

[Report of the Medical Officer of Health for St. Pancras, Metropolitan Borough].

Contributors

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St. Pancras, Middlesex.

TWENTY-FIRST ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

Being the Report for the Year 1876.

TO THE VESTRYMEN OF ST. PANCRAS.

GENTLEMEN,

During the year 1876 (52 weeks) the number of births registered in the Parish of St. Pancras was 8,317, and of deaths, 5,183 (gross numbers). After making the necessary allowances for deaths of non-parishioners in public institutions situated in the Parish, and for deaths of parishioners in hospitals outside St. Pancras, the corrected number of deaths is 5,019; and this number may be taken as approximately representing the gross mortality among those persons whose sanitary welfare is entrusted to you by the Legislature.

The births exceeded those of the year 1875 by 307.

The deaths were fewer by 382 than in the year 1875.

I estimate that the population in the middle of the year 1876 was 233,000; and my calculations of mortality are based upon this estimate.

The annual rate of mortality in 1876 was 21·54 per 1000 persons living ; and that of the preceding ten years, 1866—1875, was 23·21 per 1000. The death-rate was hence 1·67 per 1000 below the average of the preceding 10 years ; and was lower than during any one of those years, except the year 1872.

The appended tables show clearly in what respects the mortality of 1876 was normal, and in what respects the usual limits were transgressed.

It will be seen that the deaths of infants under one year of age formed a smaller proportion to the number of registered births than in the preceding year. Since, however—owing to a change in the statutory law—registration of births has become much more general of late, it would, perhaps be safer to take the deaths among infants and compare them with the deaths at all ages. If this be done, it will be seen from table No. 2 that the deaths of infants under one year of age were more, both absolutely and relatively to the total number of deaths, than in 1875.

Table No. 3 is instructive. It classifies the deaths in private houses and in the Workhouse according to diseases ; and shows the respective proportions of various diseases, as measured by the mortality caused by them.

In table No. 4 I have classified various more or less preventible diseases ; comparing the deaths from the various classes of diseases with population and total deaths. It will be noted that proportion of deaths from the seven principal zymotic diseases was almost the same (3·58) per 1000 of the estimated population as in the preceding year ; but as the total death-rate was lower in 1876 than in 1875, the deaths from zymotic diseases (167) per 1000 of total deaths was higher in 1876 than in 1875. Just one-sixth of the deaths of 1876 were due to small-pox, measles, scarlet fever, diphtheria, whooping cough, continued fevers, and diarrhoea ; and this death-rate was a little higher than the average death-rate of London from the same diseases.

Table No. 5 analyses the mortality from each one of these zymotic diseases, and shows their variableness during a period of eleven years. The gross death-rate from measles, diphtheria, whooping cough, and diarrhoea, was in 1876 above, and from small-pox, scarlet fever, and continued fevers, below

the average of the preceding ten years. From pulmonary diseases (other than phthisis), tubercular diseases (including phthisis), wasting diseases of childhood, and the convulsive diseases of infants, the mortality was in each case lower than during the preceding year.

SMALL POX.

In the autumn of the year the rise in the number of cases of small-pox reported to the Sanitary Department, following on a severe outbreak of the disease in the adjacent parish of Islington, gave rise to considerable apprehension; and the Islington outbreak was the prelude to a general Metropolitan epidemic of the disease. The following table shows the progress of small-pox from the commencement of the epidemic in this parish in September to the close of the year—

Week ending.	New cases treated at home.	New cases treated in hospitals.	Total cases.	Deaths.
September 30th	2	0	2	1
October 7th	1	0	1	0
„ 14th	0	1	1	0
„ 21st	2	3	5	0
„ 28th	0	0	0	0
November 4th	1	2	3	0
„ 11th	2	7	9	0
„ 18th	0	2	2	0
„ 25th	0	10	10	1
December 2nd	10	9	19	4
„ 9th	1	15	16	7
„ 16th	0	4	4	4
„ 23rd	2	10	12	2
„ 30th	8	11	19	0
Totals	29	74	103	20

Of the 20 fatal cases, 7 died in private houses, and 13 in hospitals.

To the early removal of cases into hospital must be attributed in part the comparative freedom from small-pox

of this Parish in 1876. Three per cent. only of the mortality from small-pox in the Metropolis was referrible to the deaths of St. Pancras parishioners, whilst our local population forms $6\frac{2}{3}$ per cent. of the whole Metropolitan population. Sixty-five per cent. of the total cases included in the last table died in hospitals, and 35 per cent. in private houses; whereas, in the Metropolis outside St. Pancras during the corresponding period 52.7 per cent. only died in hospitals, and 47.3 per cent. in private houses. Great merit attaches to the Poor Law Officers for the zeal and energy with which they had pauper cases removed into hospitals.

