average of ten years. Above 75 years of age there were 300 deaths registered, or at the rate of 10.1 per cent., which is a satisfactory return.

TABLE V.

Showing Mortality from certain classes of Diseases, the proportions to Population and to total Deaths.—1874.

	of deaths from westing discus	Total Deaths.	Per centage of Deaths to Total Deaths.	Deaths per 1000 of Population.
I.	Zymotic Diseases (Class 1. Order 4)	522	17.7	3.6
2.	Tubercular	437	15.6	3.1
3.	Pulmonary, other than Phthisis	620	21.1	4.4
4.	Convulsive Diseases of Infants under 1 year	102	3.4	0.72
5.	Wasting Diseases of Infants	185	6.2	1.3

- 2. Includes Phthisis, Scrofula, Rickets, Tabes Mesenterica, and deaths registered as being caused by Hydrocephalus in children of more than 1 year.
- 4. Includes Infantile Hydrocephalus, Meningitis, Convulsions and Teething.
- 5. Includes Marasmus, Atrophy and Debility, Want of Breast Milk, and Premature Birth.

This Table shows the number of deaths and the per centages per 1000 population, as well as those of deaths, to total deaths from five groups of diseases which do not correspond with those of the Registrar-General. The deaths in the first class do not include the mortality from privation, want of breast milk, excessive drinking, glanders, syphilis, thrush and other affections which have no apparent relation to one another, but which are included under Class 1, but in different "orders" by the Registrar-General. It appears that there were 522 deaths, or 17.7 of the total deaths from zymotic diseases; 437 or 15.6 per cent. from "tubercular affections," which include phthisis, scrofula, rickets, tabes mesenterica and hydrocephalus in children more than 1 year old. The proportion of deaths from these diseases to the mortality from all causes is a very good criterion of the salubrity of a district, provided it does not contain an unusually large proportion of poor residents, or have many of its courts and places excessively overcrowded. At any rate, a large proportion of deaths from these causes should cause special inquiry into the sanitary condition of those portions of the district in which they most commonly occur. The number of deaths from inflammatory diseases of the air passages was unusually large in consequence of the sudden changes and occasional great severity of the weather, viz., 620, or 21.1 per cent. of the whole; whilst that from convulsive diseases in infants was less than usual, having been only 102 against 124 in 1874, although the gross mortality was greater. The number of deaths from wasting diseases of infants, under which heading are included the mortality registered as having been caused by marasmus, atrophy and debility, want of breast-milk, and premature birth, was in the same proportion as in 1874. The per-centages of deaths from each of these groups of disease to 1000 population is given in the Table, for the especial purpose of comparison with other districts in which this plan of grouping deaths is adopted. It shows that there were 36 deaths per 10,000 population from zymotic diseases, which is rather below the average for all England; 31 from tubercular affections, which is precisely the same as in 1874; 44 from pulmonary affections, which is in excess of the ratio for 1874: 7.2 from convulsive diseases of infants, and 13 from wasting diseases of infants under 1 year old.

TI YEL	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874
Mean Temperature for each year	50°3	49°8	48°6	51°6	49°5	48°7	48°7	50°7	49°1	49°4
Small Pox	6	31	27	6	6	16	400	III	9	
Measles	22	26	15	35	64	40	25	59	28	68
Scarlet Fever	98	68	49	49	247	181	85	51	27	97
Diptheria	22	12	16	14	16	9		7	21	10
Whooping Cough	56	89	72	44	102	39	76	97	81	52
Fever	75	76	63	54	60	51	34	50	53	45
Diarrhœa	125	162	75	120	97	115	123	115	161	102
Totals—Hackney	404	464	317	320	592	451	751	490	380	379
Totals for London	14,272	14,761	11,660	14,638	17,413	16,476	19,455	12,729	11,170	11,230

		nualAve			centage Deaths to			an Ann		Deaths in 1875.	
		o. of Dea 865—187		Tot	tal Deat 865—187	hs.	per 1	10000 pc	pu-	Totals.	10,000 Populati
Small Pox		62			2.5			5.6		2	0.0
Measles		38			1.5			3.4		61	4.3
Scarlet Fever	2.0	96			3.9			8.1		78	5.5
Diptheria		13			0.2			I.I		21	1.5
Whooping Cough		71			2.9			6.3		113	8.0
Fever		56			2.3			5.3		58	4.1
Diarrhœa		119	**		4.9			10.4		116	8.3
Hackney		455			18.5			40.2		449	31.6
London		4.386			19.0			45.9		11,230	

1665-1875.—Deaths from the principal Infectious Diseases and Diabrhoga.—52 weeks in each year.

Table 6 shows the number of deaths from each of the seven principal zymotic diseases for the 11 years since 1865; the per centages for the 10 years 1865-1874; the per-centages of deaths to total deaths, and to 10,000 population. The deaths of residents from small pox varied between 2 in 1875 and 400 in 1871, but, with the exception of 1871 and 1872, the largest mortality in any other year was 31 viz., in 1866. The number of deaths from measles has been much more uniform, as the greatest number of deaths occurred in 1874, when they reached as many as 68, and the lowest in 1867, when they were only 15. The mortality from scarlet fever was intermediate as regards irregularity, between measles and small pox, the smallest number having been registered in 1873 and the highest in 1869, when the mortality reached the very high number of 247, or about 2½ times the average of the ten years. Whooping cough caused its greatest mortality last year, viz,, 113 deaths, and its smallest, 39, in 1870. The deaths from fever have varied less than from any of the other zymotic diseases, as the greatest number happened in 1866, when it was 76, and the lowest in 1871, when it was only 34. The deaths from diarrhea have also varied largely, having been as few as 76 in 1867, and as many as 161 in 1873. Diarrhœa can scarcely be fairly classed with zymotic diseases, as there is no evidence whatever to show that it is either contagious or infectious, which all the other diseases undoubtedly are. Still, as we are even now to a certain extent ignorant of the ultimate causes of epidemic diarrhea, we may reasonably continue its grouping with the others. We know that its fatality corresponds almost exactly with the mean weekly temperature of the summer months, and that it prevails most severely in badly drained places, especially in streets which have been built on thick deposits of refuse. There was one death from cholera or choleraic diarrhœa of a girl aged 16. She died in 18 hours, after having been exposed to a very offensive smell from an open drain. The rate of deaths from all these causes per 10,000 population was 40.2 during the years 1865-1874, and as low as 31.6 for last year, which is below the average for all England. The deaths

from measles, diptheria and whooping cough were in excess of the average, but from scarlet fever, fever and diarrhoa were somewhat below it, whilst the number of deaths from small pox was unusually small. The epidemic of small pox raised the mean annual number of deaths per 10,000 population by 5.6, so that even after allowing for this the deaths were 3 per 10,000 less than the mean.

The death-rate for the District during the year was 20.6 per 1000 population, whilst for all London it was 23.7 per 1000. In the western districts of London it was 22.1; in the northern 22.3; in the central 26.0; in the eastern 25.5, and in the southern 24.0; so that although the mortality of the northern districts was below that for all London, yet that for Hackney was 1.7 per cent. below the northern and 3.1 per cent. below that of all London. This is the greatest disparity since 1868, which shows Hackney to have been exceptionally healthy last year. The death-rate has been calculated by the elimination of the deaths of non-residents in the Small Pox and Fever Hospitals, and the retention of all the deaths in the German Hospital, whether non-resident or not, and in the City of London Union, as a counterpoise to the deaths of inhabitants of Hackney in other Metropolitan hospitals. There have been 161 inquests held in Hackney during the year, which is equal to 5.5 per cent. of the total deaths, which is about an average proportion. As the normal death rate for Hackney is 22.04 and for London 21.79 per 1000, it is evident that the death-rate in Hackney is satisfactory.

I have attended 31 meetings of Sanitary and 2 of other committees, as well as 11 meetings of the View Committee, making 44 attendances on committees, which is above the average. Many important matters have been discussed at these Committees, and reports thereon brought up to the Board. Amongst these I may mention making final arrangements for the supply of death returns to me by the registrars of the subdistricts; the consideration of the dust contracts; of the state of the River Lea; of the slaughter-house regulations issued by the

Metropolitan Board of Works; of the provisions of the Food Adulteration Act and the Artizans' Dwellings Act, and also of some of the clauses in the Public Health Act. The Committee also devoted a large amount of time to the consideration of the deposits of dust, house, and other refuse in the District, and brought up a report thereon containing recommendations which were agreed to by the Board. They also brought up a report, on your reference, as to the necessity for another mortuary in the vicinity of the Lea, in consequence of a letter received from the Chief Commissioner of Police, and also made some improvements in the old mortuary.

The mode in which the dust should be removed in the District has received earnest consideration, and it was determined to recommend that the present arrangements be continued for another year, and to ask you to refer the matter again to the Committee for report as to any or what alterations in their opinion should be made for the year 1876-7. Advertisements were therefore issued for tenders for the removal of the dust at per load and at per day, the contractor to find horse, cart, implements, and one man for each cart. The lowest tender, that of Mr. Devon, was accepted, at 2s. 4d. per load against 2s. 9d. for the previous year, but unfortunately Mr. Devon did not fully carry out his contract, so that Mr. Iszard was employed to assist, and the difference in price charged to Mr. Devon, therefore an amount of £77 9s. 9d. was stopped from his payments. The total number of loads removed was 19,387, being a somewhat larger proportion per house than in 1874. The total cost came to £2779 2s. 1d., of which £2276 16s. 7d. were paid to the contractors, and £433 16s. 6d. to the men engaged by the Board to assist in the removal. The total was about £64 less than the sum paid in 1874-5. The number of loads removed in 1873-4 was 16,091; in 1874-5 it was 17,427, and in 1875-1876, 19,387 loads. The reduction in the price of coals as compared with 1874-5 accounts to a certain extent for the increase; but the additional number of houses, especially in Stoke Newington, has been the chief cause of the increase. The complaints of nonremoval of dust numbered 3833, which is above those received in the previous year. These arose from Mr. Devon not supplying the Board with the number of carts required by my orders.

I made a personal inspection of a very large number of yards in various parts of the District to ascertain the kind and extent of their paving, as well as of their drainage, and the condition of the water-butts and other water-supply apparatus, and obtained orders from the Sanitary Committee for the proper paving and drainage of those which were defective, as well as for an improvement in the water supply and water-supply apparatus. The occurrence of typhoid fever on several premises where the water became contaminated by defective arrangements of one kind or another showed the necessity for this. As before mentioned, the average death-rate from fever was smaller than that of the preceding 10 years, which may perhaps be accounted for by the improvements made in the water-supply apparatus.

