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BOROUGH OF OLDHAM.

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REPORT

ON THE

HEALTH OF OLDHAM,

FOR THE YEAR 1893,

BY

JAMES NIVEN, M.A., M.B., B.C., Cantab.,

LATE FELLOW OF QUEEN'S COLLEGE, CAMBRIDGE,

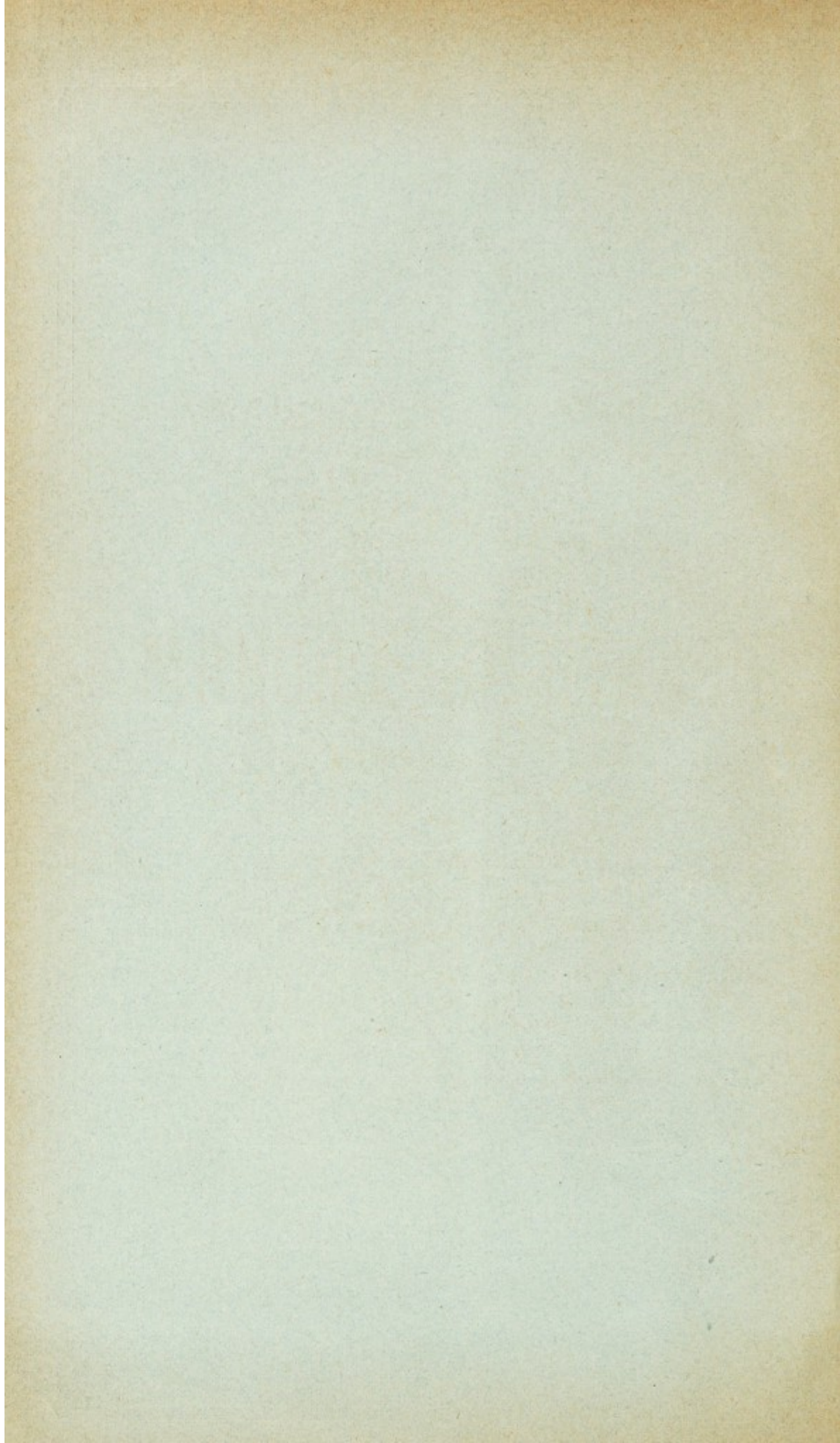
*Medical Officer of Health for the Borough, and Medical Superintendent  
to the Westhulme Fever Hospital.*

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MANCHESTER :

HALL AND SON, PRINTING CONTRACTORS, 6, ST. MARY'S PARSONAGE.

1894.





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# INDEX

TO THE MEDICAL OFFICER OF HEALTH'S REPORT FOR THE  
YEAR 1893.