ISOLATION OF INFECTIOUS CASES.

Towards the close of the year the rapid spread of small-pox in the Metropolis, and its more limited extension in St. Pancras, induced me to advise the re-opening of our own Temporary Hospital. Great praise is due to the Sanitary Committee and the Vestry for the cordiality with which they adopted my recommendation, and for the promptitude with which the necessary steps were taken. Meantime arrangements were entered into with the authorities of the Highgate Small-Pox Hospital for the reception of patients on payment of a fee by the Vestry for each case. Our own Hospital has been a great boon to the public, and I have the pleasure of reporting that during the present epidemic of small-pox, there has been only one day when there was not sufficient hospital accommodation for all sufferers needing and willing to avail themselves of it. I, as your Chief Sanitary Officer, refer with just pride to the efficient steps which you have taken to stay the epidemic, and can say that the Vestry of St. Pancras has by its action greatly raised itself thereby in the public estimation.

I may also refer to the fact, as showing a great advance in the completeness of our sanitary organization, that you have, during the past year entered into an engagement for the reception into the London Fever Hospital of patients who are not admissible into the hospitals of the Metropolitan Asylum Board, and who are without proper lodging and accommodation.

In connection with the epidemic of small-pox I may mention that the Managers of the Metropolitan Asylum District

Board invited an expression of opinion from the Vestry as to the propriety of merging the present Local Sanitary Authorities in one Central Authority for hospital purposes, such Central Authority to be, not merely a Department of Poor Law Administration, but to have the powers of the Sanitary Acts conferred upon it.

The Vestry concurred in the opinion of Managers of the Metropolitan Asylum District that the duty of providing sufficient hospital accommodation for non-paupers, as well as paupers, should be exercised by this Board, which should continue to be a Department of Poor Law Administration for this special purpose, but should not have the powers of the Sanitary Acts conferred upon it. Virtually this would be to continue the present system, except that all persons of whatever social rank might be compelled to go into pauper hospitals when suffering from infectious diseases; and that the Vestry would give up its present power to furnish hospital accommodation.

The Medical Officers of Health of the Metropolis had also under their consideration the Resolutions adopted by the Managers of the Metropolitan Asylum District Board, respecting the provision for the isolation and treatment of epidemic infectious disease in London; they having been invited to express an opinion thereon.

These Officers, as a body, agreed with the opinion of the Managers, *that adequate provision for the isolation and treatment of epidemic infectious disease in the Metropolis does not exist;* and under existing circumstances they endorsed the conclusion contained in the above Resolutions, *"that such provision could be best made in a comprehensive and systematic manner by one Central Authority acting for the whole Metropolis."* But as regards the constitution of the Authority and the administration of the infectious disease Hospitals, the Officers were of opinion that such Hospitals, regarded in the light of a sanitary provision for the advantage of the general population, should be completely dis severed from any relation with pauperism.

It may be expected that the Resolution of the Managers of the Metropolitan Asylum District, thus endorsed with modifications by the Metropolitan Vestries and their Medical Officers, will be speedily acted upon, and steps taken to centralize Sanitary Authorities for the provision of hospital accommodation.

OVERCROWDING, &c.

One portion of sanitary work has engaged my attention for a lengthened period, and has received more earnest attention since the passing of the Artisans' and Labourers' Dwellings Acts, 1875. I refer to overcrowding, and the habitual unsanitary condition of the houses of the lowest classes of the population. It will be remembered that after long deliberation and enquiry I advised the Vestry that in my opinion it was not then expedient to apply that Statute to any area within the Parish; and this conclusion has not been challenged. At the same time I stated that there was one street (Derry Street) as to which it might be speedily advisable to review my opinion. One side of Derry Street, and the adjacent Prospect Terrace, are very dilapidated, and on each successive occasion of cleansing and repairing the structural condition of the houses is found to be worse than before. No long time must elapse before the houses in the Street and Terrace will have to be demolished, but at present I am in this difficulty, that the area is too small to be dealt with under the Act of 1875, and the Artisans' and Labourers' Dwellings Act, 1868, is, as the costly experience of other Sanitary Authorities teaches us, almost inoperative. The highly penal nature of this latter statute, which, in the event of demolition, gives no compensation to the owner whose property is destroyed, makes Courts of Justice, extend every possible leniency to the owner. Moreover, the Act does not contemplate any scheme for the reconstruction of the houses demolished, or other provision for the population displaced. The knowledge of these defects in the Act of 1868 renders me loth to apply it so long as other expedient can be resorted to for keeping houses in anything like a habitable condition.