During the year I have made numerous visits to places on which dust and house refuse were being shot, and especially to localities where houses were being erected on the deposits which had been made some time ago. In some cases I induced the owners of the ground to prevent the dust contractors from shooting there; but finding myself powerless to stop the buildings I brought the matter before you on several occasions, and on October 1st asked that a case should be prepared and submitted to counsel for his opinion. In my report I pointed out the injury which the District had already sustained, and the future annoyance and injurious consequences which must hereafter accrue to the inhabitants if these deposits were not stopped. At the same time I expressed my opinion that the law as it at present stands is not adequate for our necessities, unless the Court of Chancery could interfere. I therefore drew up a list of questions to be proposed to counsel for opinion, which was embodied in a case submitted to him by Mr. Ellis in November, 1875. As the matter is one of considerable importance, I now lay before you an abstract of the case and the opinion of Mr. W. H. Michael thereon. After showing that Hackney, being

an outlying district of the metropolis, possessing a considerable quantity of ground not yet built upon, which consists to a great extent of sand and gravel, the persons building new houses frequently removed the natural ground and replaced it with offensive rubbish. That in other parts of the District very large excavations had been made, from which brick-earth had been taken away and the excavations filled in with refuse. That many houses are now being erected on the said deposits, and the Board therefore required an answer to the following questions:—

- 1. Whether under any of the Nuisances Removal, Sanitary, or other Acts, the Board could, by application to the Court of Chancery or any other Court, obtain an order restraining, for the future, the building of houses on such deposit as above described, until the whole area of the building is covered from wall to wall with a layer of concrete sufficiently thick to prevent the entrance of injurious gases into the houses?
- Answer: I think not; the foundations are to be on solid ground or on concrete, and if the foundations are so constructed, I know of no Act to restrain the owner from making any such deposit as that referred to.
- 2. This refers to letting houses after they are built.
- 3. Whether it is possible that a magistrate would grant an order for the removal of the deposit under the Nuisances removal Act?
- Answer: Yes, if it be proved that the accumulation is such as to be a nuisance or injurious to health. I must add that each case must stand on its own merits, as the magistrate would require some direct proof that the refuse in question was injurious to health.
- 4. This question referred to the power, if any, to refuse consent to the drainage of such houses.
- Answer generally on the case. I believe that the question of a proper sub-soil to houses is one of the greatest importance to the public health, and that in the existing state

of the law it is impossible to deal with the question satisfactorily."

In consequence of this opinion an application was made to the Secretary of State for the Home Department to receive a deputation, and an interview was obtained at which the abovementioned were pressed upon him. He admitted that the law in its present state cannot prevent these deposits and the erection of buildings thereon, and therefore promised to consider the matter, requesting at the same time that the proposed regulations be submitted to him in writing. At a subsequent meeting of the Sanitary Committee the following report was drawn up, submitted for your consideration, and carried. A copy was afterwards sent to Mr. Cross and the matter referred to the Local Government Board, who acknowledged the evil and recommended that the Metropolitan Board should obtain the insertion of clauses in some Act for remedying the evil complained of.

REPORT OF THE SANITARY COMMITTEE re PROPOSED REGULATIONS FOR THE ERECTION OF BUILDINGS ON DUST SHOOTS.

To the Board of Works for the Hackney District.

Gentlemen,—Your Committee have had under their serious consideration your reference as to the conditions on which houses may be erected in the Metropolis on deposits of house refuse and other made ground. After hearing portions of the shorthand-writer's notes read, and the opinion of the Medical Officer of Health, they agreed to submit the following resolutions for your approval, and recommend that a copy be sent to the Secretary of State for the Home Department if you consider they meet the exigencies of the case.

1st. Resolution.—That no building be hereafter erected on made ground unless the whole internal area of the premises be covered with a thick layer of good concrete, at least 6-inches thick, to the satisfaction of the Surveyor to the District Board, or Vestry.

2nd. That all drain pipes passing under buildings so erected, or outside the walls, if within four feet thereof, shall be constructed of glazed drain-pipes embedded in a layer of concrete, at least 6-inches in thickness, to the satisfaction of the Surveyor of the Board, or Vestry.

3rd. That no building shall be erected on a foundation of house refuse until after the lapse of two years from the time of deposit; or, in the case of any other newly made ground, until the Surveyor of the Board, or Vestry, be satisfied that sufficient time has elapsed for consolidation of the ground and for cessation of decomposition in the deposited matters.

In the event of the Secretary of State for the Home Department being of opinion that it would be preferable to effect the proposed object by bye laws, then that the District Board, or Vestry, should be empowered to make bye laws in regard to houses to be hereafter built on dust shoots or other made ground for the purpose of preventing injury to the health of the future occupants.

All of which your Committee submit.

(Signed) WILLIAM BECK, Chairman, and by others.

The inspection of the cow-sheds and slaughter-houses occupied a considerable time this year, as in many instances the View-Committee had to decide on the course to be taken as regards the new regulations issued by the Metropolitan Board of Works. The Committee also met on two or three occasions to discuss the regulations themselves, and advised that the distance at which new slaughter-houses might be erected from a dwelling-house should be 20 instead of 40 feet. This suggestion was adopted by you, forwarded to the Metropolitan Board, and inserted in their amended Regulations. I attended, in connection with this matter, at 9 meetings of the View-Committee. The

Committee objected to licenses being granted to three butchers, and to the applications of several others, as well as from cow-keepers, and asked the justices that the licenses should not be renewed until the works necessary for putting the premises into a proper condition had been carried out. This course was agreed to, and as all the works were done before the next meeting of the justices, the opposition was withdrawn. The number of licenses granted for the keeping of cows was 89 against 87 last year, there being several new applications; but there were only 71 slaughter-house licenses granted against 81 in 1874, as several butchers did not apply for renewal and others were refused by the justices.

In the course of the year I attended 81 summonses at the Worship Street and Clerkenwell Police Courts to give evidence for the removal of nuisances on premises situated within the district. Most were for neglect of whitewashing and repairing houses, for not providing a proper water-supply and water-supplying apparatus, or for want of proper drainage; but two were of an unusual kind, one being for illegal slaughtering of pigs in an unlicensed shed, when the defendant was fined £2 and costs; and the other was for boiling offal on premises which were unfit for the purpose, and not using proper means for preventing the escape of offensive effluvia. The defendant was fined £3 and costs.

My attention has also been directed again to the river Lea, which still remains in a bad state, although perhaps it is not so dark coloured, or offensive as in 1874. I was informed, in reply to some letters I wrote to the River Lea Conservancy Board, that the Tottenham authorities were using a new patent which they hoped would prevent any nuisance for the future, but, as I pointed out in my last report, some time must clapse before the river and cut can be restored to its proper condition.

Although the scarlet fever has not been quite so severe as in 1874, yet we have disinfected or issued notices for the disinfection of 255 houses against 224; and in all cases where the disinfection was not done by the officers of the Board, care was taken that the disinfection was satisfactorily performed. There

have also been 746 articles of bedding and clothing disinfected against 395 in 1874. Very many of these articles were removed from the houses of inhabitants in a good position, so that in a majority of cases the amount paid for the disinfection at the hotair chamber covered the cost of the men's wages and the fuel used. In other cases, where people were too poor to pay, no charge was made. As the men are engaged on other work when not employed at the disinfecting chamber the cost to the District has been but small, as £13 14s. were received and £11 1s. paid for overtime and fuel. In addition to this the wages for ordinary time would have amounted to £9 10s., so that the work has been cheaply as well as efficiently carried out. The comparative rarity with which this disease rages severely in a given locality at the present time as compared with what it did a year or two ago, before disinfection was so thoroughly carried out, goes, I think, to a considerable extent to show that the spreading of these zymotic diseases may be materially diminished if proper means of disinfection be generally used. It is, however, somewhat singular that the mortality per 1000 population varies so little from time to time, but I hope that better results will be obtained hereafter. This subject will be more fully considered in the latter part of my report.

The sanitary work performed has been in excess of that in any previous year, although only 8 more premises were inspected than in 1874. The number of houses inspected under the provisions of the Sanitary Act, 1866, was 6137, and nuisances were found in no less than 2993, so that 50 per cent. of the houses were in a more or less bad sanitary state, either from defective paving or drainage, deficient water supply and water supply apparatus, want of proper repair, or from overcrowding. Every room in these houses was examined, and entries made in the inspection books as to their condition, as well as of the dust-bins, water butts, cisterns and water-supply apparatus; also as to the drainage of the houses, yards and outhouses, and the condition of the eaves-gutters and rain-water pipes. There were also 159 greengrocers and 74 fishmongers'

yards inspected., 126 bakehouses examined, most of them more than once, and also the rooms in 18 houses measured to determine their cubical capacity.

The number of houses inspected as before-mentioned was 6037, which contained 25,733 rooms used for dwelling in. The number of houses in the list is 12 less than in 1874, and of the rooms nearly 500 less, in consequence of many of the kitchens not being used for living or sleeping in. This is a larger departure from the average than usual, and probably arises from the empty houses being much smaller in number than they were a few years ago. The greater rate of wages received by labourers has led in this District to less overcrowding and a less frequent use of small and badly ventilated kitchens than formerly obtained. The number of families in these small houses has also decidedly diminished, as in 1875 there were only 8793 families in the 6047 houses against 9088 families in 1874, which supports the belief that more wages are earned or else a larger proportion of the wages must be spent in house rent. The number of inmates was nearly 1000 less, as there were only 37,882 persons residing in them against 38,849 in 1874. The number of nuisances discovered was greater, but this arose chiefly, if not entirely, in consequence of the carefulness with which the water supply apparatus was examined and the strictness with which the necessary repairs were enforced. As regards the diseases discovered in these houses they varied rather considerably from those in 1874, as the small pox cases were less; those of scarlet fever more, viz., 177 against 140; those of typhus fever less, viz., 24 against 42; whilst those of typhoid and simple fever were greater viz., 47 against 29. As a much larger number of cases of scarlet fever was discovered than in 1874, whilst the mortality in 1874 was greater, we are, I think, justified in assuming that although scarlet fever was less fatal it was more prevalent than in 1874. If so, I think we may fairly assume that the sanitary measures adopted have exercised a due effect on the death-rate from this disease.

