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Manchester and Salford Sanitary Association.

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ANNUAL REPORT

OF THE

COMMITTEE

OF THE

MANCHESTER AND SALFORD

SANITARY ASSOCIATION,

BEING

A SUMMARY OF THEIR PROCEEDINGS FOR THE YEAR 1869.

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MANCHESTER AND SALFORD SANITARY ASSOCIATION.

Committee and Officers for the Year 1870.

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The Right Rev. The LORD BISHOP OF MANCHESTER.

Vice-Presidents:

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The Worshipful the MAYOR of SALFORD.

The Very Rev. the DEAN of MANCHESTER.

MARQUIS of HARTINGTON.

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A. H. HEYWOOD, Esq.

Rev. Canon RICHSON, M.A.

Sir JOSEPH WHITWORTH, Bart.

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Chairman:

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Professor REYNOLDS.

Dr. A. RANSOME.

Mr. J. F. ROBERTS.

Mr. ROBERTSON.

Professor ROSCOE, B.A.,
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KINSON.

Mr. T. R. WILKINSON.

Mr. Councillor WILLIAMS.

Honorary Secretaries:

Dr. JOHN ROBERTS.

Mr. C. H. KNIGHT.

At the ANNUAL MEETING of the Manchester and Salford Sanitary Association, held at the Town Hall, King Street, on Wednesday, May 25th, 1870 :

THE RIGHT REVEREND THE LORD BISHOP OF MANCHESTER IN THE CHAIR.

The Annual Report having been read ;

It was moved by the Rev. Canon RICHSON ; seconded by Dr. NOBLE ;

That this Meeting cordially approving of the proceedings of the Committee, as set forth in their Report, request that the said Report may be printed and extensively circulated.

Moved by THOMAS TURNER, Esq. ; seconded by ROBERT GLADSTONE, Esq. ; and supported by Dr. RANSOME ;

That inasmuch as one of the fundamental objects of the Association is the prevention of disease, this Meeting trusts that the Committee will use every means in their power to secure all possible precautions being taken to prevent the spread of infectious disorders.

Moved by Dr. MORGAN ; seconded by the Rev. E. HEWLETT ;

That the practical efforts of the Committee to improve the condition of the poorer classes by directing attention to the sanitary laws, deserve the encouragement and pecuniary support of this Meeting and the public in general.

Moved by Professor REYNOLDS ; seconded by T. D. RYDER, Esq. ;

That the best thanks of the Meeting be given to the President, Vice-Presidents, Committee, and Officers for the unwearied attention they have devoted to promoting the interests of this Association ; and that the following Noblemen and Gentlemen be requested to act for the ensuing year. (For the names see preceding page.)

J. MANCHESTER, Chairman.

The Chair having been taken by THOMAS TURNER, Esq. :

It was moved by Professor ROSCOE ; seconded by Dr. SYSON ;

That the thanks of the Meeting be given to the LORD BISHOP OF MANCHESTER, for presiding on this occasion, and for the interest he evinces in the welfare of the Association.

JOHN ROBERTS, M.D., } Hon.
C. H. KNIGHT, } Secs.

R E P O R T .

THE Committee of the Manchester and Salford Sanitary Association have devoted their attention during the past year, among other things, to the evidence of Sir Joseph Heron before the Royal Sanitary Commission, to the Sewage Question, and to the Statistics of Disease in Manchester and Salford.

The Sub-Committee appointed to consider the evidence of Sir Joseph Heron presented the following Report, which was adopted by the General Committee, and was forwarded to the Hon. Secretary of the Royal Sanitary Commission :—

MY LORDS AND GENTLEMEN,

The attention of the Committee of the Manchester and Salford Sanitary Association has been called to the evidence given by the Town Clerk of Manchester before the Royal Sanitary Commission on the 7th of June, 1869, and we, the Honorary Secretaries, have been instructed to point out (to the Royal Commissioners) certain portions of this evidence which seem likely to produce an erroneous impression. In doing this, however, the Committee do not desire to detract from the general excellence of the Town Clerk's statements, but simply to correct those portions of the evidence which seem to them to be inaccurate.

JOHN ROBERTS, M.D., }
C. H. KNIGHT, } HON SECS.

Question (p. 11.) 2359.

Can you state the rate of mortality in Manchester? The rate of mortality in Manchester is certainly not very satisfactory. I observed by the public papers the other day that the rate of mortality in Manchester, and it has been so for several weeks, was 24 per 1,000. In Liverpool during the same week it was 28, in Glasgow 35, and in Edinburgh 39, and in London that week it was 21. Perhaps I may be allowed to read a statement which will be found at page 8 of the paper which I have given in as the answers to the Rivers Pollution Commisioners. We were required to state the rate of mortality, and we give the rate of mortality from 1857 to 1866. We state, and I am desirous of just referring to this, that "The high death rate in Manchester is largely due to the excessive mortality in the infant population, nearly one half of all the deaths occurring in children under the age of five years. A large proportion of the children die within the first year from the want of the care which is necessary in the earliest months of their existence. In the years 1851-1860, the total number of deaths in Manchester and Chorlton, from all causes and at all ages was 74,359, the total under five years 35,963, the total under one year 19,725, or rather more than one half the whole infant mortality, and more than a fourth of the mortality of all ages."

In a report on the health of Manchester and Salford, presented to the Social Science Association on behalf of the Committee of the Sanitary Association, by Dr. A. Ransome and Mr. W. Royston, the average death-rate of Manchester for 15 years was stated, pp. 4, 5, as 32 per 1,000, or, excluding certain healthy suburban districts, 34 per 1,000, and in 1865, an exceptionally bad year for epidemics of Smallpox, Scarlatina, &c., it was 39 per 1,000.

Question 2360.

Is that peculiar to Manchester? It is peculiar, I believe, to Manchester, and probably for this reason. As far as we can judge, it arises from the practice of women finding employment in various ways, and leaving their children. Some are known to go to work, sometimes within 14 days after the birth of a child, and the children are left to the care of mere hirelings, and I have no doubt a great deal too much of what is usually called comfort is given to them. They call it comfort, I believe, which they apply to the druggist for, and that comfort certainly leaves them very often, and very soon with little more liability to discomfort.

Question (p. 11) 2361.