The state of the houses included within the area embraced by the Midland Railway Improvements Acts is year by year becoming worse. Had it not been for the fact that this property is dealt with by local and special enactments, I should long ago have reported the area under the Artisans' and Labourers' Dwellings Act, 1875. As the houses in this area get into a more and more unsanitary and dilapidated state they are shut up, and the displaced population com-

pelled to seek house-room elsewhere. Thus the neighbouring districts are becoming more overcrowded; and no steps whatever are taken by the Midland Railway Company to provide the poor people thus displaced with new habitations. This is an evil for which I see no practicable remedy under the existing law.

GAS.

It was not until late in the year that the new Gas Testing Room at the Vestry Hall was fitted up with new and improved Apparatus. Hence but few testings could be made, and these could not be relied on till the working of the Apparatus had been verified. No general conclusions can therefore be drawn as to the quality of the gas from the few testings made in 1876.

The purification of coal-gas from sulphur impurity, *i.e.*, from sulphur compounds other than sulphuretted hydrogen, involves a problem which for the last twenty years has much engaged the attention of chemists and gas engineers; and it is only within the last five or six years that we have possessed accurate knowledge of the means by which gas could in any great degree be deprived of any considerable amount of this sulphur impurity. Within the latter period of time our knowledge of the conditions under which the sulphur impurity may be taken out of gas have undergone an extraordinary development; and, thanks to Mr. Patterson, we are now possessed of a method of depriving illuminating gas of about one-half of the sulphur impurity which it used to contain when purified by oxide of iron. This method consists in the use of lime in a peculiar manner before the use of oxide of iron. The oldest method of gas purification consisted in the use of lime in an empirical manner, and the results were uncertain. The nuisance arising from the spent lime, technically known as "Blue-Billy," was so great that other means of purification were sought. Such a substance was found in oxide of iron, by the use of which not only was the nuisance inseparable from the use of lime avoided, but the cost of purification lessened; and thus the gas could be supplied to the consumer at a lower cost. The oxide, however, removed only one form of sulphur impurity from the gas. Sulphur was still left in forms of combination untouched by the oxide, and it is these forms of

sulphur to which the term "sulphur impurity" is now exclusively applied. On the average about 33 grains of sulphur is left in this form in each hundred cubic feet of gas after purification by means of oxide. It having been found that by treating the gas thus purified in a special manner a corrosive fluid, oil of vitriol, could be extracted from the gas, it was, too hastily as I believe, assumed that oil of vitriol would be found in injurious amount during the burning of gas containing this sulphur impurity. Hence there have been various legislative enactments requiring the sulphur impurity to be kept beneath certain prescribed amounts. Up to the year 1872 all the enactments proved abortive, for no means were known of reducing the sulphur impurity with any degree of certainty. Since 1872, owing to the discovery of the conditions under which the lime might be made to remove the sulphur impurity from gas, a great revolution has taken place in the mode of purification. The oxide process has given way almost entirely in the Metropolis to the lime process, and the gas now supplied to this parish does not contain, when tested by the same process, more than half the sulphur impurity that it contained six years ago; indeed, the restriction now placed upon the gas companies by the gas referees, to whom is entrusted the duty of prescribing from time to time the amount of allowable impurities, is so onerous that the companies are obliged to rely upon the lime process of purification.

So far as the removal of sulphur impurity from the gas is concerned the results are admirable; but a new difficulty presented itself, and one which from a health point of view is of great importance. The stench arising from the use of lime is abominable, and towards the end of the year 1875 and the beginning of 1876, the complaints respecting the King's Cross Gas Works—the only gas works in this Parish—were bitter and frequent. The complaints were renewed during the past winter, the nuisance being of course greatest in the winter months, when the make of gas is greatest. The nuisance arises from the apparently necessary exposure of the spent lime during its removal from the purifiers. The disgusting odour evolved could at times be felt six hundred yards away from the Works. I have given great attention to the subject, and suggested various modifications of the then plan of emptying the purifiers, so as to get rid of the nuisance. The Officials of the Company have always displayed the utmost readiness to carry out my suggestions some of which put the Company to great expense. Unhappily the most promising

modification—that of ventilating the purifiers by drawing air through them—was found on trial to be so dangerous in consequence of the explosive nature of the gaseous mixtures formed, and the new stinks evolved were so atrocious, that after trial, fortunately in another parish, they were obliged to be abandoned. Eventually the nuisance was kept within more manageable limits, and the Company having failed in other more favourably situated and better furnished works than those at King's Cross to get rid of the nuisance, there being moreover an absence of indubitable evidence that the disgusting odour of the lime is injurious to health, and the Company being under heavy penalties to keep down the sulphur impurity, which they can only do by the use of lime, I have not felt it my duty to recommend any steps to be taken against the late Imperial and now Gas Light and Coke Company.