There were numerous inspections of yards of houses made

by the Dust Inspector, chiefly however in the houses of the poor.

There were no less than 6262 nuisances abated during the year, which is the largest number recorded, as will be seen in the tabular statement, for twenty years. The total number from defective drainage was 1149, of which 613 consisted of choked or defective drains, 263 of deficient or defective traps, 113 of yards badly drained, and 137 of water-closet pans choked. There were 4020 nuisances arising from sanitary deficiences in connection with the houses themselves, viz., 2047 in which the houses were dirty and dilapidated, or both; 1493 in which the water supply or apparatus was defective; 11 in which the ventilation was defective and could be improved; 469 from absence of dust-bins, and 275 from badly paved yards. Accumulations of manure were removed from 98 premises; 37 pigs and pig-sties were removed from 37 yards, and 31 cases of overcrowding abated. As regards the overcrowding I am pleased to say that the manner in which the law has been enforced of late has year by year diminished the number of overcrowding cases, whilst the publicity which has been given to their details, including the publication of the houses in which they were found, has, I believe, induced landlords to exercise greater care as regards the number of their tenants. From these causes, as I think, I have not the unpleasant duty of bringing before you any of the dreadful instances of indecent occupation such as have been mentioned in every one of my late reports. I have been considered by many to have been injudicious in thus holding up the dark spots in our district to the light, but I am quite sure that when landlords know that the houses in which indecent overcrowding is met with are specified in my annual report, they will avoid, if possible, having their houses inserted in my black list.

As regards many of the defects in houses met with during our inspections, I have to report that they were found in both old and new houses, and arose from the manner and the materials from which they were constructed. Many of the small houses and some of the larger have been built either on the sod, or still worse on rubbish foundations: the bricks and mortar have scarcely deserved their names; the plastering has frequently been done with a mixture of fine siftings of house refuse; the wood-work was badly put together and made of ill-seasoned wood, which speedily shrank and gave rise to draughts and consequent colds and rheumatism. These and many other evils which obtain in the present manner of building houses would have been prevented, if the Building Bill, introduced more than once by the Metropolitan Board of Works into the House of Commons, had become law. Now, however, that public attention has been so frequently and so forcibly called to the matter, and the Secretary of State has considered some of these matters favourably, there may be some chance of the poor artizan and lower middle classes being better lodged and accommodated than at present. It will however be difficult to remedy the evils of the past without pulling down a large number of these wretchedly constructed dwellings.

The number of notices served differed but little from those in former years, except that the proportion of statutory notices was not much more than half. This has been caused by the larger number of summonses taken out during the last two or three years, and the consequently greater rapidity with which other owners have carried out the necessary works for fear of themselves being summoned. I am quite sure that a prompt and strict enforcement of the various sanitary acts is beneficial not only to tenants but landlords, because the latter will not allow tenants to occupy their houses who frequently bring them under the notice of the sanitary officers. The smallness of the rooms; the number and careless habits of their occupants, and the bad construction of dwellings must always lead to the recurrence of nuisances, but I hope by a strict supervision over the property in this District to induce greater cleanliness as well as more care in using the dwellings, even although it may at first cause rather considerable expense to the landlords by frequent repair and cleansing of the houses.

In conclusion, I have to acknowledge the uniform support

I have received from the Sanitary Committee, as well as the efficient assistance afforded to me by all the Inspectors, who have carried out their duties to my entire satisfaction during the past year.

I now purpose treating of the mortality in this District. as far as I can obtain the data to work upon, since 1840, and of discussing, as far as may be necessary for comparison, the death rates in London and England. As the basis of all mortality tables is the population, I will first enumerate the number of inhabitants at each census.

TABLE VII.

Census.	Population Hackney Parish.	Population Stoke Newington Parish,	Houses, Hackney.	Houses. Stoke Newington.
1801	12,730	1462	2137	
1811	16,771	2149	2769	
1821	22,489	2670	3915	
1831	31,047	3480	5834	
1841	37,771	4490	6864	328
1851	53,589	4840	9725	836
1861	76,687	6608	13,218	1040
1871	115,119	9841	19,355	1556

The enormous increase in the number of inhabitants since 1801 has, of course, very materially changed the character of the District, and transformed it from a rural place of residence into almost a large city. The class of inhabitants has also changed, as in the earlier periods the majority of houses were large and occupied chiefly by persons who had retired from business or who were otherwise possessed of a good income. Now, however, a majority of the houses are comparatively small, as in 1869 more than half were assessed below £25 a year. With this alteration in the character of the houses there has been a corresponding change in the class of residents, so that we now have a large proportion of poor receiving parochial relief as well as a very considerable number of those who depend for their subsistence on their weekly wages. A greatly increased density of population

has also obtained, so that instead of less than four persons to the acre in 1801 and nearly 11 persons in 1841, we now have about 38 inhabitants to each acre. The great influence of density of population on the death rates will be shown hereafter, and it is merely mentioned here in common with other causes in action affecting the sanitary state of the District. It must also be remembered that although we derive considerable advantages from our open spaces, amounting to 467 acres, yet as our building space is reduced by that quantity, the number of persons to an acre is in reality considerably in excess of thirty-eight. In addition to the 467 acres of open spaces, there are 101 acres of water, so that the living space which can be occupied in the district for buildings and streets is only 3367 instead of 3935 acres. There are certain parts of the district which is densely filled with small houses, so that each resident, counting two children under 10 as one adult, has, when indoors, about 400 cubic feet of air. We fortunately have not very many courts, and as most of these houses are small the density of population in these streets is not likely to be henceforth largely increased.

The extension of streets and houses into the fields has gone on so rapidly that there are but few fields left in the District, or even large grounds belonging to any of the houses. The substitution of houses and comparatively impermeable roads and footways for fields or open spaces covered with trees, has rendered the district more liable to floods, partly because the removal of trees diminishes the ordinary rainfall and induces a liability to occasional storms and floods, but chiefly because most of the rain runs into the sewers instead of soaking into the ground. I therefore fear that when the outlying portions of the northern districts are more nearly covered with streets and houses, that some of our lowlying places will be occasionally injured by the flowing back of the flood waters from the sewers. The planting of trees in our streets and open spaces, especially on the highest ground, will assist in keeping the rainfall more equable than it otherwise would be. The value to this district of Epping Forest is considerable, as it will assist in remedying the evils which would

otherwise result in future years from the substitution of a space occupied by oxygen and ozone-destroying people, fires and gas, in the place of oxygen and ozone producing open country. It is true that carbonic acid readily interchanges with the other constituents of the air, but the aqueous vapour given off by the lungs and skin, which is highly charged with effete animal matter, is not so readily removed, by oxydation or otherwise, from the dwellings and localities where it is exhaled. It is this necessity for the oxydation of animal matter when in a state of change which renders pure air, containing ozone, so necessary for robust health. As ozone is very rarely indeed met with in the air of those localities which are situated at a distance from the sea or the open country, and as ozone is by far the most powerfully oxydizing agent in the air, we must expect that density of population will exercise such a prejudicial influence on the sickness and death-rate of a population as no sanitary means at present in use can avert.

There are, however, numerous other causes which affect the death-rate of a population besides those mentioned, although none act so powerfully as density of population or overcrowding. Thus we find, as a rule, in overcrowded localities that the inhabitants are poor, and consequently do not obtain the necessary medical and other comforts in sickness; the children are improperly fed, badly attended to, and insufficiently clad; the houses are often damp and draughty, and the sanitary arrangements defective or out of order. Many, also, of the inhabitants follow unhealthy occupations, and, what is far worse, take too much drink. The statistics of crime and of the duty paid on fermented liquors show the enormous increase in the quantity of drink consumed and consequent drunkenness during late years. excess of drink beyond what the body can throw off, without injury to the organs concerned in eliminating it, is I believe one of the chief causes of the high death-rate, not only of adults but of young children, in densely populated localities. I do not think that the quantity of drink consumed by the working classes residing in this district is to be compared with that taken in

some other places, because the houses of the lower working classes are not so squalid, and the air not so bad as elsewhere, and the consequent desire for drink to remove the feelings of malaise and depression is not so great. Immigration of unmarried persons between 15 and 25 years of age, and a predominance of females, act in an opposite direction, but with much less effect on the mortality of a population. In this respect Hackney benefits to a rather considerable extent. by the number of young female servants employed, but it does not participate to a like extent with the rest of London, as a reference to Table IX. will show. The late Dr. Letheby laid very considerable stress upon these causes of variation of death-rate, far more indeed than they deserved, as the variation in the death-rate of Hackney cannot have been altered by the excess of females and the immigration of healthy persons to an extent of one death per annum in each 1000 population; whilst the presence of Lunatic Asylums and the excessive mortality of their inmates counterbalances this advantage to a certain extent. That this is the case can readily be proved by calculating out what is called the normal death-rate for the district; that is to say, the number of deaths which would occur in the district per 1000 population if the mortality at the different ages and of the two sexes occurred at the same rate as they would by the English Life Tables. The mode of calculating the normal death-rate will be soon described, and it is therefore sufficient to say that the normal rate calculated on the Census of 1871, was for England 22.75, for London 21.79, and for Hackney 22.04; whilst the corrected death-rate for Hackney for 1841-51 was 19.18; for 1851-61, 19.14; for 1861-71, 20.37; for 1871-75, 20:10 per 1000 population, so that the mortality which has actually taken place in the district is much below the number calculated from the Census and the English Life Table, whilst in all London it was much above the proper death-rate.

The influence exercised on the death-rate by varying proportions of the sexes in a given population is by no means large. Thus, if we take the population of England and Wales, which consisted of 487 males and 513 females, as the basis of our

calculation, we find that by applying the English Life Table to those numbers the death-rate amongst the males would be 12.20 and amongst the females 12.26, making a total death-rate of 24.46 in every 1000 of the population; so that there were not more than 2 deaths per 100,000 population than there would have been had the population of England been constituted according to the proportions enumerated in the English Life Tables. In Hackney the difference between the number of females and males is greater, as at the last Census there were 560 females and only 440 males in each 1000 population, but as there were only 200 females under 5 years of age in excess of males at that age, when by far the greatest difference in the death-rate occurs, and as the greatest variation in the relative number of the sexes exists between 20 and 40, when the difference in the mortality is least, the divergence arising from this cause in Hackney is but small, viz., 2.9 deaths per 10,000 population.

As regards age the variation is greater, because of the very small death-rate amongst persons between 5 and 45 years of age as compared with other periods of life. Thus the annual mortality per 1000 living at each of the different ages in 1861-71

TABLE VIII.