	PAGE
TO THE SANITARY COMMITTEE .....	7
<b>PART I.—GENERAL</b> .....	<b>9 to 19</b>
Eight Years' Retrospect .....	9 to 19
Damp Houses.....	9
Wet Ashpits .....	10
Ashpits, mode of emptying .....	10
Erection of Destructor .....	11
Remarks <i>re</i> do. ....	11
Building on Tipped Ground .....	12
Inspection of Unpaved Courts, &c. ....	12
Mill Lodges, condition of .....	12
Blowing Steam into the Sewers .....	12
Hospital Accommodation Inadequate .....	13
Erection of Steam Disinfector proposed.....	14
More Inspectors required .....	14
Outbreak of Typhus Fever suppressed .....	15
Special Cans for Typhoid Excreta .....	15
Mortality from Measles .....	16
Posters issued <i>re</i> Measles .....	17
Summer Diarrhœa .....	17
Waste Water Closets.....	18
<b>PART II.—STATISTICAL</b> .....	<b>20 to 43</b>
General Remarks on Zymotic Disease .....	20 to 29
Precautions against Summer Diarrhœa .....	24
Smallpox and Vaccination .....	28
Distribution of Smallpox round Westhulme Hospital .....	28
No. of Deaths from various Causes 1889-1893 .....	30 to 33
Death Rates       do.       do. ....	34
Summary of House to House Inspection.....	36 & 37
Smoke Inspector's Report and Table .....	39 & 40
A Few Points for Consideration .....	42 & 43

VITAL STATISTICS :— .....	45
Principal Causes of Death .....	45
Table 1. Births and Birth-rates in each Ward.....	46
„ 2. Deaths and Death-rates in each Ward .....	47
„ 3. Birth and Death-rates in 28 large towns .....	48 & 49
„ 4. Death-rates from Bronchitis, Phthisis, and Pneumonia .. .	50
„ 5. Deaths from Zymotic Disease in each Ward.....	51
„ 6. Deaths from Zymotic Disease during the years 1877-1891 ...	52 & 53
„ 7. New Cases of Sickness reported in the various Wards .....	54 and 55
„ 8. Deaths during the year 1891, Classified according to Dis- eases, Ages, and Localities .....	56 and 57
„ 9. Births and Birth-rates ; Deaths and Death-rates during the years 1881 to 1893.....	58
„ 10. New Cases of Sickness 1881 to 1893 .....	59
„ 11. Summary of Cases Admitted into Westhulme Hospital from 1879-1893.....	60 and 61
„ 12. Number of Cases Admitted from each Ward into West- hulme Hospital .....	62
„ 13. Samples of Food Analysed .....	63
„ 14. Magisterial Proceedings .....	63
„ 15. Return of Inquests held in Oldham .....	64
„ 16. Work done in the Nightsoil and Ashes Department .....	65
„ 17. Prices of Food, and the number of Paupers relieved in Oldham, 1885-93 .....	65
„ 18. Meteorological Observations .....	66 and 67
Nuisances Reported and Work Executed.....	68 to 70
Disinfection .....	70 and 71
Infectious Diseases (Cases and Visits) .....	71
Smoke Observations, Mill Lodges, and Slaughter Houses Inspections...	72
Deaths Registered in Oldham during the year 1893.....	

MEMBERS OF THE SANITARY COMMITTEE.

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1893.

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MR. ALDERMAN JACKSON CHAIRMAN.

„ „ G. HANSON, VICE-CHAIRMAN.

THE MAYOR.

MR. ALDERMAN BRIERLEY.

„ COUNCILLOR HAWKINS.

„ „ HORROBIN

MR. COUNCILLOR JUDSON.

„ „ MELLOR.

„ „ WADDINGTON

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MEMBERS OF THE SANITARY COMMITTEE

1883

THE MAYOR	MR. ALBERT BURNETT
SIR COLLEGE TUTOR	MR. HAWKINS
MR. BURNETT	MR. WASHINGTON
MR. WILD	MR. BOBBS

MR. CHAIRMAN AND MEMBERS  
OF THE  
SANITARY COMMITTEE.

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GENTLEMEN,

I have the honour to submit to you my Annual Report for the year 1893.

I beg to thank you for the careful attention which you have directed during the past year to the urgent questions which presented themselves to you, and for the support which you accorded to me in dealing with smallpox. I leave your service with a confident hope that progress in sanitary matters will advance with increasing speed, and that the public will view your endeavours to deal with conditions injurious to health with a more active approbation. I have to express my deep sense of the excellent service you have received both from your Sanitary and from your Hospital Staff, and I would express more especially my personal obligation to the Matron of the Hospital, and to the Chief Clerk of the Sanitary Department.

I would also express my gratitude for the uniform support and assistance which I received from my brother officers under the Corporation.