Is that mortality chiefly among the very poorest class? It is chiefly amongst the poorest, not paupers exactly, but the poorest classes. I may be allowed to state that in Chorlton-upon-Medlock, which is a very large township in Manchester, the death rate is only 18 per 1,000. The districts where the mortality in Manchester is greatest, are two; one is chiefly occupied by what you may call the vicious classes, the haunts of thieves and prostitutes and all people of that class, and there is another district which is mainly occupied by the Irish. No sanitary arrangements that can be made will to any very large extent,

The infantile mortality of Manchester is higher than that of any other place in the kingdom.

But it must be remembered that a high infant mortality does not arise solely, or even chiefly, from parental neglect; it is always a sign of sanitary neglect. Young infants are at all times exposed to the noxious exhalations from drains and privies.

In answer 2361 the statement is made, that if Manchester had statistics of sickness as well as statistics of deaths, it would compare favourably with other places. It must be stated that for the last ten years the Manchester and Salford Sanitary Association have regularly collected, every week, statistics of all diseases coming under treatment in the parochial and public institutions of the town, and they do not find that any support is given by these returns to the Town Clerk's statement; on the contrary, from these returns Chest Diseases are shown to be unusually prevalent in Manchester, and epidemics seem to

I believe, affect the condition of those classes—it is something that is beyond the reach of mere sanitary legislation. Manchester is not, as a whole, an unhealthy town, and I believe if what was suggested was carried out that we should have not only statistics of death, but statistics of sickness; it would then be found that Manchester would compare very favourably with other places. Then again there is this peculiarity, that we have not a large area of rural districts which practically belong to Manchester included within the area for which our death rate is given. I mean rural districts like Broughton—Broughton belongs to Salford, and is entirely occupied, or nearly so, by gentlemen connected with business in Manchester, and for a long time they would not allow a house of under £20 a year to be erected in the township of Broughton. Then, again, Stretford, Bowdon, and all those places are occupied by gentlemen who are connected with business in Manchester, but we do not get the benefit of their low rate in determining the death rate of the city.

Question (p. 15) 2372.

You are still now, after ten or twelve years' experience, advocates for the ashpit system? Yes, for the privy and ashpit, when properly constructed, at any rate, and we are, perhaps, more strongly advocates of it now than we were ten years ago.

spread without impediment.

In the same answer the Town Clerk says "there is this peculiarity, that we have not a large area of rural districts which practically belong to Manchester included within the area for which our death rate is given." Now, if we compare Manchester with Liverpool, and refer to the constitution of both districts, we shall find that Liverpool is all urban, but Manchester has twelve other townships incorporated with it, all more or less suburban. The following table shows the influence of these healthy districts in lightening the death rate of Manchester itself, and it unfortunately shows, moreover, that, when strictly compared, the Manchester death rate is as bad as that of Liverpool.

	AVERAGE OF 10 YEARS.	
	1841 to 1850. Deaths per 1000 of population.	1851 to 1860. Deaths per 1000 of population.
Registration District of Manchester	33	31½
Township of Manchester	36	34
Town of Liverpool	36	33½

With reference to the reply to this question, we should like to ask the witness how many privies and ashpits in Manchester are properly constructed. About 36,000 we know to be simply open pits in which, sometimes for months, faecal and other refuse is allowed to ferment

and putrify ; and even the improved form of ashpit adopted by the Corporation, provides for the retention of fœcal matter for several months close to the dwellings. We believe that much of the unhealthiness and mortality in Manchester, especially amongst children, may be ascribed to the atmosphere created by the present privy and ashpit systems.

Questions (p. 23) 2405, 2406.

Do I rightly understand you to say that you do not consider it necessary to give any increased inspection to the central authority?—No ; I would not give any increased power in that direction. I do not express any opinion as to the number of inspectors that might be required to give all information necessary for the Secretary of State, but I would certainly give no increased power to the inspectors to interfere with the local authorities, whether in large or small towns.

You do not think it necessary that the inspectors should be travelling about the country, but rather that they should go to visit places from whence they receive complaints?—Yes ; I certainly should think that that was quite sufficient ; either where they received complaints, or where, as is now the case, the death rate, or other circumstances of a casual or temporary character seem to call for some special interference.

With regard to this and the following question, we doubt very greatly the sufficiency of the present method of inspection.

It seems to us very important that inspectors, without being summoned by complaints, should be instructed to travel about the country and report upon matters relating to the public health ; and that, where sanitary work is not properly performed by the local authorities, the central authority should have power to enforce its completion within a reasonable period.

Municipal authorities may be trusted to carry out those general works of utility, which are sure to yield a good return in money, as gas works, and water works, &c., and also works which are likely to be ornamental to the towns, but they require constant supervision in sanitary matters.

Question (p. 29) 2436.

Is your town divided into districts for the purposes of nursing?—I do not think so. I am not aware of it. There was only one attempt, but I do not think it lived long.

The witness does not seem to be aware that both Manchester and Liverpool are divided into districts for the purposes of nursing. In Liverpool this work has been carried on for ten years, and district nurses are employed, besides probationers and private sick nurses.

In Manchester, the Nurse Training Institution has only existed for four years, but there are now nine nurses actively engaged in visiting the poor in the most neglected parts of the town.

The movement in Manchester was inaugurated by this Association.

Question 2450.

With reference to your middens or ashpits, do you happen to know what is the experience of Stockport? I really do not.

Question (pp. 30, 31) 2451.

I suppose that the Lancashire towns generally were managed in the same way as Manchester in that respect?—I believe nearly all except some newly created towns where they thought they were to begin in a state of perfection, and they find that they have turned trout streams into very disagreeable polluted streams; or else, generally speaking, in all the old towns in our neighbourhood I think it will be found, as in Manchester, that privies and ashpits are the rule, and water-closets the exception. Perhaps I might be allowed to interject one

In reply to this question it is stated that "the Corporation have required the existence of a yard behind each house in which the privy and ashpit will be placed. The consequence of that legislation has been that in Manchester, since 1844, the building of back to back houses, which is one of the most crying nuisances that can be imagined, has been illegal." Notwithstanding this Act, a vast number of back to back houses are still in existence (see Report of Statistical Society, 1864-5, page 4), and many of the yards behind the houses are each literally a yard square.

observation, for it is rather an important one. In Manchester, under our Act of 1844, a privy and ashpit in such a situation as satisfies the Corporation is required to every house. The Corporation have required the existence of a yard behind each house in which the privy and ashpit will be placed. The consequence of that legislation has been that in Manchester, since 1844, the building of back to back houses, which is one of the most crying nuisances that can be imagined, has been illegal. The clauses of the Act have necessitated behind each house a yard, and then between the yards of those cottages, and the cottages bordering into the other street, there is necessarily a passage, so that the nuisances created by, and the evils arising from, back to back houses and cottages being erected, have not been allowed to exist in Manchester since 1844.