The evil results arising from the enforced use of the lime process of purification have directed the attention of chemists to the alleged ill effects arising from sulphur impurity in gas, and to an entire review of our knowledge on the question. I have myself made a large number of observations and experiments which throw, I believe, considerable light on the subject, and others have by their experiments added greatly within the last few months to our knowledge of the subject.

The sulphur impurity of gas is either the same substance, bisulphide of carbon, which we are in the habit of burning for the production of a beneficial disinfectant, sulphurous acid; or a class of bodies of a similar constitution. It is produced during disinfection in quantities enormously greater than can ever be the case when gas is burnt. Yet none of the destructive effects arising from the supposed production of oil of vitriol has ever been observed during an experience of ten years. Experimentally I find that not more than five per cent. of the sulphur impurity in gas, as determined by the prescribed apparatus, is converted into sulphuric acid, even when the gas is burnt under the conditions most favourable for its production, and that most of the sulphuric acid so produced is at the moment of generation neutralised and rendered harmless by the small quantity of ammonia always present in the gas and in the air. Moreover, the undoubtedly unpleasant effects felt in a gas-lighted room—such as stuffiness and irritation—may all readily be accounted for by other conditions resulting from the burning of gas; and further no perceptible difference as to discomfort is felt in rooms lighted

under equal conditions of ventilation, by a gas containing 17 and one containing 39 grains of sulphur impurity respectively. These other conditions are high temperature, great and injurious dryness of the air, and the products resulting from the burning of other constituents of coal gas than sulphur impurity. In a room with the ordinary means of ventilation and lighted by gas, I find, for instance, that the atmosphere becomes in a few hours of practically constant composition, and that the air of the room exhibits three layers of different character, viz.: (1.) a comparatively cool layer extending from the floor to the level of the breast of the chimney-piece; (2.) a layer, somewhat warmer and dryer, extending from the last to a little distance above the tops of the doors; and (3.) a hot and very dry layer, very disagreeable to the senses, reaching from the last to the ceiling. Ordinarily the top of a gas-lighted room will be from 12 to 15 degrees Fahrenheit hotter than at the ordinary breathing height; and the difference may be much greater than this if much gas be used. The carbonic acid impurity will rise to ten or twelve times the amount at the ceiling that exists in pure air, and to six times as much as is found at lower levels in the gas-lighted room. Besides this, Drs. Odling and Russell have determined that the actual amount of sulphur in any form of combination in the air of an ordinary gas-lighted room is very small, not forming more than 1000th part of the other impurities formed when a gas is burnt to the ordinary extent, containing 33 grains of sulphur per 100 cubic feet, *i.e.*, twice the amount of sulphur in the gas supplied to this Parish. This amount of sulphur compounds in the air is altogether trivial.

These facts, and the annoyance caused to the public by the lime method of gas purification, induced the Gas Light and Coke Company to apply to Parliament for a relaxation of the present restriction on sulphur impurity, so as to enable them to revert to the oxide system of purification; and I was called upon to give evidence before a Committee of the House of Commons as to the nuisance arising from the lime system of purification as carried on in this Parish. The result of the Company's application to Parliament is not yet known. *

*Note.—The Committee rejected the Company's Bill on June 7th, 1877.—T. S.

COWHOUSES.

The condition of Cowhouses has been very satisfactory during the year, and no irregularities have been reported.

SLAUGHTERHOUSES.

These have, on the whole, been well kept, and very few complaints have been made. The most serious was the slaughter of a diseased sheep in a slaughterhouse situated in the northern part of the parish. I believe that the offence was committed without the knowledge of the licensee. It was necessary, however, in the opinion of your solicitor, to whom the Sanitary Committee referred the case, that the licensee, as well as the owner of the sheep, who used the slaughterhouse temporarily, should be summoned. The 11th bye-law had not been complied with, and the result was that the owner was fined by the Magistrate, and the occupier of the slaughterhouse acquitted. Beyond this no complaints worthy of record have been received.

I have the honour to be,

Gentlemen,

Your obedient Servant

THOMAS STEVENSON,

Medical Officer of Health and Examiner of Gas.

Sanitary Department,

Vestry Hall, Pancras Road, N.W.

May 28th, 1877.

TABLE I.
ST. PANCRAS SANITARY DISTRICT.

Table showing the Population, Inhabited Houses, Births, Deaths, and Marriages, for the year 1876 and 3 Years preceding.

GROSS NUMBERS.

Population estimated at the middle of the Year *	No. of Inhabited Houses in Parish or District. (Estimated)	Births.	Deaths.**
1876 234,000	25,360	8,317	5,019
1875 231,000	25,140	8,000	5,401
1874 229,000	24,920	8,010	4,982
1873 227,000	24,700	8,095	5,392
Average of 4 Years } 1873-1876 }	25,030	8,105	5,198

NOTES.