Annual Death-rate at different Ages per 1000 Living.

YEARS.	0 5	5 15	15 25	25 35	85 45	45 55	55 65	65 75	75 85	85
Hackney	ALC: U	DCL T	+ - 17 1	Mary III	migne.	102	ESETE OF	Note	O BUSS	200
1851-61	58.54	5.83	5.20	8.48	11.83	16.55	30.69	67.43	144.73	317.92
1861-71	63.67	5.48	5.73						150.82	
London }	81.61	7.32	6.34	9.83	14.99	22.10	38.65	75.03	157.78	306.42
England ) 1861-71	68-60	6.21	7:30	9:79	12.74	17.35	30.38	62.74	140.20	298.60

was as follows:—In England, under 5 years, 68.60; between 5 and 15, 6.2; between 15 and 25, 7.3; between 25 and 35, 9.8; between 35 and 45, 12.7; between 45 and 55, 17.3; from this

age it rises rapidly to 30.4 between 55 and 65; 62.7 between 65 and 75; 140.5 between 75 and 85, and above 85 to 298.6 per 1000. In Hackney the death-rate under 5 was not so great, especially in 1851-61, when it was only 58.5, and in 1861-71 it was 63.67; that for all London being 81.6 per 1000 living at that age. A reference to the table shows the death-rate at the ageperiods ranging between 5 and 15, 15 and 25, 25 and 35 to have been decidedly below the means for all England, but above 35 to have been above the rate. The table also shows that there has been a decided increase in the mortality of children under 5 years of age in 1861-71 as compared with 1851-61, and that a considerable rise has occurred in all England to a large but not to an equal extent: it is clear, therefore, that Hackney has participated with the rest of England in the causes of the increased death-rates. A reduction also occurred in the mortality of those who were aged between 5 and 15, as in Hackney the rate in 1851-61 was 5.83, and in 1861-71 it was 5.48. In England it was 6.75 in 1851-61, and 6.21 in 1861-71. As before mentioned, the rate rapidly rises at 55 years, and that above 65 it is in excess of the death-rate below 5 years, so that the mortality of a district will depend on the proportion which the population below 5 and above 65 years of age bears to the inhabitants between those ages. I therefore append a table showing the number living at each census since 1850.

TABLE IX.

Number living at different Ages per 1000 Population.

77		0	5	15	25	35	45	55	65	75	85
Ye	ears.	5	15	25	35	45	55	65	75	85	
A.	1851	126	214	191	161	119	87	58	32	10.4	1.6
kne	1861	130	214	194	154	122	84	56	33.3	11.3	1.4
Hackney	1871	129	211	204	158	115	87	53	30.4	11.0	1.6
Lor	ndon 1871	130	203	193	170	124	89	54	28	08	010
En	gland 1871	135	226	184	148	114	88	58	335	12	015

The Table shows that the number of children under 5 years has increased since 1851, although not to a great extent, but that they were a little below those of the population in London, and decidedly so as regards all England, the rate in 1871 having been 129, 130, and 135 respectively. At 5-15 years the number has slightly decreased, whilst at 15-25 years they were decidedly larger, being 214 against 191 in 1851. There was also a slight decrease at 25-35 and 35-45 years; the same at 45-55; a decrease at 55-65, viz., from 58 to 53 per 1000 population; a slight decrease at 65-75, but a slight increase at 75-85 years. The constituent parts of the population as regards age has, therefore, not varied very much in the 20 years, so that unless other causes had come into operation the mortality, as far as age is concerned, would not have altered much.

Having, then, ascertained the number per 1000 of the whole population living at each age, in order to obtain a normal deathrate we have only to multiply the number at each age by the death-rate as shown by the English Life Table, and add up all the products. If we wish to obtain a normal death-rate which allows for variation in the relative number of males and females, we must ascertain the number of males and females at each age and divide those numbers by the total population to get out the number per 1000 population, and then multiply each number so obtained by the average death-rate of males and of females, as shown in the Life Table for the respective ages. The sum thus obtained will show the number of deaths which would take place in the district if the deaths occurred in Hackney at the same rate as in a Life Table population. As before stated, the variation resulting from difference in the number of the two sexes is not large, but it is so considerable for age as to reduce the deathrate for all England from 24.47, which is the Life Table rate of a stationary population, to 22.75, which is the normal rate, or a difference of 17.2 deaths per 10,000 population. To simplify this, I will state that the standard death-rate for England, if it had a stationary or Life Table population, would have been, as just stated, 24.47; but as the population of England increases at

a greater rate than the Life Table standard, the large number of persons living between 5 and 65 would reduce the rate to 22.75 per 1000 persons living. The actual death-rate in 1871 was 22.60, so that it varied from the calculated death-rate by only 0.10 per 1000 population. As regards Hackney the normal death-rate is 22.04 per 1000 population; of London 21.79, and of England 22.75; so that the mortality of Hackney ought to be higher than that for all London—other conditions besides age and sex being equal—and somewhat lower than that for all England.

TABLE X.

HACKNEY.—PER-CENTAGES OF DEATHS AT DIFFERENT AGES
TO TOTAL DEATHS, 1851-75.

Years.	0	<u> </u>	5	15	25	35	45	55	65	75	85	All
		5	15	25	35	45	55	65	75	85		-
1851-61	202	157	63	48	65	72	73	84	105	87	44	100
1861-71	227	167	56	51	69	71	74	83	103	78	21	100
1871-75	245	155	48	54	70	73	75	81	98	79	22	100

This Table shows that the death-rate under one year has has steadily increased since 1851 in greater proportion than the deaths at other ages, whilst the proportion of deaths above 65 have decidedly decreased in proportion to those amongst middle-aged persons. This is by no means satisfactory, as it shows a considerable change in the status of the inhabitants, as the mortality amongst the labouring classes is greater at the middle period of life than it is amongst well-to-do persons. For instance, the mortality per 1000 at 45-55 years of age amongst ministers of religion and persons living on their means is about 10 annually; whilst amongst surgeons it is 20, clerks 25, cabmen, &c. 29, labourers 25, printers 24, carvers and gilders 26, plumbers and glaziers 28, poulterers 30, and potters 34, whilst amongst domestic servants it is only 18. It is therefore evident

that as our population acquires a larger proportion than before of those whose death-rates are higher in middle life, in consequence of their occupations, that the mortality must increase at those ages, whereas at more advanced periods of life, when the influence of occupation is not so much felt, and the ordinary death-rate at those ages therefore prevails, we should expect that in proportion to deaths at other age-periods the mortality would be less above 65 years. The increase in the number of deaths under one year to those at all other ages is very large, as there were out of each 1000 deaths no less than 245 deaths under 1 year in the five years ending 1875, against only 202 in the decennium 1851-61, whilst the proportion between 1 and 5 had diminished, as there were not so many left at those ages who were susceptible to children's diseases. At 5-15 the number of deaths per 1000 was much smaller in 1871-75 than in 1861-61, although there was a large proportion living at those ages. As will be shown, this change has been caused to a great extent by the increased density of the population. On the other hand the alteration in the occupations of the residents, and perhaps other causes, has led to the deaths of 272 per 1000 in 1871-75 amongst those who were more than 15 and below 55, against 258 in the same ages in 1851-61. One of the chief of these causes is the proportion of servants to the rest of the population being smaller now than it was 20 years ago.

The chief condition affecting the mortality of a locality is the density of population. In order to ascertain as nearly as possible the effect produced, the Registrar-General has extended some investigations which he made some years since, has divided the various districts of England and Wales into seven classes, and carefully discussed the deaths at different ages. This investigation shows that density of population affects children under five years more than it does persons living at other periods of life, and that it causes an increase at 45-65 years, after which the effect of increased density gradually ceases.

TABLE XI.

No. of Group.	No of Districts.			Proximity in Yards.			Observed Mortality.			Calculated Mortality.	
England and Wales exclusive of London		593			107			22.0			20.41
1	 	53			147			16.75			18.90
2	 	345			139			19.16			19.16
3	 	137			97			21.88			20.87
4	 	47			46			24.90			25.02
5	 	9			28			28.08			28.08
6	 Ma	nchest	er		17			32.49			37.70
7	 Liv	erpool	١		7			38.62			38.70

The Registrar-General states that the mortality of districts did not increase as the density of their population, but as the square root of the density. When this calculation is applied to the various groups, it will will be seen that in group No. 1, in which there are 147 square yards to each person, the mortality is less than the calculated number; that in group 2, with 139 square yards to each inhabitant, the actual and calculated mortality agree; that in group 3, with 97 square yards to a person, the actual mortality is in excess; but in groups 4 and 5, with a death-rate of 24.90 and 28.08 and a space of 46 and 28 yards respectively to each individual, the calculated mortality agrees so closely with the observed as to be practically identical. They are nearly the same for Liverpool, but differ for Manchester. As regards children under 5 years the increase of mortality is most marked, as the following conclusively show:—

This brief Table points out that whenever there are less than 147 square yards on an average to each person, the mortality, amongst children will—other things being equal—increase rapidly, that the density and mortality both increase together, until the death-rate amongst children becomes, in the most densely crowded districts, nearly 60 per cent. in excess of that which obtains in the districts having a mean density of 97 to the acre. Now as the Hackney District contains 3953 acres, or excluding the marshes and water spaces which are situated on our borders and not in our midst, and our population was about 142,000 on July 1st, 1875, we have only 132 square yards to each inhabitant, or deducting the marshes and the Lee 117 yards, so that for some time past the effects of increased density of population has been counteracting our sanitary measures.

On 'reference to Table XII, showing the mortality in Hackney as well as in London since 1841, we perceive that although the death-rate has increased, yet that it has done so only to a small extent, and that, as previously mentioned, our normal death-rate, that is to say our rate calculated for age and sex, is higher than our mortality at the present time. Our mean death-rate for 1841-5 was 19.18 per 10,000 population; for 1851-61 it was 19.14; for 1861-71 it was 20.37, and for 1871-5 it was 20.1, our normal death-rate being 22.04. It is therefore very evident that as our death-rate now is only 1.0 per 1000 in excess of what it was in 1841-51, although our density of population is nearly three times as great as it was then, and as the class of people now living in the district would naturally give a higher death-rate than those residing here years ago-amongst the proportion of servants to the remainder of the population being smaller,-we may be well satisfied with the present rate of mortality.