Question (pp. 41, 42) 2521.

Should you consider that it was necessary that the officer of health should always be a medical man?—No, I do not think so. Of course I express that opinion with very great diffidence, but I think there are a very great many questions in towns which seriously affect health, and which probably would be even better understood by a gentleman who was not a medical man. I do not think it is at all necessary that he should be a medical man.

With reference to the reply to this question, it is difficult to perceive how a knowledge of medicine can be a barrier to understanding “a great many questions in towns which seriously affect health.”

The Committee observe with pleasure that the principles approved of by them in the prolonged discussion of the sewage question last year are gradually gaining favor. Since then the weekly removal of the excreta has been tried on an extensive scale at Rochdale, and is found to answer very well in practice, both from a sanitary and economical point of view. The box or receptacle system now established at Rochdale is a simplification of the Goux system, which was first tried there, and differs from it only in the absence of the absorbent lining of the receptacles. On the 5th of November Dr. Syson informed the Committee that the municipal authorities at Salford had determined to abolish the sunk ashpit, and substitute in its place a modification of the Goux closet. Subsequently Dr. Syson read a paper before the Committee in which he described the reconstruction of the ashpits going on at Salford, and the economical and sanitary advantages of the modified Goux closet. He sums up these advantages under six heads :—

“1st.—The old reeking ashpits are done away with for ever, the atmosphere will thus be proportionately purified, and the soil no longer be excrement sodden.

“2nd.—The manure at once becomes of great commercial value, and the ashes also find a ready market at the same price, or nearly so, as was formerly obtained for the night-soil itself. In other words, a source of great national loss becomes converted into a great national income.

"3rd —The excrement of the whole town can be readily removed at least once a week, instead of heretofore about three times during the year.

"4th—In case of fever, or contagious disease, the whole of the excrements can be readily and economically disinfected.

"5th.—Its simplicity.

"6th.—Its economy, compared with the cost of any other improved plan."

These advantages belong more or less to all forms of the receptacle system, and numerous trials of it, extending over the summer as well as winter season, will no doubt prove whether the spent fustic lining of the Salford plan is superior to the absorbent of M. Goux, or whether fine ash thrown upon the excreta, as in Mr. Morrell's closet, is superior to both.

In relation to these experiments we may state that Dr. John Roberts, one of the Hon. Secretaries of this Association, paid a visit of inspection to the reconstructed closets at Salford, and found that, whenever the instruction of the Health Committee to empty the chamber utensils into the closet was carried out, the tubs were more or less foul. He suggests that it would be better with these closets to cancel that particular direction, even at the cost of losing some of the manure, which would pass into the sewers. In making the round of places supplied with these receptacles Dr. Roberts became convinced that the refuse of dye-works had no deodorizing power, but that,

when copiously mixed with urine, it emitted an odour more disagreeable than that of decomposing urine itself. On the other hand many of the old ashpits, which were not half full and which contained fine ash in large quantities, had no appreciable odour, and compared favourably with some of the reconstructed closets in this respect, while from a few others, where no doubt the fine ash had reached the point of saturation, the odour was intolerable. It is but fair to state that the new plan was generally preferred to the old one by the tenants of the houses to which it was attached.

The Committee are glad to find that Mr. Leigh, the officer of health for Manchester, is in favour of the frequent removal of the excreta, as is shown by the following extract from his Report to the Health Committee, presented on the 22nd of November, 1869:—

“So desirable and important is the frequent removal of the human excreta from the precincts of houses, that the officer of health would be glad to see the receptacle system adopted in Manchester, with such modifications as the experience acquired both in Manchester and Rochdale may render expedient. He is of opinion that the covering of the excreta with fine ashes from day to day would be an improvement on the system carried out at Rochdale, and that the flue or shaft already adopted in all newly-constructed privies within the city would be effectual for carrying off any offensive odours from the deposited excreta.”

It now remains with Manchester to give a full trial to a system described in such forcible terms by its officer of health.

It would not be proper to leave this subject without acknowledging the labours of Dr. Lloyd, of Anglesey, who was the first to advocate the frequent removal of the excreta, the separation of the liquids from the solids, and the deodorizing of both by means of fine ashes, &c. (See Paper in *Engineer*, February 26th, 1858.)

The weekly statistics of deaths and diseases, published by the Association, show that there was a marked improvement in the health of Manchester and Salford during the year 1869, as compared with that of the few preceding years. Taking the register of deaths first into consideration, we find that there were fewer deaths, during 1869, than in any year since 1864, when the total number amounted to 12,273. In the four succeeding years they amounted to 14,007, 13,989, 13,763, and 14,465 respectively; while in 1869 the deaths only numbered 12,763, being 490 more than in 1864, and 1,702 deaths less than in the year 1868.

There was also a considerable decrease in the number of cases of disease observed during the year at the various public institutions of Manchester and Salford. In the year 1867, 79,337 cases were observed; in 1868, 84,010; and, in 1869, 78,394; the last-named year showing a decrease of 943 cases upon the number for 1867, and a decrease of 5,616 upon the return for

the year 1868. The following table shows the close correspondence between the total numbers of deaths and diseases of five of the most important zymotic diseases on the one hand, and the gross number of deaths from all diseases in each year on the other; it further shows that when the general mortality is high, the mortality from zymotic diseases is correspondingly high :--

	1866.	1867.	1868.	1869.
Cases of five zymotic diseases..	6,310	5,557	6,934	5,077
Deaths from do. do.	2,164	1,996	3,048	1,987
Deaths from all causes	13,989	13,763	14,465	12,763

The deaths in public practice during the year amounted to 2,997, being 1 death to every 26 cases. In 1866, 1867, and 1868, respectively, the proportion between deaths and cases was 1 in 23·5, 1 in 24·89, and 1 in 25 cases.