1. Population at Census 1871, 221,465.
2. Area in acres, 2,672.
3. Average No. of Persons in each house at Census 1871, 9.2.

* For statistical purposes the Registrar-General estimates the population to the middle of the year on the basis of the rate of increase ruling between the two preceding Census periods. The estimate of population may be checked by the known number of inhabited houses, and by the average number of inmates per house, as ascertained at the preceding Census.

** The deaths of non-parishioners in public institutions within the parish are deducted, but a proportion of the deaths occurring in General Hospitals, relative to the population of the parish or district, is added to the total number of deaths in this column.

TABLE II.

ST. PANCRAS SANITARY DISTRICT.

Table showing the Annual Birth-Rate, Rate of Mortality, Death Rates among Children, and Deaths in Public Institutions, for the Year 1876 and 10 Years preceding.

	Birth Rate per 1000 of the Population.	Annual Rate of Mortality, per 1000 living.	Deaths of Children under 1 year : per centage of total Deaths.	Per cent- age of Deaths of Children under 1 year to Registered Births.	Deaths of Children under 5 years : per centage of total Deaths.	Total Num- ber of Deaths in Public Institutions
1876....	35.7	21.54	24.8	15.5	37.9	1,119
1875....	34.5	23.38	23.4	15.8	39.7	1,091
1874....	35.0	21.75	24.4	15.5	37.4	1,013
1873....	35.1	22.32				
1872....	35.1	21.28				
1871....	33.8	25.19				
1870....	34.6	24.14				
1869....	33.7	22.81				
1868....	35.2	22.50				
1867....	34.1	24.25				
1866....	33.4	24.45				
Average of 10 years 1866 to 1875.	} 34.5	23.21				

ST. PAUL'S SANITARY DISTRICT.

Table showing the Annual Birth-Rate, Rate of Mortality, Death Rates among Children, and Deaths in Public Institutions for the Year 1876 and 10 Years preceding.

Year	Birth Rate per 1,000 of the population	Death Rate per 1,000 of the population	Rate of Mortality among Children per 1,000 of the population	Deaths in Public Institutions per 1,000 of the population	Total Deaths per 1,000 of the population
1876	33.7	23.4	24.8	15.6	1,118
1875	34.6	23.3	24.1	15.8	1,081
1874	35.0	23.7	24.4	15.6	1,043
1873	35.7	23.8			
1872	36.7	24.2			
1871	37.8	24.1			
1870	37.9	24.1			
1869	38.7	24.1			
1868	38.2	24.2			
1867	34.1	24.3			
1866	33.4	24.4			
10 Years preceding 1876	34.6	23.4			

Deaths Registered at several groups of Ages from different causes during the Year 1876.

[illegible]

CAUSE OF DEATH.		Under 2 months.	AGES.																		Total under 5 years.	Total.
			0 to 1 1 2	1 to 2 2 3	2 to 3 3 4	3 to 4 4 5	4 to 5 5 6	5 to 6 6 7	6 to 7 7 8	7 to 8 8 9	8 to 9 9 10	9 to 10 10 11	10 to 11 11 12	11 to 12 12 13	12 to 13 13 14	13 to 14 14 15	14 to 15 15 16	15 to 16 16 17	16 to 17 17 18			
LOCAL DISEASES continued.																						
Order 2.—Organs of Circulation.																						
1	Pericarditis	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2		
2	Aneurism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3		
3	Heart Disease, &c.	3	4	4	1	8	17	19	37	56	48	27	1	...	...	...	...	...	12	285		
Order 3.—Respiratory Organs.																						
1	Laryngitis	...	...	2	5	6	15	...	2	...	...	...	...	...	...	...	...	...	...	28		
2	Bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	63		
3	Pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	Asthma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	169		
5	Heart Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	181		
6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	130		
Order 4.—Digestive Organs.																						
1	Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9		
2	Enteritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	Peritonitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	Asthenia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	Obstruction of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
6	Hernia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
7	Dyspepsia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
8	Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
9	Intestinal Obstruction	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
10	Stricture of Intestines	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
11	Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
12	Stomach Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
13	Pancreas Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
14	Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
15	Liver Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
16	Spleen Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 5.—Urinary Organs.																						
1	Nephritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	Ischuria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	Bright's Disease (Nephria)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	Calculus (Stone)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
6	Cystitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
7	Kidney Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 6.—Organs of Generation.																						
1	Orchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	Prostatitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	Uterus Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 7.—Organs of Locomotion.																						
1	Synovitis (Arthritis)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	Joint Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 8.—Intestimentary System.																						
1	Phlegmon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	Ulcer	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	Other Disease, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
CLASS IV.—DEVELOPMENTAL DISEASES.																						
Order 1.—Diseases of Children.																						
1	Premature Birth.	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	73	73		
2	Cyanosis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1		
3	Scrofula	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	Other Malformations	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	Toxemia	1	45	16	9	...	...	...	...	...	...	...	...	...	...	...	...	...	4	66		
Order 2.—Adults.																						
1	Puerperia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
2	Childbirth (see Puerperal Fever)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 3.—Old People.																						
1	Old Age	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Order 4.—Nutrition.																						
1	Atrophy and Debility	119	56	5	4	...	...	...	...	...	...	...	...	...	...	...	...	...	154	178		
CLASS 4.—VICIOUS DEATHS.																						
Order 1.—Accident or Negligence.																						
1	Fractures and Contusions	1	2	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	8	32		
2	Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
3	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
4	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
5	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
6	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
7	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
8	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
9	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
10	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
11	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
12	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
13	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
14	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
15	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
16	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
17	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
18	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
19	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
20	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
21	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
22	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
23	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
24	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
25	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
26	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
27	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
28	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
29	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
30	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
31	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
32	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
33	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
34	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
35	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
36	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
37	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
38	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
39	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
40	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
41	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
42	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
43	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
44	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
45	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
46	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
47	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
48	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
49	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
50	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
51	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
52	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
53	Choking	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
54	Choking	...	...	...	...	...	...	...	...	...												