I am, Gentlemen,

Your obedient Servant,

JAMES NIVEN.

MIR CHAIRMAN AND MEMBERS

SANITARY COMMITTEE



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## PART I.

### GENERAL.

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It may not be amiss to look back over the 8 years during which I have acted as your Medical Officer of Health. In the first Report which I issued after an opportunity of making myself acquainted with the town, I called attention to the almost universal prevalence of damp in the walls of the houses, and to the consequent soakage through these walls of organic matter. It has been my hope that in new houses effectual means would be taken for excluding from the basements of houses the entrance of damp and of subsoil air. Year after year I have called attention to the urgent necessity of attending to this vital matter. Situated, as Oldham mainly is, on a retentive sheet of clay, every new house should have a damp-proof layer of concrete extending over the whole area of the foundations, and a damp-proof course inserted in the wall beneath the ground floor, and above the ground. Between the layer of concrete and the basement of the house there should be an air space ventilated by means of air grids, or perforated bricks.

The expense entailed is a small matter compared with the saving of health which must follow the adoption of this measure. That it was not considered necessary on a former occasion is no reason why the subject should not be again brought up for consideration.

In association with this question of a damp-proof course must be taken the condition of the ashpits. These are open receptacles for ashes, from the bottom of which free soakage takes place into the subsoil. But a certain amount of water generally lodges in them. As a consequence not only is the subsoil fouled by them, and the benefits of a pail over a midden privy system to a large extent neutralised, but in emptying them the men have to stand in wet. As a consequence there is a tendency not to empty them completely, when a certain amount of putrefying material remains and causes a nuisance. Hence I, at first, recommended that they should be covered over with an open roof so as to admit of free ventilation. But that would not do away with another nuisance, which, especially in windy weather, is, in my opinion, a danger to health.

These ashpits are emptied first of all into the streets, and from this heap the carts are filled. Now, with such an arrangement, the ashes will often get blown about the streets, and the air filled with disease matter. I have, therefore, urged the adoption of a system, under which the ashes should be kept in receptacles covered over. The Superintendent of the ashes and nightsoil departments has made an experiment on such a system and reports on it, on the whole, unfavourably. It is more expensive than the old system, and entails considerable labour in the removal of the ashes. He also finds that in the lower class of property the ash cans get destroyed. In my opinion, these considerations should be taken into account, but they should not prevent you from proceeding on these lines, with the removal of house-refuse. The receptacles should be accessible from the outside of the passages, and should be made of such a size as not to entail excessive labour. Where they are liable to be destroyed, it may be necessary for a time to retain the present system. The receptacles should be water-tight. Especially in confined localities it is essential that the present system of open ashpits should be replaced by vessels protected from rain.

Another subject which I introduced in my first Report, was that of tips. I had particular reason for believing that both nuisance and danger

might be present in houses built on tipped ground, even after a number of years, and, accordingly, I mentioned to you, in my Report for 1886, the desirability of erecting a Destructor to consume the ashes. In the beginning of 1888, I made a representation to you on the offensive condition of the Borough Tips. In 1890, after having inspected the Destructors at Ealing, Battersea, Bolton, Leeds, and Bradford, you finally determined to have a Destructor of six cells erected at Rhodes Bank, according to Mr. Horsfall's system. This was the result of careful consideration on your part, and the result has justified you completely. A description of this Destructor is given in the report by Mr. Alderman Noton, then Chairman of the Committee, in the Annual Report for 1891. It is due to the present chairman to say that he strongly advocated the adoption of this Destructor.

A brief description is contained in leaflets in the possession of Mr. Jessop.

The merit of this Destructor consists in the uniformly high temperature attained in the flue, part of which is expanded into a cremating chamber, in which, when the cells are in full action, the temperature runs steadily up to 1500° F. No fuel is used to assist the cremator. There is no nuisance perceptible even at a short distance from the cells.

Its chief demerit lies in the great amount of wear and tear necessitated by the high temperature attained. This, however, can be provided for, and is a feature of all efficient Destructors.

During the year 1893, over a fifth of the ashes of the Borough was consumed in the Destructor, besides the Fish Offal and Market and other refuse. You have arranged to add four cells to this Destructor, and you are considering the advisability of planting Destructors in other parts of the Borough.

In 1888 the Sanitary Committee endorsed my recommendation that houses should not be built on tips till after the lapse of ten years.

In 1888 I made an inspection of unpaved streets and courts in the Borough and handed in a list to the Surveyor's Committee, with the result that a number were paved and sewered. The unpaved and undrained condition of many courts, however, still remains a serious evil.