Small-Pox was very prevalent in the year 1863; 166 deaths occurred from it during that year. The epidemic continued during 1864 and 1865. In 1866 the deaths from Small-Pox had fallen to 36, and by 1867 they had reached the low number of 7 deaths. The disease declined no further, neither did it remain at the low point it had then reached, for by 1868 the deaths amounted to 13, and by the end of 1869 the number had made a stride to 70. The annual tables

of disease, which extend no farther back than 1866, give 135 cases of Small-Pox as having occurred in that year, in 1867 they fell to 56, in 1868 they rose to 70, and in 1869 to 490. The above figures, when analyzed, show where this disease was most rife during the year. Forty-one of the deaths, or about four-sevenths of the whole, occurred in the township of Manchester; 19, or two-sevenths, in Salford; 7 in Hulme, and 3 in Ardwick, making together the remaining one-seventh. Then, again, out of the 490 cases which occurred in public practice, 296 occurred in Manchester, 198 in Salford, 28 in Chorlton, 11 in Hulme, and 7 in Ardwick. It is therefore plain that Manchester and Salford were the two townships least protected against the invasion of this epidemic disease, six-sevenths of the whole number of deaths having occurred in those two townships. The township of Chorlton entirely escaped the disease in its fatal form, not a single death having taken place there during the year. On this point the disease return might mislead at first sight, for 28 cases are attributed to this township against 11 to that of Hulme. But 22 of the 28 cases were from the Chorlton Union Workhouse, which receives patients from the townships of Hulme and Chorlton. When this fact is taken into consideration the difference between the registers of deaths and diseases is accounted for. The annual disease table further shows that 100 cases of Small-Pox were treated at the Manchester Work-

house, 116 as either in-patients or home-patients of the Manchester Infirmary, 66 at the Salford Workhouse, 49 at the Salford Dispensary, 22 at the Chorlton Union Workhouse, and 3 at the Chorlton Dispensary. The natural conclusion to be drawn from the above figures is, that we are witnessing the commencement of another epidemic of Small-Pox, which, if the anti-vaccinators have succeeded in deluding the public to any extent, may it is to be feared prove more severe and protracted than that of 1863-65.

Measles was more than usually prevalent during the year 1869. This disease has not fluctuated to such an extent as Small-Pox and Scarlatina. In 1866 there were 215 deaths from this cause, in 1867 there were 338, in 1868 there were 279, and in 1869 there were 427. The cases of Measles treated in the public practice of Manchester and Salford amounted to 372 in 1866, they rose to 654 in 1867, they declined to 527 in 1868, and in 1869 they reached to 783. During the last four years Measles has risen and fallen in alternate years, but, notwithstanding this ebb and flow, the disease has progressed so that in 1869 it was twice as prevalent as in 1866. In 1866 the proportion of deaths to cases in public practice was 1 to 24; in 1867, 1 to 24; in 1868, 1 to 31; and, in 1869, 1 to 17.

Scarlatina, while it was increasing to a marked extent in London, Liverpool, and other large towns, declined in Manchester. It is true that this district was severely visited by that epidemic in the year 1868,

when it caused 1,510 deaths in the eleven registration districts which supply returns to the Association. Manchester and Salford, therefore, did not escape, but passed through the ordeal first. In 1869 the deaths from the disease amounted to 655, being less than half the number of the preceding year. On turning to the disease table we find that 935 cases of Scarlet Fever came under treatment in public practice, being 960 less than in 1868. By means of this table we are enabled to draw a conclusion as to the character of the disease during the year, for out of the 935 cases 51 proved fatal, or 1 death in 18. In the previous year, when the epidemic was at its height, the death-rate in public practice was 1 in 9. The disease has therefore retrograded in fatality as well as in prevalence.

Whooping-Cough, like Measles, has not been so subject to variation as the other zymotic diseases. On consulting the register of deaths it becomes evident that it has steadily decreased in prevalence since 1866. Taking the four years from January, 1866, to the end of December, 1869, for examination, it is to be seen that the number of deaths for each year in succession was respectively 489, 478, 316, and 283. In 1866 Whooping-Cough was common in spring and summer; in 1867 it prevailed in summer, autumn, and winter; in 1868 it was observed mostly in the spring, diminishing steadily with the advance of the year, so that there was very little of it in the winter

months ; in 1869 it began to be frequent in summer, reaching its acme towards the end of the year.

This disease has varied still less from year to year in public practice. In 1866, 628 cases were observed; in 1867, 847 cases; in 1868, 620 cases; and, in 1869, 610 cases. The rate of mortality in the cases tabulated by the Association was, in 1866, 1 death to every 23 cases; in 1867, 1 in 21; in 1868, 1 in 23; and, in 1869, 1 in 24.

Continued Fever, which had prevailed so extensively during the year 1868 as almost to equal the epidemic of 1866, declined considerably during the past year. In 1868, 930 deaths from Fever were registered in the eleven registration districts which supply returns to this Association; in 1869 the number fell to 552, being a decrease of 378 on the return of the preceding year. The disease tables give a similar result. In the preceding year 3,822 cases of the severer forms of Fever were observed; in 1869 the number was 2,259, or a diminution of 1,563 cases. Though the marked decrease in the number of Fever cases for the year is a subject for congratulation, this decrease was accompanied by the appearance in Manchester of Relapsing or Famine Fever, the outbreak of which in our midst diminishes greatly the satisfaction with which the Fever return for the year would have been otherwise regarded. In November 20 cases of Relapsing Fever were admitted into the Manchester Workhouse, and in December 26 more, making together 46 cases for

those two months. The mortality of the Fever cases treated in public practice was this year heavier than it was in 1868, being in that year 1 in 11·5 cases, while in 1869 it was 1 in 10. More than half the total number of Fever cases occurred in Manchester, and more than a fourth in Salford; the remainder was pretty equally distributed between Chorlton, Hulme, and Ardwick.

Diarrhœa did not prevail to anything like the same extent in 1869 as in 1868. In the last-mentioned year the deaths from this disease amounted to 1,430, while in 1869 they declined to 1,003. A still greater decrease, in proportion, was observable in the number of cases of Diarrhœa and Dysentery treated in the public practice of last year, as compared with that of the preceding one in 1868, 4,779 cases were treated in the parochial and other public institutions; in 1869 the number fell to 3,152, being a decrease of 1,627. The proportion of deaths to cases was in the former year as 1 to 25, and in the latter as 1 to 38.