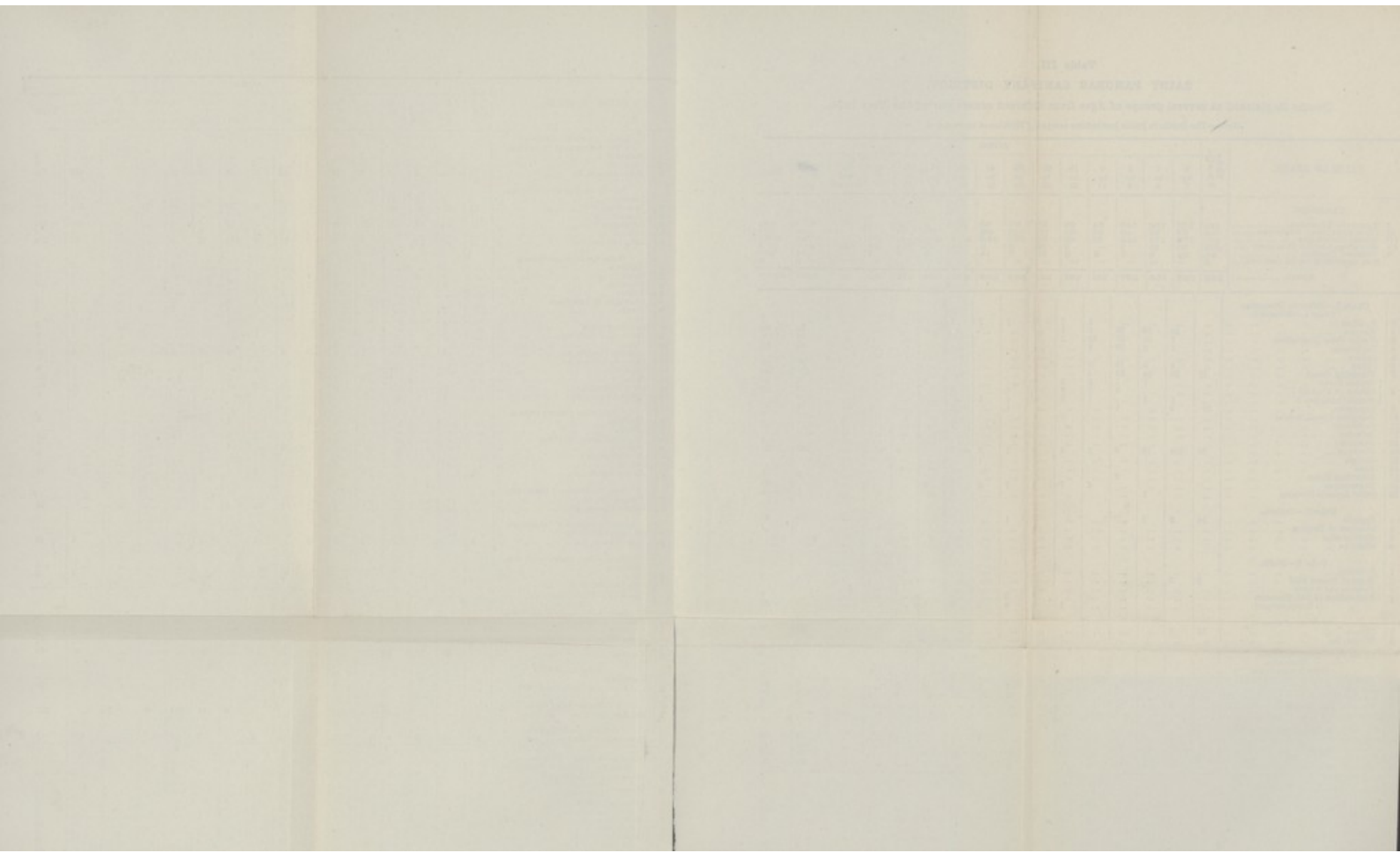


Table IV.