The condition of the mill-lodges was formerly a cause of great annoyance, but within the last two years the nuisance arising from that source has not been great, although many are still fed from the sewers. It is desirable that this supply of water to the mill-lodges should be altered, and that they should be fed from a comparatively pure source. The practice of blowing off steam into the sewers has also not been so common of late years, and has not given rise to that amount of annoyance which it formerly did. Frequent complaints used to be made of effluvia from the drains, especially in Clegg Street, and more particularly on Saturdays. These nuisances have been very much reduced by the use of Corporation water for condensing purposes, and by the improved condition of the mill-lodges generally.

In 1886 I prepared books for entering particulars of diseases notified in the town.

The Bakehouses throughout the town have received continuous attention.

As regards the sale of milk it seemed to me impossible to prevent contamination of the milk, as it was usually sold in shops, and though I advised covering it over with muslin so as to exclude dust, it was considered prudent in 1888 to send a card to milk sellers, to be hung up in a conspicuous position, advising that milk should always be boiled before use.

During the eight years that I have been in Oldham, Westhulme Hospital, containing 100 beds, has had to serve for the reception of all fevers. On two occasions it has been found totally inadequate. In 1887 the number of Scarlet Fever cases seeking admission was more than the Hospital could contain, and again in 1893, what with cases from Oldham and from neighbouring townships, it was full of smallpox. Apart altogether from the reception of cases from outside, it would not have been a wise thing to treat Scarlet Fever side by side with Smallpox. Under these circumstances Scarlet Fever has been altogether excluded from the Hospital. Near the end of last year an epidemic diffusion of smallpox led you to remove the acute cases of Smallpox to a distance from the town. The cases were taken partly to a farm house formerly used by the Quickmere Local Board, and partly, to a hospital erected by the Chadderton Local Board. This was not immediately attended with the beneficial results which might have been anticipated.

It is true that cases ceased to occur near the Hospital, although the convalescents were treated there, but they became more frequent in the centre of the town. To a large extent this was due to overlooked cases of the kind mentioned in my Report for last year.\* But there were, also, two or three cases of the occurrence of smallpox following discharge from the Hospital, a circumstance which had not before happened. Whether this was due to imperfect disinfection, or to causes connected with the altered circumstances of the patients, is not easy absolutely to decide. No provision is made of a special disinfecting room for the patients before they leave the Hospital, but, although such provision would be desirable, I cannot say that I regard its absence as the cause of these occurrences. On the other hand the clothing worn by patients should be disinfected by steam. It was understood that by this time a steam disinfector would have been erected, and the materials for its erection had actually arrived.

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\* The occurrence of cases among the houses round Westhulme Hospital, did, however, cease, and the disease speedily died out entirely.



Unfortunately the action entered by Manlove, Alliot & Co., against the proprietors of the disinfecting machine which you proposed to use, prevented its erection. There should be no unnecessary delay in proceeding with the erection of a steam disinfector.

In consequence of the removal of acute smallpox patients from Westhulme Hospital it has seemed to you necessary to have a separate Smallpox Hospital. During last summer a great amount of time was spent in looking for possible sites for a hospital. At last a suitable site appeared to you to have been suggested. It should be a part of any new hospital to have a steam disinfector, and patients' discharge disinfecting rooms attached.

In removing patients over the long distances which they are now taken, a great additional strain was thrown on your staff, so that their other work was much interfered with. In the Report for 1892 I mentioned the desirability of having an additional Inspector who should attend to the work imposed by the Factory and Workshops Act of 1891, and who might at the same time see that the farms and milkshops were properly looked after. I am strongly of opinion that a special Inspector should be appointed for these duties.

The cleansing of the walls in houses should also fall upon the Department, when it is considered necessary to strip the walls. It is not desirable that a number of different people should be exposed to infection. This, again, will require an addition to the staff.

It happened, owing to special causes, that I saw nearly all the cases of smallpox before removal during the year 1893, and, indeed, in previous years; This entailed a large consumption of time, taken along with other matter connected with the outbreak of smallpox. It is desirable that the

Medical Officer of Health should be relieved from as much of this work as possible. To that end a resident medical officer, and suitable isolation rooms are required at the Hospital.

I have formerly expressed to you my opinion that the number of Inspectors is not sufficient to overtake the work which has been imposed on them. Undoubtedly, the house to house inspection, which has now been extended to three of the most defective wards of the town, has thrown upon them a large increase of work. But an examination of the returns will make it clear that such an inspection is absolutely necessary, and, as a consequence, the condition of these wards has been considerably improved.

In regard to other diseases than Smallpox I would remind you of the service rendered to the town during the year 1886 by Westhulme Hospital, when an outbreak of that terrible disease Typhus Fever was suppressed by prompt isolation in the Hospital. The Hospital also rendered signal service in enabling us to check the wave of Scarlet Fever in 1887. The comparatively low death rate from that disease in the Hospital is sufficient testimony to the careful tendance of the sick in that institution. You will certainly again require its services for some other disease than Smallpox, and one equally terrible though not so repulsive.