*Quarterly Returns of Deaths in Manchester and Salford for 1869,
compiled from the Weekly Returns.*

DISEASES.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Small-Pox	16	21	11	22	70
Measles	91	149	110	77	427
Whooping-Cough..	9	34	48	192	283
Scarlatina	302	120	107	126	655
Diarrhœa.....	61	55	716	171	1003
Fever	173	102	121	156	552
Diseases of the } Lungs..... }	1119	908	645	1015	3687
Other causes	1639	1457	1463	1525	6084
Total	3410	2846	3221	3284	12761

*Quarterly Returns of Diseases in Public Practice for 1869,
compiled from the Weekly Returns.*

DISEASES.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Small-Pox	125	175	91	99	490
Measles.....	175	297	167	144	783
Scarlatina	362	199	206	168	935
Diphtheria.....	1	1	3	...	5
Whooping-Cough..	20	59	121	410	610
Croup	13	5	13	7	38
Diarrhœa	403	474	1601	565	3043
Dysentery	20	13	48	28	109
Cholera.....	...	1	...	...	1
Erysipelas	69	67	57	76	269
Continued Fever...	244	147	149	315	855
Typhus.....	298	205	181	283	967
Typhoid	123	78	94	142	437
Febricula.....	632	470	423	545	2070
Ague.....	...	1	2	1	4
Rheumatic Fever..	299	209	120	251	879
Puerperal Fever...	6	1	1	4	12
Bronchitis and Catarrh	3438	2339	1673	3240	10690
Influenza	52	14	13	22	101
Pleurisy and Pneumonia. . }	253	247	208	207	915
Phthisis	922	895	900	958	3675
Constitutional Syphilis	416	389	428	514	1747
Other diseases.....	9387	9242	8842	9377	36848
Accidents.....	2899	3249	3562	3201	12911
Total	20157	18777	18903	20557	78394

A most important work, carried on by the Association from year to year, is the delivery of a course of lectures on sanitary subjects. Any one who will look over the accompanying list of subjects which have been discoursed upon by the several gentlemen who kindly give their services to the Association, cannot but admit that an incalculable amount of good is being performed.

Last September the Association sustained a severe loss in the death of George Greaves, Esq., Consulting

Surgeon to the Chorlton Union Workhouse. Mr. Greaves was one of those who joined the Association when it was first established, and by his services on sub-committees, and his regular attendance at the ordinary meetings of the committee, he contributed in no small degree to the success of the Association. The Committee, at its meeting in October, drew up and passed a resolution expressive of their great loss, and their sympathy with Mrs. Greaves in her bereavement.

The Annual Report would not be complete without some reference to the financial difficulty in which the Association, notwithstanding the observance of a rigid economy, finds itself placed. Like many other institutions supported by voluntary contributions, it has unfortunately in most years been obliged to curtail its operations for want of the necessary funds. The balance sheet shows that there was a deficit at the end of the year of £29 12s. 11d. This is not a large sum to be obtained in such important places as Manchester and Salford, and the Committee feel sure that, if the benefits which this Association annually confers were fairly brought before the notice of the wealthy and charitable, the deficiency would be at once made up, and the Association placed anew in a position to carry out uncurtailed its sanitary work. Therefore the Committee hope that each member will do his utmost to obtain additional subscribers, as some effort must be made to supply the vacancies caused by death and by the removal of contributors from the district.

THE FOLLOWING LECTURES HAVE BEEN DELIVERED
DURING THE YEAR :—

LECTURER.	SUBJECT.	PLACE.
T. TURNER, Esq., F.R.C.S.	<i>Poisoned Blood.</i>	Rusholme Road School.
Ditto	<i>Life and Death.</i>	Christ Church School, Hope Street, Salford.
Ditto	<i>The value of Water in connection with Life and Health.</i>	St. Peter's School, Green-gate, Salford.
Dr. JOHN ROBERTS	<i>Contagious Diseases.</i>	St. George's School, Hulme.
Dr. J. SHEPHERD FLETCHER, M.R.C.S.	<i>The Sanitary influence of Air, Fire, and Water.</i>	Bennett Street School, Oldham Road.
Ditto	<i>Ditto.</i>	St. Mary's School, Upper Moss Lane, Hulme.
Dr. LEDWARD, M.R.C.S.	<i>Catching Cold</i>	St. Mark's School, Clowes Street, West Gorton.
Ditto	<i>Modern City Life</i>	Independent School, Osborne Street, Oldham Road.
Dr. A. E. DAVIES	<i>Fresh Air.—Illustrated by Chemical Experiments</i>	St. Paul's School, Mulberry Street, Hulme.
Ditto	<i>Food.—Illustrated by Chemical Experiments</i>	The Egerton Schools, (St. Bartholomew's,) Regent Road.
Ditto	<i>Ditto</i>	St. Jude's School, Canal Street, Ancoats.
Ditto	<i>Water : its pollution in relation to health.—Illustrated by Chemical Experiments</i>	St. Thomas's School, North Street, Ardwick.
Ditto	<i>Food.—Illustrated by Chemical Experiments</i>	Temperance Hall, Grosvenor Street, Chorlton-on-Med.

LECTURER.	SUBJECT.	PLACE.
Professor ROSCOE, F.R.S., Owens College	<i>The Laws of Health.—Illustrated by Chemical Experiments. Opening Address</i>	Salford Town Hall.
G. M. HARRISON, Esq.	<i>Poisons in the Atmosphere.</i>	Independent School, Knott Mill.
Dr. W. H. BARLOW Hon. Medical Officer to General Hospital and Dispensary for Sick Children	<i>Why do the Children die ?</i>	All Souls' School, Ancoats.
Ditto	<i>Ditto</i>	Unitarian School, Bridge Street, Strangeways.
Ditto	<i>Infant Mortality</i>	St. Jude's School, Canal Street, Ancoats.
Dr. WHITGREAVE	<i>Can we prevent Disease ?</i>	St. James's School, Ellor Street, Pendleton.
Dr. SYSON	<i>Live and let live</i>	St. Saviour's School, York Street, Chorlton-on-Med.
G. M. HOPWOOD, Esq., F.C.S	<i>Air, what it is and its uses. Illustrated by Chemical Experiments</i>	St. Michael's School, Miller Street.
A. M. SMITH. Esq. B.Sc.	<i>Sunshine and Shower, as Sanitary Agents.—Illustrated by Chemical Experiments</i>	Temperance Hall, Grosvenor Street, Chorlton-on-Med.