The proportion of deaths amongst infants under 1 year to 1000 births in each year has increased to a larger extent than the general death-rate, thus showing the effect of increased density. The death-rate amongst infants is a far more delicate test of the influence of density of population than even of children under 5 years, as is shown by the fact that the average, which was very regular up to 1861 (having been 128 in 1841-51 and 127 in 1851-61), increased during the 10 years 1861-71 to 143 and in 1871-75 to 147 per 1000 births. It is therefore quite evident

### TABLE XII.

Showing the number of births and deaths, the proportion of births to deaths, of births to population, of deaths under 1 year to births in Hackney and the death rates per 1000 inhabitants in London and Hackney for the years 1841-75. Also, death-rate per 1000 population from seven principal epidemic diseases.

	Hackney	Hackney	Hackney	Hackney	Hackney	Hackney	London	Death rate per 1000			
Years.	Number of births.	Total number of deaths.	No. of births to each 100 deaths.	No. of births to 1000 popula-	1 year	Death rate per 1000 popula- tion. Correctd	Death rate per 1000	population from seven principal epidemic			
			Un- correctd	tion.			tants.	Englnd.	London	Hackny	
1841	1081	766	141	25.6	151	18.1	24.0	3.36	3.23	No	
1842	1182	900	III	27.0	161	20.6	23.5	return not c. publishd forc.	3.34	separ	
1843	1220	845	144	27.0	not pub.	18.7	24.7	ot for	4.41	ate	
1844	1359	862	158	29·I	not pub.	18.5	25.0	hd ye	4.77	retur	
1845	1360	824	165	28.3	119	17.1	23.2	ols se	3.99	for	
1846		945	153	29.3	123	18.9	23.3	put	3.66	these	
1040	1450	1128	135	29.6	122	21.9	27.0	4.64	4.98	years	
1847	1527		148	28.9	116	19.5	25.8	4.28	6.53		
1848	1541	1040		29.2	130	22.3	30.1	2.93	5.74		
1849	1609	1230	131		7.7	16.5	31.1				
1850	1656	925	179	59.0	106	102		3.31	3.47	110	
verages	1398	946	146	28.3	128	19.18	24.77	3.64	4.445		
1851	1799	1074	157	30.2	132	18.2	23.4	3.92	4.26		
1852	2000	III7	179	32.6	110	18.3	22.6	4.19	4.24		
1853	1891	1207	156	29.8	127	19.0	24'4	3.67	4.24		
1854	2039	1417	144	30.9	132	19.3	29.4	4.26	5.26		
1855	2180	1508	145	31.8	125	20.6	24.3	3.22	4.47		
	2275	1371	165	32.1	124	18.2	22.I	3.29	4.17	3.69	
1856	2388	1470	164	32.2	137	18.7	22.4	3.87	4.18	3.33	
1857		1630	153	32.7	149	20.7	23.9	4.28	5.01	3.88	
1858	2484		164	32.2	117	19.3	22.7	4.37	4.96	4.04	
1859	2554	1561	168	35.5	116	19.5	22.2	2.94	3.25	2.98	
verages	2223	1391	159	31.8	127	19.14	23.77	3.864	4.221	3.26	
1861	-	1748	157	32.7	119	19.9	23.2	3.49	4.10	3.48	
	2752 2768	100000000000000000000000000000000000000	158	31.6	109	18.9	23.6	3.64	4.77	3.52	
1862		1753		33.9	141	20.9	24.5	4.78	5.29	4.53	
1863	3075	1937	159		151	21.7	26.6	4.61	5.38	3.99	
1864	3170	2148	148	33.3	158	20.5	24.6	4.35	4.66	3.98	
1865	3356	2193	153	33.8	161	22·I	26.5	3.91	4.72	3.66	
1866	3508	2405	145	34.0	100000000000000000000000000000000000000		The second second	3.36	3.67	3.10	
1867	3858	2263	170	35.9	144	19.7	23.0		The state of the s		
1868	3976	2247	163	35.6	142	19.0	23.6	4.45	4.59	2.91	
1869	3913	2650	148	33.7	155	21.6	24.6	4.57	5.39	5.20	
1870	4029	2476	163	33.3	146	19.4	24·I	4.47	2.03	3.73	
iverages	3440	2182	156	33.8	143	20.37	24.43	4.163	4.789	3.78	
1871	4184	2814	149	33.2	152	22'4	24.6	4.55	5.22	5.96	
1872	4401	2487	174	33.2	149	19.3	21.2	3.98	3.83	3.77	
1873	4431	2594	171	33.5	151	19.1	22.5	2.92	3.39	2.85	
1874	4775	2799	170	34.7	139	20.0	22.6	3.64	3.30	2.76	
1875	4970	2948	168	35.1	146	20.6	23.7	3.30	3.89	3.17	
ıverage	4553	2729	166	33.9	147	20.58	22.95	3.68	3.99	3.70	

that our death-rate is rising, and must continue to rise unless the smaller houses that are built here in future shall be provided with better accommodation, with better materials, and on better foundations than hitherto. I consider it most necessary that all possible means should be used for preventing buildings being erected on unsuitable ground, in unsuitable places, and with bad materials. I therefore hope that a new Building Act will speedily be passed, so as to give extra powers to the Metropolitan Board of Works in preventing many of the building scandals which have come to light during the last few years.

The average annual number of births during the 10 years, 1841-51, was 1398; in the next decennium it was 2223; during 1861-71 it was 3440, and for 1871-75 it had increased to 4550. The number of births to population for the same time was as follows,—in 1841-51, it was 28.3; for 1851-61, 31.8; for 1861-71, 33.8, and for 1871-75 33.9, showing a considerable alteration in the character of the population since 1851. This increased birth-rate has made our population a more highly progressive one, and therefore tended, somewhat, to reduce our death-rate, as shown by the difference between the mortality of a life table or stationary and a progressive population. The number of births to deaths has increased with the births, but not quite in the same proportion as of births to population, for in the 10 years, 1841-51, there were 146 births to each 100 deaths; in 1851-61 there were 159 to each 100; in 1861-71 there were 156, and during the five years, 1871-0, the rate has increased up to 166 births for each 100 deaths. The increased number of births and somewhat diminished death-rate account for the allowed proportions.

The average number of deaths in 1841-51 was 946 per annum; in 1851-61, 1391; in 1861-71, 2182, and in 1871-75 it had mounted up to 2729. This number was in excess for the year 1871 in consequence of the very large number of deaths from small pox, which were nearly four times as numerous in this district as the deaths from cholera in 1866. The average death-vate in London per 1000 population, for each year during the

period of 1841-51, was 24.77; in the 10 years, 1851-61, it was 23.77, or 1.0 per 1000 population less than in 1841-51; in 1861-71 it was 24.43, and since 1871 the average has been 22.95, so that although the density of population is much greater the death-rate has diminished.

The columns in Table XIII, to which I now desire to call your attention, are important, because they show the mortality from zymotic diseases as far as possible in England and Wales and London and Hackney. During the years 1841-51 the returns for England are printed by the Registrar-General for six years only. The average number of deaths in the years 1841-61 from scarlet fever, small pox, measles, whooping cough, fevers, diarrhea, and other zymotic diseases was at the rate of 19.3 per 5000; in 1861-71 it was 20.8, and in 1871-75 only 18.4, being but little above the average for 1841-51. In London the death-rate from these diseases was higher than for all England, as it was 22.2 per 5000 in 1841-51; 22.7 per 5000 in 1851-61; 23.9 per 5000 in 1861-71, but in 1841-75 it was only 19.9. It is therefore evident that the mortality from these diseases is as regular, when taken together and for a sufficiently long period, as the mortality from all causes. This will readily be seen by comparing the means of deaths from all causes and from epidemics alongside of one another, when the correspondence will be appreciated.

TABLE XIII.

	ENGI	LAND.	LON	DON.	HACE	NEY.
Years.	Death-rate per 1000 population, from all causes.	Death-rate per 5000 population, from seven epidemic diseases.	Death-rate per 1000 population, from all causes.	Death-rate per 5000 population, from seven epidemic diseases.	Death-rate per 1000 population, from all causes.	Death-rate per 5000 population, from seven epidemic diseases.
1841-51	22.36	18.2	27.77	22.2	19.18	anioony
1851-61	22.24	19.3	23.77	22.7	19.14	17.80
1861-71	22.21	20.8	24.43	23.9	20.37	18.90
1871-75	21.76	18.4	22.95	19.9	20.28	18.50

The mortality from these diseases was nearly as uniform in

Hackney as for all England and London, as the highest rate was 18.90 per 5000 inhabitants, and the lowest 17.80; the highest decennial death-rate from all causes being 20.37 per 1000 population, and the lowest 19.14; the variation in the zymotic rate being 1.1 and of the death-rate from all causes 1.19, or almost identical. The highest death-rate from all causes in England for any one of the decennial periods during the thirty years, 1841-71, was 22.51, viz. in 1861-71, and the lowest in the five years 1871-75, viz., 21.76, giving a range of 0.75 per 1000 inhabitants, whilst the death-rate from seven epidemic diseases varied between 20.8 and 18.4, or a range of 2.4 per 5000 population. In London the highest death-rate from all causes in 10 years was 24.77 per 1000 inhabitants, and the lowest occurred in the 5 years 1871-75, viz., 22.25, giving a range of 1.82, whilst the rates for the seven epidemics were 20.28 and 19.18, or 1.1 per 5000 inhabitants, which is precisely the same variation as for Hackney. A similar comparison between the death-rate from other diseases, as far as my present enquiries have led me, will show rather greater differences than those just mentioned. I therefore do not consider these diseases to be preventible in the sense placed on this word by the public, but I do believe that by means of isolation, disinfection, and other proper sanitary action, a large number of cases may be prevented, the intensity of the poison lessened, and the death-rate consequently reduced from its present high rate. How far this reduction can be carried, experience only can show, but I think that cases of death from scarlet fever, whooping cough and measles can never be entirely prevented, or anything approaching it, unless some living agent can be applied to the body for its protection against them in the same way as the vaccine virus is used to prevent small pox. In regard to infantile diarrhea, as there seems to be a close connection between its excessive mortality as an epidemic and the want of proper subsoil drainage, some effective means may be adopted so as to reduce the number of deaths to a very considerable extent.