In respect of Typhus Fever, the type of disease in Oldham both in and out of the Hospital has been severe. At the same time, unless patients are removed at an early period of their attack I have thought that the act of removal was injurious to them. Great care requires to be exercised in this disease, in carrying and conveying the patients. Since the year 1886 special covered cans have been provided for Typhoid excreta with disinfectants to be placed over the Excreta when emptied into the can. In that way the Typhoid excreta have been separated, and exposure to the air avoided. For the last two years they have been removed to the destructor at Rhodes Bank and destroyed in the cremator.

There is reason to believe that the Excreta of typhoid patients does not contain the infectious matter in quantity till over a week after the commencement of symptoms. It should, therefore, be possible to remove altogether from any possibility of conveying the disease the matter discharged during the illness, when that has been recognised.

The high mortality from measles has engaged my earnest attention. The directions in which it seems to me that the notification of measles would be productive of benefit are the gradual education of people to recognise the gravity of the disease, and the enabling the Sanitary Authority to give timely warning to schools, so that the brothers and sisters of previous cases might be kept away. No doubt good would in that way be effected. It is questionable, however, whether, having regard to the number of children not attended at all by medical men, and to its highly infectious nature, it would be possible by these means to greatly check the spread of the disease. I have endeavoured to limit its incidence on schools in another way. Handbills have been distributed by the school visitors on the occurrence of a case, to the parents, warning them that the disease was a dangerous one and requiring isolation of the child attacked or a month, at least. The other children are, of course, excluded from the school for that period, or longer, if necessary.

The disadvantage of this proceeding is that, although otherwise useful, it is not automatic, and is liable to be stopped for that reason. It requires, in fact, vigilance in marking the course of the disease and in guarding school authorities against impending danger.

It is found that in Oldham measles becomes epidemic every two years, with a tendency to the shortening of the period. It will, therefore, be well to be on the alert, and to adopt, at least, all the measures which have been formerly in use, with any additional

precautions which may recommend themselves. For this purpose the posters issued in 1890 will be found useful if issued immediately that the disease is observed to be on the increase. A warning to householders of the necessity of strict isolation should be distributed by the school visitors, with an explicit statement of the need to keep the other children at home during the whole period of illness.

In regard to whooping cough the same difficulties apply as appertain to measles, perhaps in an increased degree. I have observed that deaths from whooping cough are often associated with unhealthy conditions in the house, and, therefore, the houses should be regularly visited on the occurrence of a death.

If it were possible to isolate cases of these diseases in Hospital, no doubt the number of deaths would be greatly reduced, especially from measles. But, at present, there is no prospect of that consummation.

Two other fatal diseases, largely depending on insanitary conditions, have received from you considerable attention, viz.—Summer Diarrhoea, and Consumption. The former is no doubt of a Zymotic nature, though, in what precise manner the infection grows is not so clear. Certain facts about the disease, however, are sufficiently well ascertained, viz.—Its conveyance by milk which has undergone contamination, and probably by other contaminated foods. It has been shown, also, to be connected with certain insanitary conditions. For these reasons, you have on several occasions issued handbills to every house in the Borough, giving plain directions for the protection of children. To these might be added other cautions, but, it may be, with the effect of distracting attention from the most essential. It might be well, however, to add to the next issue a paragraph stating that, considering the danger arising from these conditions, any dirty ashpit or privy, if reported to the Sanitary Office, 2, Mill Street, would at once receive attention.

Brief directions for diminishing the risk of infection from Consumption have also been sent to every house, and I would especially recommend the directions issued in 1892 for the next issue.

In my last report, I mentioned that you were considering the adoption of the water-carriage system in place of pails, and particularised certain precautions that would have to be taken, to make such a system reasonably safe.

Since then, about 100 waste-water closets have been fixed. In many of these the revolver is under the closet floor, and experience shows that it is apt to get fast and therefore useless. With any waste-water system it is essential that the tipper or revolver be easily accessible. There are other drawbacks to this system, especially in poorer neighbourhoods, and with back to back houses. In fact with any system of closet a breakdown is inevitable in certain neighbourhoods. It is only when each house is placed in possession of its own backyard that such a system is successful. This may be effected, as in Manchester, by removing houses and replacing them by yards. Where, however, the houses are, by reason of smallness, or damp, or other inherent defects, not adapted to this mode of conversion, you will hesitate to give them a new lease of life by pulling down a portion and making yards. In any case the existence of a row of back to back houses with a stack of common privies is a nuisance and a danger.