Members from Donations in former Years.

	£	s.	d.
Atherton Miss (1866)	50	0	0
A Friend, per T. Turner, Esq. (1866)	10	0	0
Barber Robert, Esq.....	10	0	0
Bazley T. Sebastian, Esq., Little Grove, East Barnet, Herts	5	5	0
Binyon Miss (Clifton)	5	0	0
Brooks Samuel, Esq.	5	0	0
Chadwick R., Esq.	20	0	0
Callender W. R., Senr., Esq.....	5	0	0
Ditto ditto second donation (1867)	5	0	0
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Ellesmere The Earl of.....	5	0	0
Gardner Robert, Esq.	5	5	0
Gillibrand P., Esq.	5	0	0
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Heywood Sir B., Bart.....	5	5	0
Heywood Arthur H., Esq.	5	0	0
Heywood James, Esq.....	5	5	0
Heywood Oliver, Esq.	15	0	0
Houldsworth Henry, Esq.	10	0	0
Jones R. Jennings, Esq.	5	0	0
Jones W. C., Esq.....	5	0	0
Mackintosh Messrs. C., and Co.....	5	5	0
Manchester, The late Lord Bishop of	10	0	0
Potters and Norris, Messrs.....	5	5	0
Plant James, Esq.....	5	0	0
Schunk, Souchay, and Co., Messrs.....	5	0	0
Spafford George, Esq.	5	5	0
Taylor J. E., Esq.....	5	5	0
Todd and Coston, Messrs.	5	0	0
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Watkin W. B., Esq.....	10	0	0
Wood W. Rayner, Esq.	5	0	0

SUBSCRIPTIONS.

	£	s.	d.
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Andrew Henry, Esq., 13, Bread-street, High-street.....	1	1	0
Alcock Misses, 'The, Nelson-street, Chorlton-upon-Medlock...	0	10	6
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Bardsley Sir James L., M.D., Chatham-street	1	1	0
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Butterworth and Brooks, Messrs., Charlotte-street	2	2	0
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Brown William B., Esq., Leaf-square	1	1	0
Booth William, Esq., Oldham-street	1	1	0
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Booth Thomas, Esq., Salford.....	0	5	0
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	£	s.	d.
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Calvert Dr. F. Crace, Bond-street	1	1	0
Carver William, and Co., Messrs., 15, Mosley-street.....	1	0	0
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Findlater and Mackie, Messrs.	1	1	0
Fairbairn William, Esq., Polygon, Ardwick	1	1	0
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Greg, Brothers, and Co., Messrs., Booth-street.....	2	2	0
Galloway Messrs. W. and J., Chester-road, Hulme	2	2	0
Graham Messrs. William, and Co., 86, Major-street.....	1	1	0
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Gaskell Rev. William, 46 Plymouth-grove	1	1	0
Gladstone Murray, Esq., Cross-street	1	1	0
Gibson Rev. Canon, Polygon, Ardwick	1	1	0
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Greg Francis, Esq., Booth-street.....	1	1	0
Goldschmidt Philip, Esq., Albert Square	1	1	0
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Heywood E. S., Esq., „	2	2	0
Heywood Oliver, Esq., „	2	2	0

	£	s.	d.
Harter William, Esq., Cheapside, King-street	2	2	0
Hunter Thomas, Esq., Cheapside, King-street	2	2	0
Houldsworth Messrs. J., and Co., 23, Portland-street	1	1	0
Harrison G. Morley, Esq., 6, Piccadilly	0	10	6
Hadfield George, Esq., 24, Fountain-street	0	10	6
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Jackson J. W., Esq.....	1	0	0
Joule Dr. J. P., Broughton.....	0	10	6
James and Chabot, Messrs., Portland-street	1	1	0
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Keighley J., Esq., York-street	1	1	0
Kessler William, Esq., 33, Dale-street.....	1	0	0
Langton Wm., Esq., M'chester and Salford Bank, Mosley-st.	2	2	0
Leissler John, Esq., Messrs. Du Fay and Co., Booth-street	2	2	0
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Lyon, Lord, and Co., David-street	1	1	0
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Lamb James, Esq., John Dalton-street	1	0	0
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Mayson J. S., Esq., Charlotte-street.....	0	10	0
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Novelli and Co., Messrs., 60, George-street	2	2	0
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	£	s.	d.
Nicholls B., Esq., Eagley House, Stockport-road.....	1	1	0
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Peel Messrs. John, and Co., 11, Peel-street, Duke-street.....	2	2	0
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Potter Messrs. Edmund, and Co., 10, Charlotte-street	1	1	0
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Pearce Messrs. M., and Co., Bale-st., Lower Mosley-street...	1	1	0
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Parlane James, Esq., Dickinson-street	1	0	0
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Reiss Brothers, Messrs., 104, Cross-street	2	2	0
Ross Malcolm, and Co., Messrs., Cromford-court	1	1	0
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Ross Edward, Esq., London-road Station	1	1	0
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Ralli Brothers, Messrs., Peter-street	1	1	0
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Schuster Messrs. Leo, Brothers, & Co., 12, Sackville-street	2	2	0
Sharp, Stewart, and Co., Messrs., Atlas Works, Oxford-street	2	2	0
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	£	s.	d.
Schwind Charles, Esq., Bowdon	1	0	0
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Smith Dr. R. Angus, York-place, Rusholme	1	1	0
Satterfield Joshua, Esq., Alderley.....	1	1	0
Shaw John, Esq., Brewery, City-road	1	1	0
Standring John, Esq., 18, Fountain-street.....	1	0	0
Stoeher Messrs. E., and Co., Deansgate	1	1	0
Stowell Rev. T. A., M.A.....	1	1	0
Schofield Thomas, Esq., Cornbrook	1	1	0
Turner Thomas, Esq., 77, Mosley-street.....	2	2	0
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Tysoe Messrs. Charles, and Sons, New Cannon-street.....	2	2	0
Turner Wright, Esq., Brindle-heath, Pendleton	1	1	0
Thompson Joseph, Esq., Pin Mill, Ardwick	1	1	0
Trapp S. Clement, Esq., 88, Mosley-street	0	10	0
The Strines Printing Co., George-street.....	2	2	0
Vernon, Freemantle, and Co., Messrs., Piccadilly Mills	2	2	0
Westhead Messrs. J. P. and E., and Co., 49, Piccadilly	2	2	0
Wadkin and King, Messrs., 12, Chepstow-street	1	1	0
Weston S., Esq., 3, Mount-street, Cross-street	1	1	0
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Watts Sir James, Knt., Portland-street	1	1	0
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Worthington Thomas, Esq., King-street.....	1	1	0
Whitworth Messrs. B., and Brother, Exchange-street.....	2	0	0
Whitehead Dr., 87, Mosley-street.....	1	1	0
Wells, Cook, and Potter, Messrs., 18 and 20, Mosley-street	1	1	0
Waters Messrs. J. E., and Co., 31, Portland-street	1	1	0
Wood M. Bateson, Esq., 19, Princess-street	1	1	0
Woodhouse Rev. F. C., St. Mary's Rectory, Upper Moss-lane	1	1	0
Westmore Rev. H. H., 15, York-street, Cheetham	0	10	6
Williams Mr. Councillor, 1, Marlborough-square	0	10	6
Wilkinson T. R., Esq., Manchester and Salford Bank	0	10	6