I now propose carrying this discussion somewhat further by calculating the mean number of deaths in each decennial period

since 1856 from 12 groups of diseases. By Table XIII, we see that the average death-rate from Order 1 of the Registrar-General's classification, which includes not only the eruptive fevers and diarrhea, but also deaths from rheumatism, syphilis, privation, want of breast milk, &c., was 20.80 in 1856-65, and 20.42 in 1866-75; so that the proportionate number of deaths remained nearly the same, although their rates oscillated between 16.8 and 23.7 in 1056-65, and between 16.4 and 28:4 during the 10 years 1866-75. From diseases of uncertain seat, such as gout, dropsy, mortification, &c., the differences were somewhat greater, as in 1856-65 the mean was 4.84 against 4.69 in 1866-75, although the range from year to year was less than in the former order. The mortality from tubercular diseases was also singularly close, having been 16.77 in 1856-65, and 16.52 in 1866-75; and the variations also were not large, as the smallest proportion in 1856-75 was 15.1, and the largest was 18.5; but in 1866-75 they were greater, viz., 15·1 in 1873, and 20·0 in 1867. The death-rate from affections of the circulatory organs has decidedly increased since 1870, as the average for 1866-75 was 5.88 against 5.04 in 1856-65, or about 15 per cent. increase. Tha mean rate from diseases of the respiratory organs are moderately close considering the great variations of temperature in different years. Thus in the decennium 1856-65 it was as low as 13.9; in 1866, a cold and rainy year, it was as high as 18.5, and in the next ten years it varied between 15.0 in 1869 and 22.1 in last year, when the weather was at times very cold, and nearly always very changeable. The mean for the first period was 16.39, and for the second 16.64. Deaths from diseases of the digestive and urinary organs claimed their number of victims in closely corresponding ratios, as the mean in 1856-65 was 6.50, and in 1866-75 it was 6.15. The greatest difference in the whole is, as we might have expected, amongst the deaths entered as premature birth, debility and atrophy, because in proportion to the increase of density of population so as a rule the population becomes relatively poorer; a larger number of children are born, and a greater proportion die during

TABLE XIV.

Per centages of Deaths in Hackney in each year from 1866 to 1876, arranged in 12 groups.

	- Zymotic diseases.	N Diseases of uncertain seat	ω Tubercular diseases	A Diseases of the nervous system	Useases of the circulatory organs	ο Diseases of the respiratory organs	→ Diseases of the digestive and urinary organs.	∞ Diseases of the skin and joints	o Premature birth and atrophy	5 Childbirth and diseases of women	T Old age	7 Violence	Temperature
1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875	20·9 19·2 21·9 23·0 16·8 19·8 21·5 23·7 19·8 20·8 22·2 16·6 16·6 25·4 21·6 28·4 22·2 17.1 16·4 17.7	4.9 5.4 4.7 4.5 4.6 5.1 6.0 4.4 4.4 4.7 5.2 4.7 4.6 4.8 4.6 4.8 4.6	17.6 18.5 14.7 15.9 16.8 16.4 17.1 15.5 17.1 18.1 16.7 20.0 17.8 16.2 16.7 15.6 16.2 15.1 15.3 15.6	10·7 10·9 12·4 14·0 13·7 11·8 12·0 13·2 11·9 11·9 11·0 13·7 11·1 11·9 10·6 12·5 12·8 13·3 12·1	4·2 3·9 4·5 3·8 6·3 6·5 6·3 4·3 5·7 4·8 4·1 5·9 5·5 6·7 5·7 6·8 6·9 6·5	17·1 16·9 16·2 14·1 18·5 17·4 13·9 14·6 19·1 16·1 15·1 16·0 14·4 15·0 15·9 15·7 16·2 19.1 17·9 22·1	6.8 6.4 7.2 8.0 5.2 6.9 6.3 7.5 5.5 5.6 5.8 6.3 5.7 6.3 6.3 6.3	0.5 0.7 0.4 0.7 0.4 0.5 0.9 0.7 0.5 0.6 0.4 0.4 0.5 0.4 0.5 0.4 0.5 0.4 0.4 0.5 0.4 0.4	4.9 4.3 5.7 4.6 4.6 4.6 5.4 4.2 5.0 6.6 6.6 7.5 7.5 7.7 7.0 6.4 7.2	0.9 1.3 0.7 1.0 0.7 0.8 0.6 1.1 1.3 0.9 1.2 1.4 1.2 0.8 1.1 0.6 1.5 1.1 1.5 1.1	7·3 7·2 7·1 6·8 7·1 6·6 6·6 7·4 7·8 7·6 6·7 5·1 4·8 6·4 4·5	4.2 4.7 4.5 4.6 5.3 3.4 4.6 3.4 3.5 2.9 2.9 2.4 3.1 3.3 3.4 2.9	49·1 51·8 49·2 50·8 47·0 49·4 49·5 50·3 48·5 50·3 49·8 48·6 51·6 49·5 48·7 48·7 50·7 48·9 48·1 49·4
1856-65 1866-75	20.42	4.84	16.77	12.18	5.88	16.39	_	_			6.34	3.10	Mean No of death in each 10 years

the first year of birth from syphilis, improper food and want of care. The number of deaths entered as being from premature birth is sure to be relatively greater amongst a poor population, because the mothers and children do not have the care and comforts which those in a better class receive, and because many of the deaths from atrophy and premature birth should really be

ascribed to syphilis or other constitutional disease. The excess is rather considerable, as only 4.89 deaths were registered from these causes in 1856-65, against 6.45 in 1866-75. In the first decennium the death-rate did not exceed 5.5 in more than two years, whilst in the latter it was in no instance less than 5.5, having been as high as 7.6 in 1867, and 7.2 in 1875. The deaths from old age were rather less in the last decennium, having been 6.34 in 1866-75 against 6.96 in 1856-65. The deaths from violence have decreased, as the ratio was 4.10 in the first and 3.14 in the last ten years. As the number of deaths registered under this class differs very much according to the deaths from drowning in the River Lea and the Regent's Canal, but little attention need be paid to these variations, except to notice how singularly close the death-rate from these causes has remained during the period under discussion. This table deserves a much more lengthened consideration, but the length to which this report has already extended forbids the expenditure of space.

The number and kind of nuisances abated each year having been so fully considered in each report, and as but little benefit would arise by recapitulating them, I shall merely state that a Table will be found in the appendix showing the total number of nuisances abated in each year, as well as of cesspools emptied, filled up, and drained into the sewer; of houses cleansed, whitewashed and repaired; of drains which have been relaid, repaired and cleansed; and, since 1867, the yearly number of yards which have been newly paved, or in which the paving was repaired. It appears that there have been 5,246 cesspools emptied and filled up since January 1st, 1856; the largest number having been done in 1856, when no less than 1518 cesspools were destroyed, and the smallest last year, when only 18 were discovered by the sanitary staff. There is no doubt that several are still in existence, although unknown to your officers, as they are only found by a careful examination of premises respecting which complaints are made of offensive smells.

I cannot conclude this report without expressing my thanks for the kind support you have so uniformly afforded me during the whole of the long period for which I have held this important office.

I remain, Gentlemen,

Yours obediently,

JOHN W. TRIPE, M.D.,

May, 1876.

Medical Officer of Hedlth.

Received and Ordered to be printed and oircalated.

M. YOUNG,

May 24, 1876.

Chairman.

TABLE XV.

MALES AND FEMALES AGES AT DEATH IN 1866-75.

Per-centages at each Age for Hackney.

200 100		2 2	w l	25	35	45	55	65	75	85	95	ds
AGES.	Under I year	to 5	to 1	to	to	to	to	to	to	to	to	95 and upwards
44. 111	5.7	-	S	15	25	35	45	55	65	75	85	95 dn
1856	20.6	14.3	7.2	5·1	9.0	7.1	7:3	8.7	10.0	8.2	2.2	0.3
1857	22.2	14.0	4.9	5.7	7.1	7.5	7.3	9.4	11.2	8.8	1.9	1.0
1858	22.8	16.0	7.0	4.2	6.5	7.3	6.0	9.7	11.6	6.0	2.0	0.1
1859	19.1	15.6	7.1	5.2	6.1	8.1	6.4	9.1	11.6	8.7	2.7	
1860	19.6	18.6	5.9	4.9	7.2	6.4	7.1	8.2	11.2	8.8	1.8	0.3
1861	18.7	18.8	5.2	5.4	5.4	6.6	8.8	9.6	10.9	8.6	1.6	0.1
1862	17.3	17.6	5.2	5.2	7.6	7.8	7.7	10.5	11.4	7.3	2.3	0.1
1863	22'4	18.2	7.3	4.7	6.4	6.5	6.6	9.1	9.4	7.1	2.2	0.1
1864	22.3	16.4	5.1	6.0	7.0	7.2	7.7	6.9	11.1	7.8	2.4	0.1
1865	24.6	14.5	5.2	4.7	6.5	7.0	7.7	8.0	10.7	9.1	1.5	0.5
1866	23.5	15.9	5.2	5.2	6.9	8.3	7.1	8.4	9.6	7.5	1.7	0.1
1867	21.8	14.9	4.0	5.6	6.3	8.1	7.6	7.5	9.9	9.0	[2.2	0.1
1868	25.4	13.9	4.7	5.0	7.7	6.9	7.1	7.8	10.7	8.5	2.2	0.1
1869	23.4	19.7	7.1	4.8	7.5	6.0	6:4	7:3	8.7	6.9	2.1	0.1
1870	23.7	15.3	5.9	5.2	7.2	7:0	7:9	7.8	10.6	6.9	2.4	0.1
1871	22.6	16.5	6.4	7.3	7.5	6.9	7.4	7.6	8.8	7.3	1.7	**08
1872	25.6	15.2	4.3	5.4	8.1	7.7	7.5	7.1	9.6	7.6	1.8	O.1
1873	25.9	13.7	3.5	4.5	6.9	7.0	7.4	9.0	10.7	8.8	2.4	0.5
1874	23.8	15.2	5:4	4.8	6.1	7'9	7:5	8.3	10.9	7.8	2.3	0.1
1875	24.2	16.7	4'5	5.0	6.3	7.2	7.8	8.8	9.0	7.9	1,0	0.4
1856-65	20.96	16.40	6.10	5.14	6.88	7.15	7.25	8.89	10.01	8.04	2.06	0.53)
1866-75	24.32	15.70	5.13	5.31	7.05	7:30	7:37	7.96	9.85	7.82	2.07	0.13
-	Under	I	5	15	25	35	45	55	65	75	85	95,
Ages	year.	5	15	25	35	45	55	65	75	85	95	and upward

## TABLE OF DEATHS.

REGISTERED IN THE HACKNEY DISTRICT DURING THE YEAR 1875.