During the year 1893 it became a matter of serious discussion whether the Strinesdale reservoir should continue to add its water to the general drinking water of the town. I had, on a previous occasion, called attention to the contamination of this source of supply. The Chairman of the Waterworks Committee was decidedly of opinion that the water was a source of public danger under existing conditions, an opinion in

which I fully concurred. Moreover, it appeared difficult to believe that it could by any system of filtration, be made fit for consumption. Under these circumstances the water from the Strinesdale gathering ground has been, I believe, altogether disused.

## PART II.

## STATISTICAL.

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At the end of this report will be found the usual tables showing the analysis of the causes of death, and the work done by the nuisance department &c., which may be made the basis of such other remarks as I have to make. First, with regard to the general death rate, it will be observed that, the death rates between 1881 and 1891 having been calculated on the corrected populations, that for 1893 appears to be the lowest of the series—see table 9. The diminution is no doubt due, in part, to the population having ceased to increase in the ratio which held during the last decade, but cannot be entirely ascribed to that cause. On referring to the same table it will be noted that the diminution of the birth rate which has been steady since the year 1885 continues itself into the year 1893. If the proportion of deaths under 1 year to births were constant, the effect of such a diminished birth rate would be for a time to lower the mortality; but such is not the case. Thus in 1892 the proportion of deaths under 1 year to births is 1 per cent. lower than in 1893, and the lessened mortality as compared with 1892 cannot be ascribed to that cause. But the gradually contracting birth rate is, undoubtedly, a sign of hard times, in the absence of any other cause sufficient to account for it.

It is not for the first time that a certain degree of hardship or of apparent hardship has seemed to be attended with a beneficial result on health. The lock out which lasted over five months, from the beginning of November, 1892, to the end of March, 1893, was however, to my

knowledge, attended with much real hardship, and would probably have entailed much more, had it not been for the remarkable fall during last year in the price of provisions. On referring to table 17 you will observe that the price of flour per load dropped from 26s. 3d. in 1892 to 21s. 6d. in 1893, potatoes from 7s. 4d. per load to 6s. 6d., and meat from 4½d. per lb. to 4¼d. This was, it is true, largely discounted by the rise of 2s. per ton in the price of coal. That there was a decided pinch is shown by the greatly increased number of indoor poor in the Oldham Union. It has been supposed that the improvement in health which has been noted under similar conditions, is mainly due to the enforced temperance resulting, and no doubt some good will accrue from that source. But I should certainly suppose that a very large influence must be ascribed to rest from labour extending over such a multitude of persons. It must be remembered that coarser provisions, if not a smaller amount, will suffice under the altered conditions.

On referring to the table at page 42 of the Report for 1892 giving the principal causes of death in the years 1881-92, and to the principal table at the end of the Report it will be seen that the improvement in 1893 has taken place almost entirely in chest diseases, and especially in Phthisis and Bronchitis. It is true that 44 deaths are ascribed in this year to Influenza, as against 41 in 1892, but it is probable that the wave, which reached its apex in 1891, has for the time passed over. Table 4 shows the death rate from 1877 to 1893 from Bronchitis, Phthisis, and Pneumonia.

Now Bronchitis and Phthisis are not always separated in the death certificate with that precision which is to be desired, but there could be no doubt that an improvement has occurred in the death rate of Phthisis when the aggregate mortality from the two is decidedly lower than in any previous year, and when the death rate from Bronchitis is still more depressed than that from Phthisis. On referring to the column shewing the annual mortality from Phthisis it will be seen that a marked drop occurs in the corrected table in the year 1887, which has been apparently



maintained. It is, I think, possible that the great amount of attention bestowed on this subject since the year 1886 has to do with the diminished mortality. In addition to those more general conditions as regards occupation, housing, &c., which had long been recognised as having a powerful influence in producing Phthisis, a growing feeling prevailed that the time had arrived to give practical effect to the special knowledge of the disease resulting from Koch's great discovery. Greatly aided, as I have always been, by the medical men of Oldham, I was able in 1886 to obtain a considerable amount of clinical evidence pointing to the transmission of tuberculosis from individual to individual, and relating also to the conditions under which such transmission occurred. An incidental result was that a greatly increased attention was directed to this important subject, and in 1888 a handbill giving elementary measures of precaution was distributed to every house in the Borough. To this educational process I attach the utmost importance. But, during the last year, it appeared to me that the time had come when a more constant action should be taken in regard to Consumption, and I advised you that it was desirable that Tuberculosis should be added to the list of notifiable diseases. It is, however, no use having a disease notified unless notification leads to adequate preventive action. Moreover, owing to the great duration of the disease, and to the frequent change of medical men, which a disease so fatal is liable to produce, practical difficulties in notification presented themselves. Further, it was anticipated that medical practitioners might not be willing to have Consumption notified, in which case notification as an aid to prevention would have been useless. Before, therefore, making any recommendation to you, I considered it advisable to consult the Medical Society of Oldham. The members of the Society discussed the subject very fully in two successive meetings, and after weighing the objections to notification, passed a unanimous resolution that the notification of Phthisis was advisable in the interests of Public Health. You considered this resolution, but any action thereupon was postponed *sine die.*, that is