MANCHESTER AND Salford

NOTION PAUPER CHARITABLE AND PUBLIC
New Cases of Disease coming under

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

MANCHESTER

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MANCHESTER AND SALFORD

RETURN FROM PAUPER CHARITABLE AND PUBLIC New Cases of Disease coming under

MANCHESTER.																
Area in Statute Acres	Manchester Township 1,645															
Population in 1861	" " 185,050															
DISEASES.	POOR LAW DISTRICTS.							PUBLIC INSTITUTIONS.								
	St. Peter's	St. Andrew's	St. George's	Cathedral	St. Jude's	St. Michael's	Total of Districts	Workhouse	ROYAL INFIRMARY.						CHILDREN	
									In-patients	Out-patients	District I.	District II.	District III.	St. Mary's Hospital	Clinical Hospital	City Gaol
	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15
Small-pox	9	5	12	8	5	36	75	100	74	2	10	13	17	1	4	..
Measles	19	22	30	9	17	46	143	8	6	2	..	19	13	66	45	1
Scarlet Fever	9	14	28	17	19	28	115	22	30	2	2	30	45	69	60	..
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..
Whooping-cough	6	6	10	17	5	13	57	..	..	14	..	6	9	166	169	1
Croup	..	1	2	..	1	3	7	1	..	..	..	..	1	..	1	..
Diarrhœa.....	34	78	29	19	37	82	279	74	3	136	7	11	22	749	487	188
Dysentery	6	2	3	5	3	15	34	1	..	10	2	..	3	11	..	3
Malignant Cholera.....	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..
Erysipelas	12	6	2	4	3	14	41	51	10	10	7	8	5	10	1	11
Continued Fever	68	11	68	34	67	20	268	97	3	..	5	3	3	6	10	1
Typhus	3	2	8	2	13	40	68	355	96	..	9	40	39	..	..	..
Enteric or Typhoid	4	5	1	..	3	1	14	50	54	2	5	5	30	1	14	..
Febricula	37	7	16	28	30	112	230	95	27	29	27	45	81	400	78	98
Ague	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Rheumatic Fever	3	..	12	2	16	5	38	23	74	290	51	32	87	7	..	12
Puerperal Fever.....	..	..	..	2	..	..	2	4	..	..	..	2	1	..	..	..
Bronchitis and Catarrh.....	217	266	143	205	176	348	1355	474	34	1607	109	149	243	365	530	187
Influenza.....	..	..	..	..	..	..	..	..	..	2	..	..	1	..	1	26
Pleurisy and Pneumonia	22	12	4	17	12	48	115	119	20	46	15	9	42	14	69	20
Phthisis	6	27	26	21	23	31	134	282	30	1205	84	117	149	135	75	44
Constitutional Syphilis	14	4	..	9	1	30	58	476	5	250	19	..	13	13	41	125
All other Diseases	335	354	649	412	299	702	3161	3081	1205	6855	220	235	380	3097	3996	193
Accidents	69	29	7	27	10	80	222	193	858	5908	33	13	59	..	21	5
TOTAL	1373	851	1051	838	650	1654	6417	5506	2529	16370	606	737	1244	5110	5604	915

Medical Officers to whom the Association

- (1) Mr. R. M. Mann,
- (2) „ J. Broadbent,
- (3) „ Edward Meacham,
- (4) „ John Walsh,

- (5) Mr. Octavius Dean,
- (6) Dr. E. Manley.
- (7) Mr. J. Westmoreland,
- (8) „ J. P. Sleightholme,

- (9) Mr. H. O. Pilkington,
- (10) „ A. E. Sutcliffe,
- (11) „ S. Buckley,
- (12) „ H. Runcorn,
- (13)

SANITARY ASSOCIATION.

INSTITUTIONS OF MANCHESTER AND ADJOINING DISTRICTS.

Treatment during the year 1869.