THE STUDIOS OF		-		100						SIZ	1.6%		400	
Lana	1.		25	2	25	35	45	55	65	75	85	05	p p	
AGES	Jnder year.	to 2	to 5	-	to	to	to	to	to	to	to	to	an	ਬ
	ye ye	4	2 t	5 to	15	22	33	45	55	59	10	in	95 and upward	Total
	_	-	-		_			4		9	-	00	50	
CLASS 1ORDER 1		12:	118	118	1 3	1 8	I B	110			1 6	1-5	DA	
Small Pox			I			I								2
Measles	17	23	17	3	I									61
Scarlatina	5	9	40	18	4	2								78
Diphtheria	I	2	9	7			1		I					21
Croup	5	3	15	2										25
Whooping Cough	43	41	25	4										113
Typhoid Fever			3	15	IO	2	2	2	6	I	2			43
Typhus Fever			2	3			2	I	I	I				10
Simple Fever			I		2	I				I				5
Erysipelas	4					2	2	I	2	2	I			14
Carbuncle										3				3
Influenza														
Dysentery					I			I						2
Diarrhœa	78	18	3						4	4	9			116
Choleraic Diarrhœa	3	I			2			I						7
Remittent Fever														
Rheumatism		**		5	6	2	3	4	2					22
									1		1		1	
	156	97	116	47	26	10	10	10	16	12	12			522
0														
ORDER 2.	100		100	137	100	- 79	24	7 9 19	39		3.32		81	
Syphilis	7													7
0.1.		1			1		00		1			1	1	
Order 3.														
Privation				**										
Want of breast milk							**							6
Purpura and Scurvy			2											2
Alcohol Del. Trem.						2	**	I						3
Intmprace														
	-					The state of								
	6		2			2		I						II
0					3 33									
ORDER 4.							100		1 9		100		91.0	
Thrush	5	**												5
CT ACC & ODDER														
CLASS 2ORDER I	198		000			109	153		-					
Gout				"		**				2	1			3
Dropsy			I	I		I	**	I		4	I			3 9
Cancer	*:		I	I		2	II	II	23	17	3			69
Mortification	4	**	3	**-	1		2		2	2	I			15
	. 1		-											
	4		5	2	1	3	13	12	25	25	6			96
0	1	a tri					1	Total Co.		-			-	
ORDER 2.								1						
Scrofula	2	I	::		I	I								5
Tabes Mesenterica	52	II	16	I			**							5 80
Phthisis	5 18	5	5	15	68	80	66	51	33	5	I			334
Water on the brain	18	10	7	0										41
	-	27	28	20	60	0.	66		-			-		
and the state of t	77	27	20	22	69	81	66	51	33	5	I			460
			-	_	_	_		-	-	-				The state of the s

## TABLE OF DEATHS-Continued.

		ABL		OF			15-			1.				
AGES	Under I year	1 to 2	2 to 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upward	Total
CLASS 3ORDER I Inflammn, of Brain . Apoplexy	60	6	20	6 2 1	6	2 3 1 1	7 9 1  1	5 15 4 1 5 	5 22 10  2 	4 25 18   2 2	4 11 12 2 1  2	3 2 I 		84 87 51 5 13 92 17
		1 33	100								100		Lin	
ORDER 2. Inflammn. of heart Aneurism Heart Disease		::	::	6 8	1 1 2 4	3 1 11	1  23	2 I 32	34 35	1  43	18	2	 I	10 4 173 187
ORDER 3. Laryngism Stridulus Laryngitis Bronchitis Pleurisy Pneumonia Asthma Lung Disease	2	3 46 27	1 2 25 I 20	6 2 6	4 7 2	 I 8  20	 1 9 4 17 1 3	 22 2 11 4	39 1 13 4 2	48 1 15 2	 55 2 6 4	 15  1		11 8 372 13 100 15 13
	153	76	49	16	13	31	35	39	59	67	67	17		622
CLASS 3ORDER 4 Gastritis Enteritis Peritonitis Ulcratn.of Intestines Hernia Ileus Intussusception Stomach Diseases Hepatitis Jaundice Liver Disease Spleen Disease	7  2  4 1	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··		3		I I I 2 4 I I I I I 2 2 2	2 2 1 2 2 2 1 1 9 1	1	3	     		2 15 11 3 10  6 2 14 6 46 3
ORDER 5. Nephritis Nephria Diabetes Stone			 I 	4	 I	2	3 2	I 6 2	2 7 2 	 7 1  5	3	1		3 35 7

## TABLE OF DEATHS-Continued.

		ADI		01	DE	CL	110			287 8				
AGES	Under	I to 2	2 to 5	5 to 15	15to25	25to35	35to45	45to55	551065	65to75	75to85	85to95	95 and upwrd.	Total.
ORDER 6. Ovarian Dropsy Uterus, Disease of	::	::	::			.:		I	2 I	1	2	1	::	7 3
12 1 1 2				1.	1		1	2	3	I	2	1		10
ORDER 7. Bones and Joints, Diseases of	2			5	3	2	2	I	2	2	I	1000		20
ORDER 8. Ulcer and Abcess Skin Disease	5			::						::				7
01	5		1		1.,				I					7
CLASS 4ORDER I Premature Cyanosis Spina Bifida Other Malformatns. Teething	131 5 2 6 5	 1 1 5	···  ·  ·  ·  ·  3											131 5 3 8 13
tra 23 33 33	149	7	4											160
ORDER 2.					5	11	8	I						25
ORDER 3.										26	71	33	2	132
ORDER 4. Atrophy & Debility.	48	2	3									de C		53
CLASS 5ORDER I ACCIDNT—NEGLGN Fracture—Contsns.		1		100							I		vite 1300	22
Gunshot			6	  I	2	4	2	4		4			::	9
Poison Drowning Suffocation			1	 I	4	i	I	3	3	2				16 11
Otherwise	2									I				3
811 2 0	14		9	3	6	5	3	7	3	9	I	1		10
ORDER 2. Murder&Manslghtr.	I													1
ORDER 3. Suicide Not Specified					3	4	8	6	2	.:				23
Totals for all Diseases	723	244	249	130	148	185	212	231	259	267				

ampoint standing 2						No. or Epi	idemic	ses in v Diseaurred.	which ses
NAME OF STREET OR ROAD.	Number of Houses Inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which Nuisances were found.	Small Pox.	Searlatina,	Typhus Fever.	Fever.
Abbott street	27 29 16 40 6 9 18 6 9 15 26 13 33 10 14 5 14 16 30 14 3 20 8 6 3 3 4 3 11 3 4 6 11 11 11 11 11 11 11 11 11 11 11 11 1	87 57 60 158 24 43 59 30 45 64 80 60 132 20 66 16 57 48 130 41 12 114 60 30 133 258 66 194 360 49 44 109 47 24 72	35 30 20 69 18 14 28 9 17 36 18 45 10 19 5 20 17 57 14 3 37 15 10 53 68 18 60 10 10 10 10 10 10 10 10 10 10 10 10 10	170 141 89 253 35 49 93 37 59 73 147 134 181 24 119 20 95 83 263 46 17 163 77 43 221 291 72 219 439 59 63 148 37 97	21 20 8 22 2 4 16 2 4 5 19 15 20 4 7 1 6 10 14 5 2 19 11 6 2 19 11 6 11 11 11 11 11 11 11 11 11 11 11 1		 I		
Brook street, Clapton Brown's place Bridge street Brunswick street Brunswick grove	120 27 24 49 17	487 108 96 197 68	240 36 30 74 17	861 136 125 298 67	19 39 19 12 37 12		I		
Carried forward	919	4102	1416	6345	475		18	2	2

didr at possil by 2						Epidemi	ses in which Diseases arred.
NAME OF STREET OR ROAD.	Number of Houses Inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which Nuisances were found.	Small Pox.	Typhus Fever.
Brought forward Caroline place Caroline street, Clapton Charles street. Chapel court Chapel road Chapman road Church road, Homerton Church road, West Hack-	919 11 49 2 5 47 13 41	4102 48 136 8 11 211 52 176	1416 16 58 3 5 76 17 63	6345 49 221 18 29 283 68 289	475 6 19 1 4 24 8 18	18	2 2 I I I
ney	5	20	6	31	I		
Church street, Stoke Newington Church terrace Church yard, Hackney Clarence road Clarke's buildings Cock and Castle lane College lane College street Conduit street and place Conrad street Contage place Cowdray street Cross street Cross street Cross street Crozier terrace Culford road  Derby road Derby road Devonshire place Digby road Downham road	6 12 9 46 4 10 9 19 45 43 15 13 13 8 19 64 2 7 6 80	24 50 43 191 15 54 28 76 180 143 90 26 78 32 76 257 8	6 17 16 69 4 14 12 29 58 51 23 13 19 16 29 100 4 70 12 6 109	43 81 53 301 21 57 43 109 261 189 96 61 78 57 128 439 21 281 53 31 502 87	3 4 23 6 6 6 21 15 21 10 6 5 7 41 	1	
Downham road	12 50	60	19 ·	81 306	9 33		
Duncan terrace  Duncan square  Duncan place  Durham grove	6 36 4 8	30 150 16 32	8 69 8 10	31 283 41 43	28 2 8		
East street	2 50	8 232	87	17 359	2 31	2	···· I
Carried forward	1722	7621	2623	11399	919	27	4 6

Angerone							idemie	ses in Diseaurred.	
NAME OF STREET OR ROAD.	Number of Houses Inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlatina.	Typhus Fever.	Fever.
Brought forward  Edward's lane  Eleanor road  Elgin street  Elizabeth cottages  Essex street  Exmouth place	1722 18 8 58 20 22 23	7621 70 32 348 40 88 88	2623 23 11 79 20 31 31	95 51 397 76 131 136	919 7 4 40 15 11 17		27	4	6
Fairey street Falcon court Farm place, Homerton Fenn street Field view Fisher's place Florefield road Ford place Fountain yard Frame court Frederick place Fulham place	13 11 12 9 6 9 40 4 2 2 3 10	52 40 48 36 36 37 152 34 4 12 40	16 13 21 9 9 11 58 8 2 2 2 3 13	71 61 76 53 61 52 227 39 6 11 19 51	8 5 12 2 1 7 21 1  2 1		I	I	I
Gainsboro road	21 8 25 15 43 17 31 16 41 11 16	120 32 100 90 178 112 124 62 158 44 110 24	40 8 49 17 81 21 41 20 52 12 25 6	161 29 249 81 363 78 131 81 208 52 109 39	12  17 9 30 9 15 7 18 5 11				
Hartwell street Havelock road Haywood's buildings Hedger's grove Hemsley street and place Hertford road Heslop place High hill ferry Holmbrook street	3 59 11 46 24 25 10 154 60	12 250 48 210 99 106 35 454 244	3 89 14 73 35 38 13 181 57	16 368 58 309 152 186 50 793 309	3 31 3 26 15 19 4 61 37		4 6 I 2 2	· · · · · · · · · · · · · · · · · · ·	1
Carried forward	2634	11294	3858	16835	1415		49	6	9