Table showing the Mortality from certain classes of Diseases, and proportions to Population, and to 1,000 Inhabitants in 1878.

Proportion to 1,000 Inhabitants	Proportion to Population	Total Deaths	
187.9	2.34	833	1. Fever, Typhoid, &c. malignant diseases.
237.9	4.94	1073	2. Primarily Diseases (other than Typhoid).
139.0	2.83	639	3. Tubercular Diseases.
34.2	1.19	233	4. Wasting Diseases of Infants &c.
10.3	1.13	323	5. Convulsive Diseases of Infants &c.

Notes.

1. Includes Typhoid, Typhus, Malaria, Enteric Fever, Diphtheria, Whooping Cough, Tetanus, and Infantile.
2. Includes Typhoid, Typhus, Cholera, and Tetanus.
3. Includes Malaria, Anæmia, Debility, want of breast Milk, and Convulsive Tetanus.
4. Includes Hydrocephalus, Infantile Marasmus, Convulsions, and Tetanus.
5. Includes the deaths from Typhoid, Enteric Fever, &c. which are reported as such. Cases of other febrile diseases in Infants, especially the Whooping Cough, are not included.

TABLE IV.

ST. PANCRAS SANITARY DISTRICT.

Table shewing the Mortality from certain classes of Diseases, and proportions to Population, and to 1,000 Deaths in 1876.

	Total Deaths.	Deaths per 1000 of Population.	Proportion of Deaths to 1000 Deaths.
1. Seven Principal Zymotic Diseases ..	835	3.58	167.0
2 Pulmonary Diseases (other than Phthisis)	1023	4.84	237.9
3. Tubercular Diseases .	559	2.65	130.0
4. Wasting Diseases of Infants	233	1.10	54.2
5. Convulsive Diseases of Infants	328	1.13	76.3

NOTES.

1. Includes Small Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhœa.

3. Includes Phthisis, Scrofula, Rickets, and Tabes.

4. Includes Marasmus, Atrophy, Debility, want of Breast Milk, and Premature Birth.

5. Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

NOTE.—Under the heading “Seven Principal Zymotic Diseases” deaths in Special Hospitals are included. Under the other headings deaths in Public Institutions, excepting the Workhouse, are not included.

TABLE V.
ST. PANCRAS SANITARY DISTRICT.

Table shewing the Number of Deaths from the seven principal Zymotic Diseases, in the 10 Years 1866 to 1875, and in the Year 1876.

Disease.	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	Annual Average of 10 years, 1866-76.	Proportion of Deaths to 1000 Deaths in two years, 1874-75.	1876	Proportion of Deaths to 1000 Deaths in 1876.
Small Pox	43	65	12	1	21	448	58	2	3	2	67	0.6	22	4.4
Measles	101	83	102	68	87	105	105	221	64	82	102	15.2	117	23.4
Scarlet Fever	121	101	237	239	477	95	70	17	95	220	167	31.7	137	27.4
Diphtheria	31	44	50	20	35	37	16	38	35	55	36	9.8	38	7.6
Whooping Cough	211	166	128	221	99	158	259	215	121	232	181	36.0	198	39.6
Fever	170	118	122	126	158	112	78	78	67	58	109	15.2	84	16.8
Diarrhœa	215	211	286	219	227	236	235	253	222	178	228	43.1	239	47.8
Total	892	788	937	894	1104	1191	821	824	607	827	888	151.7	835	167.0
London	..	..	..	..	..	..	..	..	11352	13518	..	156.9	823	162.3

TABLE VI.
ST. PANCRAS SANITARY DISTRICT.

Report of the Sanitary Work, &c., completed in the year ending
December 31st, 1876.

No. of Complaints received during year	-	-	1815
No. of Houses, Premises, &c., inspected	-	-	2000

RESULTS OF INSPECTION.

Orders issued for Sanitary Amendments of Houses and Premises	-	-	-	1347
Houses and Premises, &c., Cleansed, Repaired, and Whitewashed	-	-	-	937
Houses Disinfected after Infectious Diseases	-	-	-	293

HOUSE DRAINS.