SALFORD.						HULME.			CHORLTON.		ARDWICK.		PENDLETON AND PENDLEBURY.					DEATHS.
1,329						477			646		21,739		2,650			Area in Statute Acres.		
70,967						68,209			44,850		508		24,448			Population in 1861.		
POOR LAW DISTRICT.			PUBLIC INSTITUTIONS.			POOR LAW DISTRICTS.											DISEASES.	
Greengate	Regent Road	Regent Road No. 2.	Workhouse	Dispensary	Salford County Gaol.	St. George's	Medlock	St. Philip's	Poor Law District	Dispensary	Poor Law District	Ardwick & Ancoats Dispensary	Chorlton Union Workhouse	Total.				
16	17	18	19	20	21	22	23	24	25	26	27	28	29					
19	12	..	66	49	2	3	6	2	3	3	1	6	22	496	Small-pox	19		
7	22	11	4	229	..	16	13	16	19	45	8	22	68	783	Measles	45		
21	6	3	16	279	1	45	21	15	19	88	13	12	21	935	Scarlatina	51		
2	..	..	..	1	..	..	..	..	..	..	..	..	..	5	Diphtheria	3		
14	1	1	4	19	..	2	10	17	13	84	1	6	16	610	Whooping-cough	25		
1	..	..	..	17	..	2	..	5	2	1	..	..	..	38	Croup	9		
59	47	37	1	242	227	27	32	23	42	92	10	31	207	3043	Diarrhoea	82		
6	4	..	..	19	..	..	..	1	13	1	..	1	..	109	Dysentery	1		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	Malignant Cholera	1		
8	4	2	3	9	4	6	7	11	3	24	..	18	16	269	Erysipelas	11		
6	3	13	138	151	..	19	19	14	6	21	11	20	38	855	Continued Fever	15		
15	15	4	..	70	..	11	1	4	59	19	..	7	155	967	Typhus	155		
15	36	..	..	97	..	10	1	2	30	36	3	14	18	437	Enteric or Typhoid	46		
21	21	17	22	209	6	35	66	112	82	213	8	67	81	2070	Febricula	3		
..	..	1	..	..	..	..	..	..	..	..	..	1	..	4	Ague	..		
23	22	4	10	46	10	15	20	9	15	9	23	38	21	879	Rheumatic Fever	2		
..	..	..	..	3	..	..	..	..	..	..	..	..	..	12	Puerperal Fever	4		
245	361	161	51	1825	195	161	171	155	340	564	164	307	937	10690	Bronchitis and Cattarrh	352		
4	1	5	..	34	1	..	15	..	..	7	2	2	..	101	Influenza	..		
18	23	2	2	187	21	11	22	13	9	40	5	30	63	915	Pleurisy and Pneumonia	76		
45	43	44	16	585	10	45	28	19	58	165	15	120	227	3675	Phthisis	533		
10	39	8	..	304	45	5	19	24	83	7	2	30	171	1747	Constitutional Syphilis	31		
662	606	480	466	4384	127	342	308	453	890	1513	289	976	2889	36848	All other Diseases	1404		
43	74	26	..	3146	6	40	21	34	75	736	4	1267	127	12911	Accidents	129		
1244	1341	819	799	11905	655	805	820	929	1761	3667	559	2975	5077	78394	TOTAL	2997		

is indebted for the annexed Returns.

(14) Mr. W. M. Maccall,
 (15) Dr. J. Ogden Fletcher,
 (16) „ A. C. Clarke,
 (17) „ T. M. Johnson,
 (18) „ James Cran,

(20) Dr. A. Veitch,
 (21) „ Braddon,
 (22) Mr. S. Woodcock,
 (23) Dr. Alex. Wilson,
 (24) Mr. H. M. Williamson,

(25) Mr. Joseph Foster,
 (26) „ John Porter,
 (27) „ J. V. L. Westmacott,
 (28) „ R. P. O. Gorman,
 (29) „ George Clements.

RETURN OF BIRTHS AND DEATHS

COMPILED BY

TOWNSHIP OF	POPULATION 1861.	<i>Deaths for the Years ending December</i>				
		1869	1868	1867	1866	1865
Manchester	185,410	6228	6965	6632	6932	7156
Salford	71,002	2332	2703	2491	2548	2458
Pendleton and Pendlebury. }	24,448	615	781	664	649	676
Chorlton	44,795	1054	1109	1119	1085	1118
Hulme and Moss Side	71,128	1915	2143	2113	2108	1943
Ardwick	21,746	617	764	744	667	656
TOTAL.....	418,529	12761	14465	13763	13989	14007

It has been thought advisable that the mortality return be remodelled; the deaths from the several causes, hitherto given separately, are now included in the general grouping. For more detailed information, reference can be made to the Weekly Returns. Moreover, the rate of death to population is omitted, as it is impossible to ascertain with anything like accuracy the variation of population from year to year. To assume that the rate of increase will be the same as it was during the ten years preceding the last census will certainly, in this locality, lead to error. An illustration in proof may be supplied by the fact that the increase of population in the township of Manchester at the census of 1851, from the previous

FOR THE YEARS 1865 TO 1869.

MR. WILLIAM ROYSTON.

<i>Births for the Years ending December</i>					POPULATION	TOWNSHIP
1869	1868	1867	1866	1865	1861	OF
6837	7124	6907	6742	6835	185,410	 Manchester
3539	3288	3222	3109	3004	71,002	 Salford
1035	1120	1080	989	993	24,448	 { Pendleton and Pendlebury.
1693	1649	1634	1576	1607	44,795	 Chorlton
3058	3276	3061	3032	2896	71,128	Hulme and Moss Side
1089	1174	1157	1114	1106	21,746	 Ardwick
17251	17631	17061	16562	16441	418,529	 TOTAL

one of 1841, was about 15 per cent., but at the census of 1861 the population had decreased nearly 1 per cent.; and again, in Hulme, at the census of 1841, the increase from 1831 was about 200 per cent., and at that of 1851 it was about 100 per cent., but at that of 1861 the increase was only about 30 per cent. The plan of estimating a certain number of persons for each house built is also fallacious, as the density of population varies in towns considerably with the circumstances of the times. The method adopted in previous tables of adding the excess of births over deaths cannot yield accurate results, because it does not include the effects of emigration and immigration.

FOR THE YEARS 1882 TO 1889.

MR. WILLIAM ROYSTON.

Township	Population					
	1881	1882	1883	1884	1885	1886
Alford	1,119	1,119	1,119	1,119	1,119	1,119
Barrow	1,119	1,119	1,119	1,119	1,119	1,119
Brinsford and Holehouse	1,119	1,119	1,119	1,119	1,119	1,119
Charnock	1,119	1,119	1,119	1,119	1,119	1,119
Elton and Moss Side	1,119	1,119	1,119	1,119	1,119	1,119
Alford	1,119	1,119	1,119	1,119	1,119	1,119
Total	1,119	1,119	1,119	1,119	1,119	1,119



The population of the town of Alford in 1881 was 1,119, and in 1886 it was 1,119. The population of the town of Barrow in 1881 was 1,119, and in 1886 it was 1,119. The population of the town of Brinsford and Holehouse in 1881 was 1,119, and in 1886 it was 1,119. The population of the town of Charnock in 1881 was 1,119, and in 1886 it was 1,119. The population of the town of Elton and Moss Side in 1881 was 1,119, and in 1886 it was 1,119. The population of the town of Alford in 1881 was 1,119, and in 1886 it was 1,119.