No. of Hennes in which Equipment Discount						Epi	f Hous demie occu	es in v Disea rred.	which
NAME OF STREET OR ROAD.	Number of Houses Inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlatina.	Typhus Fever.	Fever.
Brought forward High street, Homerton Hill street Hindle street Hockley street Holly street Homer road Homerton row	2634 39 6 33 23 83 33 6	11294 166 24 138 78 498 138 24	3858 59 6 61 29 149 45 6	16835 239 31 246 149 591 191 29	1415 19  25 14 33 22 3			6	9  I
Jane's place Jerusalem gardens John street, Homerton John street, London fields. John street, Shacklewell John street, West Hackney Kenton road	8 45 22 14 33 20	16 132 78 69 132 78	8 56 25 17 49 29	29 227 115 105 247 117	4 20 17 5 19 13		· · · · · · · · · · · · · · · · · · ·	 I	
Lamb lane	12 39 9 10 130 9	52 234 32 54 430 47 40	16 22 71 11 14 160 13 12	93 91 295 51 83 571 46 51	4 6 28 3 6 51 6 3		2 I		
Margaret street	43 16 22 56 3 29 40 16 12 6 5 30 43 10 15 8	228 66 108 280 6 67 222 70 52 38 20 17 180 172 40 62 40	64 19 31 95 3 32 61 21 15 14 8 5 5 52 60 14 19 9	279 68 139 391 15 147 266 91 73 81 36 29 239 241 59 79 47	23 8 4 38 1 17 21 10  3 4 3 19 23  7 3		2	I	
Carried ferward	3583	15500	5244	22773	1900	2	58	8	10

Specimen Statement Stateme							idemi	ses in c Dise irred.	
NAME OF STREET OR ROAD.	Number of Houses inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of houses in which nuisances were found.	Small Pox.	Scarlatina.	Typhus Fever	Fever
Brought forward Myrtle street, Dalston	3583 30	15500 164	5244 39	22773	1900	2	58	8	10
Newington common New Church road New street North street Nursery row	11 56 12 73 12	45 206 48 292 48	14 81 17 116 13	63 318 75 409 68	3 19 5 26 4		2 I		
Orchard's street, Kingsland Orchard street, Well street Orchard cottages Ottaway street	12 16 13 36	92 64 50 216	16 21 20 73	78 71 86 319	2 4 7 23		I 2	 I	
Palace road	79 5 14 3 29	289 21 62 12 97	117 5 17 3 27	436 23 61 15 109	39 1 6 	· · · · · · · · · · · · · · · · · · ·	5 2	I	·····
ton Pawnbroker's alley Pear tree place Percy road Percy terrace Pickle's buildings Pleasant place Plough lane Prince Edward's road Prospect place Pyle place	12 6 10 36 32 6 6 10 41 27 3	84 24 20 150 94 12 26 34 193 97	17 6 10 61 41 6 6 13 58 31	81 31 37 241 182 19 21 65 216 116	2 8 15 16 2  6 16				
Queen's court	7	14	3	36	6		т.	1	
Railway crescent Rayner street Red Lion lane Retreat, The Richmond place Ridley Road Rigby's buildings Rochester place Rock place	28 6 6 7 15 4 4 6 3	110 24 24 28 66 8 8 14 12	36 10 7 7 7 19 4 4 6 4	159 43 33 36 77 19 13 19 31	13  4 2 4 4  1	i	1 2 I		1
Carried forward,	4250	18257	6179	26569	2176	4	84	10	12

						No. of Epi	f Hous demic occur	Disea rred.	which ses
NAME OF STREET OR ROAD.	Number of Houses inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which nuisances were found.	Small Pox.	Scarlatina.	Typhus Fever.	Fever.
Brought forward Roseberry place Rosina cottages Rosina street	4250 30 19	18257 134 17 58	6179 45 23 29	26569 193 51 136	2176 12 6 12	4	84  2 I	 I	I2  I
Saint John's place Saint Thomas cottages Samuel row Sanford lane Saxony cottages Shacklewell lane and green Shacklewell row Sheep lane Shepherd's lane Shepherd's place Silk Milk hill and court South row Spring Vale grove Stanboro' yard Stapleton's buildings Stellman street Stonebridge common Suther street Sussex street Swiss cottages	37 71 5 9 21 6 6 2 10 22	50 18 48 76 34 96 148 229 22 18 67 18 18 4 30 132 164 40 22 37	20 8 15 32 12 27 49 100 6 9 28 6 7 2 14 34 53 13 5 11	93 29 76 137 51 143 216 443 31 37 131 25 29 9 59 159 231 69 31 56	16 2 5 10 11 3 30 39 3 4 8  1 8 14 23 4 1 6		I	·····  i ····  i ····  i ···  i ··  i ·	3  1 2 
Taylor's buildings Tennyson terrace Templar road Temple street Thomas street Tottenham road Tranquil place Tryon's court Tudor grove Tyssen passage, Dalston Tyssen street, Dalston Tyssen street, Stoke Newington Union street, West Hack-Hackney Union street, Stoke Newington	64 16 19 109 9 4 17 16 21	15 38 287 68 74 424 33 12 73 60 84 74	5 11 109 18 23 171 12 4 31 23 31 28	33 53 446 98 111 712 51 17 149 119 163 149	1 3 33 7 14 48 6 4 11 10 12 11			i	3
Carried forward	4998	21164	7262	31412	2585	4	102	20	29

				No. of Houses in which Epidemic Diseases occurred.					
NAME OF STREET OR ROAD.	Number of Houses inspected.	Number of Rooms.	Number of Families.	Number of Inmates.	No. of Houses in which nuisances were found.	Small Pox.	Scarlatina.	Typhus Fever.	Fever.
Brought forward Union row Urban place	4998 8 17	21164 32 68	7262 12 34	31412 51 167	2585 3 11	4	102	20	29
Victoria grove	18 66 67	90 396 287	27 96 	99 441  493	5 30  39	2	3 3 6		
Wallis road Warburton road and square Warwick villas Waterloo place Water lane Wellington street Well street West street, Triangle West street, Well street Western place Wetherell road Wharf road White Hart court White Post lane Whitmore road Wick road William street Winchester place Windsor road Winslade road Wood street Woodland street Woodland street Woolpack place	35 28 28 64 30 6 15 14 9 10 4 7 26 228 20 61 34 64 12	34 382 140 84 86 322 128 24 57 62 36 43 8 34 186 993 122 16 110 286 136 266 48	10 136 39 31 34 106 33 6 19 21 9 22 4 9 59 38 7 28 79 49 109 14	59 569 187 141 162 401 149 31 78 93 47 94 17 42 209 1406 186 36 103 343 203 438 67	4 47 6 16 12 29 11 4 4 8 7 7 2 3 18 61 4 1 9 9 23 15 5		10 2 3 2 10 I I I I	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
York buildings	4	32	6	39 32	10				
Other places Other cases of Epidemic Disease	7	41	14	57	4	1	33	2	10
TOTAL	6037	25733	8793	37882	2993	7	177	24	47

Year.	Cesspools emptied, filled up, and drained into Sewer.	Repairs, Cleanse or Whitewash.	Choked Drains cleansed or repaired, or re-laid.	Yards paved or paving re-laid.	Total Number of Nuisances abated.	
1856	372	93	164		1567	
1857	351	226	337		1789	
1858	1518	132	138		2515	
1859	447	. 85	138		1224	
1860	264	182	256		1226	
1861	300	252	294		2487	
1862	257	247	358		1235	
1863	330	367	359		1696	
1864	169	211	411		1410	
1865	213	252	433		. 1512	
1866	498	1415	735		4260	
1867	166	1217	565	508	5811	
1868	67	1321	374	461	3923	
1869	43	1767	277	228	4354	
1870	31	2388	653	326	4240	
1871	113	2530	344	226	5180	
1872	27	2021	350	130	3909	
1873	15	2437	536	343	5406	
1874	47	2422	738	381	6110	
1875	18	1947	757	245	6262	

Privy Cesspools emptied, filled up, and drained into the Sewer	
Total number of Nuisances from defective drainage	1149
Yards paved or paving re-laid 275 Number of Dust Bins provided 469 Houses repaired, whitewashed, &c 2047 No. of Houses in which the ventilation has been improved 11 ,, to which a better supply of water	
has been given or the apparatus	
improved 1493	
Total hamber of meaning inspected.	
Total number of nuisances from defect in houses	4295
Number of houses disinfected 255 ,, overcrowded 31 Pigs removed from separate premises 37	
Stable dung and other refuse removed (excluding	
dust 98	
Filthy places cleansed 136	
Other nuisances removed 261	010
	818
Total number of nuisances abated	6262
Number of Lodging Houses' Notices served	196
" Notices for disinfecting premises	255
" Letters sent out	673
" Preliminary notices served	3618
,, Peremptory	1597
" Statutory	1317
,, Persons summoned before a magistrate	81
Copies of summonses and orders made out	486
,, Dust complaints received and attended to	3019
"Bodies deposited and taken to the Mortuary "Houses from which bedding, &c. was removed	39
to be disinfected at the Board's Apparatus	51
" Articles disinfected at Board's Apparatus	746
" Fish condemned unfit for human foodpads	76

## PREMISES INSPECTED

DURING THE YEAR 1875.

Number	of Houses inspected under the Sanitary Act, 1866	6037
"	,, in which Epidemic disease has appeared	255
,,,,	Premises inspected from complaints received	465
,,,	Cow sheds inspected	89
,,	Slaughter houses inspected	77
,,	Greengrocers' yards inspected	159
,,,	Fishmongers' and Poulterers' yards inspected	74
,,	Bakehouses inspected	176
,,	Houses measured as well as inspected	18
,,	Urinals inspected	221
	Total number of premises inspected	7571