Repaired, Cleansed, &c.	-	-	-	-	321
Trapped or Ventilated	-	-	-	-	473

PRIVIES AND WATER CLOSETS.

Repaired, Cleansed, &c.	-	-	-	-	432
Supplied with Water	-	-	-	-	288
New provided	-	-	-	-	9

DUST BINS.

New provided	-	-	-	-	55
Repaired, Covered, &c.	-	-	-	-	77

WATER SUPPLY.

Cisterns (new) erected	-	-	-	-	18
Cisterns Cleansed, Repaired, and Covered	-	-	-	-	248

MISCELLANEOUS.

Removal of accumulations of Dung, Stagnant Water, and other Refuse	-	-	-	-	97
Removal of Animals improperly kept	-	-	-	-	19
Bakehouses	} Regularly inspected	-	{		
Licensed Cowhouses					65
Licensed Slaughterhouses					59
Other Proceedings, e.g. Legal Proceedings	-	-	-	-	35

Return for the Period—June to December, 1875.

RETURN made by Mr. W. T. JONES, Vaccination Officer of the Sub-Districts of ST. PANCRA'S PARISH, respecting the Vaccination of Children whose Births were Registered in his District, from 1st June, to 31st December, 1875.

Registration Sub-Districts comprised in the Vaccination Officers' District.	Number of Births returned in the Birth List Sheets as Registered from 1st Jan., to 31st De- cember, 1875.	Number of these Births duly entered by 31st Jan., 1877, in Columns 10, 11, and 13 of the Vaccination Register (Birth List Sheets, viz. :					Number of these Births which on the 31st Jan., 1877, remained unentered in the Vaccination Register on Account (as shown by Report Book.)			Number of these Births remaining on 31st Jan., 1877, neither duly en- tered in the Vac- cination Register (columns 3, 4, 5 and 6 of this Return) nor temporarily accounted for in the Report Book, Cols. 8, 9, and 10 of this Return.
		Col. 10. Successfully Vaccinated.	Col. 11. Insuscep- tible of Vaccination.		Col. 13. Dead Unvacci- nated.		Postponement by Medical Certificate.	Removal to Districts, the Vaccination Officer of which has been duly apprised.	Removal to Places un- known, which cannot be reached, and Cases not having been found.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1 Kentish Town . .	2854	2421	11	—	190		2	7	223	—
2 Regent's Park . .	1312	1108	8	—	94		1	2	97	2
3 Camden Town . .	791	665	—	—	72		1	—	51	2
4 Somers Town . .	1321	1075	1	—	121		1	—	121	2
5 Tottenham Court Road .	823	663	1	—	69		2	4	83	1
6 Gray's Inn Road . .	941	755	2	—	68		2	3	109	2
Total . .	8042	6687	23	—	614		9	16	684	* 9

* These Cases have been entered in the Report Book, Certificates promised.

Return for the Period—January to June, 1876.

RETURN made by Mr. W. T. JONES, Vaccination Officer of the Six Sub-Districts of ST. PANCRA'S PARISH, respecting the Vaccination of Children whose Births were Registered in his District from 1st January, 1875, to June 30th, 1876, inclusive.

Registration Sub-Districts comprised in the Vaccination Officer's District.	Number of Births returned in the Birth List Sheets as registered from 1st January to 30th June, 1876.	Number of these Births duly entered by 31st January, 1877, in Columns 10, 11 and 13 of the Vaccination Register (Birth List Sheets) viz :					Number of these Births which on 31st January, 1877, remained unentered in the Vaccination Register on account (as shown by Report Book) of			Number of these Births remaining on 31st January, 1877, neither duly entered in the Vaccination Register “(Columns 3, 4, 5 & 6 of this Return, nor temporarily accounted for in the Report Book,” (Columns 8, 9 & 10 of this Return).
		Col. 10. Successfully Vaccinated.	Column 11.		Col. 13. Dead Unvacci- nated.	Postponement by Medical Certificate.	Removal to Districts, the Vaccination Officer of which has been duly apprised.	Removal to Places unknown, or which cannot be reached ; and Cases not having been found.		
			Insuscep- tible of Vaccination.	Had Small Pox.						
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1 Kentish Town - -	1536	1340	1	...	91		5	5	86	8
2 Regent's Park - -	670	563	1	...	49		2	7	47	1
3 Camden Town - -	439	384	...	...	24		1	1	27	2
4 Somers Town - -	645	539	1	...	58		...	2	44	1
5 Tottenham Court Road -	454	367	...	...	43		2	2	34	6
6 Gray's Inn Road - -	560	445	3	...	38		2	3	64	5
TOTAL - - -	4304	3638	6	...	303		12	20	302	* 23

* These cases have been duly entered in the Report Book, certificate produced.