you declined to give any practical effect to it. Now it is perfectly true that with your present staff you cannot usefully deal with the notification of this disease. Nevertheless, it is, of all infectious diseases, that which most requires notification. It is dependent for its spread on well-known insanitary conditions, and on well defined modes of infection. Both are eminently removable, and where Phthisis has effected an entrance, ought to be removed. Whatever doubt may exist as to their precise effect on other infectious diseases, there is none whatever as to the influence of damp, dark, and badly ventilated dwellings on the propagation of Phthisis, and the Sanitary Authority should have the opportunity of preventing that influence from taking effect. At the same time, I would express an opinion that the continuance of the policy of educating the public in measures of precaution, by a house-to-house distribution of hand-bills, is very desirable.

It will be observed that the death rate from Diarrhoea is very high. On referring to Table 3, it will be found that Oldham suffers considerably less from this disease than most other large towns, a comparative immunity which holds for other years. It would be a mistake to imagine that this was due to any sanitary superiority. It is no doubt true that sanitary conditions play a part in the production of Diarrhoea not less important than they do in the production of Phthisis, but in a different way. It is probable that the condition of the subsoil has a most important effect on this disease, and that inefficient drainage and defective yards have much to do with its prevalence. Dr. Ballard's investigations, and Dr. Hope's inquiries, point to the conclusion that a growth takes place in polluted soil, and damp in houses, of a virus special to Diarrhoea, which then finds its way into the food supply, especially into the food supply of the infant. If such is the case, all the conditions in Oldham necessary to favour the disease are to be found in tolerable abundance, except one, viz: a high temperature. The considerable elevation of Oldham above the sea level insures that the subsoil shall not for any lengthened period be subject to that high temperature which Dr. Ballard showed to be necessary for the

disease to light heavily on the town. Usually, therefore, Oldham escapes rather easily. But in warm years, when all the conditions are favourable, as in 1893, the mortality from Diarrhoea very nearly approaches that of less favoured districts. 140 deaths were, last year, ascribed to this cause. Having regard to the high mortality attending summer Diarrhoea, you have deemed it good policy to send to every house, a hand-bill giving instructions as to the precautions to be taken to prevent children from attack, which I here reproduce.

BOROUGH OF OLDHAM,  
OFFICER OF HEALTH'S DEPARTMENT.

PRECAUTIONS TO BE TAKEN TO SAVE CHILDREN FROM  
SUMMER DIARRHŒA.

1. ALL LIQUID FOODS taken by young children should be boiled before use. No water or milk should be used unboiled in the hot months. If it is desired to keep food or drink for young children, it should be boiled and then stood in a jug or other dish, covered over with a clean cloth.
2. MOTHERS should, if possible, suckle their babies in the hot summer months to the exclusion of other food.
3. The BACK-YARD should be kept scrupulously clean.
4. The GRIDS in the back-yards should be trapped.
5. A YOUNG CHILD should not be allowed to play near an untrapped grid, or near a heap of manure; and it should not be allowed near the slop-pipe.
6. FRUIT should be carefully selected, and cleaned before children are allowed to use it.
7. All BREAD and other SOLID FOOD should be kept in a clean, dry, and well-aired place; and cooked meat, if not quite fresh, should be placed in boiling water for some time before use.

JAMES NIVEN, *Medical Officer of Health.*

But there are certain measures which require to be taken before you can hope entirely to affect this disease.

- 1.—All privies in stacks should be abolished, and whatever alteration is required in houses to insure this should be carried out.
- 2.—Manure should be contained in water-tight middens, and house refuse in water-tight receptacles.
- 3.—Unpaved streets and courts should be paved and flagged. Whatever other precaution may be necessary to avoid any filth from soaking into the subsoil will also tend in the same direction.

From Typhoid Fever the death rate in 1893 was 0·19 per 1,000, which is seen from Table 3 to be under the average of 33 large towns. On examining the corresponding table in recent years it is found that the typhoid mortality is comparatively low, although not what can be called a small figure. If the deaths are taken in quinquennia it is found that the number of deaths was from 1879 to 1883, 144; from 1884 to 1888, 119; from 1889 to 1893, 104. There has thus been a distinct reduction in the death rate, a reduction, however, still more marked when taken all over the country. The measures in Oldham which may be considered in recent years to have improved the typhoid death rate have already been mentioned. It has also been mentioned that a portion of the water supply was not such as to ensure protection from this disease, while in 1891 there seemed reason for believing that the water supply had something to do with its causation, although the number of cases was not very great nor the evidence conclusive. There is, however, one singular fact about Oldham which deserves to be noted, viz., that so many of the houses have until recently been in direct connection with the drains. In 1890, 576 - in 1891, 714; in 1892, 657; and in 1893, 793 slop-pipes admitting sewer gas were disconnected. This will serve as a sufficient indication of a time not very remote when the houses were practically all in connection with

the sewers. It is certainly very remarkable that with such conditions typhoid fever should not have been more abundant, nor is there any plain connection discernable between these conditions and the occurrence of typhoid fever. I am far from saying that such a connection does not exist where favourable conditions are present. It must be remembered, however, that, in Oldham, fœces are not discharged into the drains, and that as far as possible the typhoid excreta have in recent years been separated and disinfected. It does seem, however, that the typhoid fever virus is no necessary inhabitant of sewers, and that exposure to sewer gas is not sufficient to give rise to the disease, without special contamination of the sewers.

I am strongly of opinion that separate pails should still be supplied for Typhoid excreta, after waterclosets are provided, and that the disinfection of such excreta and their cremation in the destructor, should not be intermitted.

From Scarlet Fever the mortality in 1893 was comparatively low, the number of deaths being only 16 and the number of cases notified 442, as compared with 667 notified in 1892. The diminution in numbers notified, and the mild type of the disease were extremely fortunate circumstances, since the Hospital was entirely required for the treatment of Smallpox. Such good fortune is, however, by no means to be counted upon, as the experience of Leicester amply shows, and the former history of Scarlet Fever in Oldham is such that the Sanitary Authority could not have continued to look with calmness on the prospect of having no means of isolating cases of that disease. In former years, especially in 1886 and 1887, I made a special effort to induce parents to have their children isolated in the Hospital, and so excellent was the management and nursing of the children, that parents became anxious to have them sent to Westhulme. Unfortunately the effort to deal with this disease was frustrated in 1887 by the inability of the Hospital to receive all the cases, and in 1888, by the prevalence of Smallpox. Nevertheless, as I have

previously stated in my reports, I believe that the Hospital, by diluting the incidence of Scarlet Fever in the worst localities, has had a decided effect in diminishing the mortality from that disease. The general decline in the fatality of Scarlet Fever which has taken place in recent years, may reasonably be ascribed to notification, with the attendant measures of precaution and isolation carried out at home and in hospital, owing to the action of Sanitary Authorities. The same remark also applies to Typhoid Fever. Unquestionably, these measures can be far better carried out, as a rule, when patients are removed to hospital, than when they are retained at home.

Diphtheria is a disease which has never seemed to take much hold of Oldham. Nevertheless, it is sufficiently in evidence to require every effort that can be made to cope with it. The new treatment with Antitoxic Serum has yet to run the gamut of that stern criticism which medicine applies to all new discoveries. So far as the evidence yet goes, it promises well. But, if it should prove that an antidote has been found to this most fatal disease, the Public will expect that poor children when attacked, shall be isolated and treated. Public Bodies will, in that case, be expected to provide the funds for manufacturing the material, by which not only will poor children be saved, but a terrible infection will be removed in the process of cure. Wards for the reception of cases of Diphtheria will have to be provided in Oldham, as in London and elsewhere.

In 1893 smallpox obtained a very considerable hold of Oldham. As I showed in my Report for 1892, its prevalence could be assigned to three causes, viz., to the presence of Westhulme Hospital near a large number of houses, to the prejudice existing against vaccination, and to the numerous oversights of mild cases of smallpox. I do not propose to add materially to that Report which carried the cases on to March, 1893, but I submit figures relating to the vaccinations of all cases admitted into Westhulme Hospital during 1893, and figures relating to the distribution of smallpox round Westhulme Hospital.

## Cases of smallpox treated in Westhulme Hospital during 1893.

At Ages.	Admitted.			Died.		
	Vacc.	Doubtful.	Not Vacc.	Vacc.	Doubtful.	Not. Vacc.
0-5	14	0	56	1	0	18
5-15	35	2	59	0	1	9
15-25	152	2	16	3	1	5
25-35	155	0	21	4	0	7
35-45	79	3	3	5	1	3
45-55	23	1	1	2	0	1
55 & upwards	14	2	0	2	1	0
Total at all ages	472	10	156	17	4	43

The significance of these figures is unmistakable. Smallpox is seen to be seven times more fatal to the unvaccinated than to the vaccinated. The mortality amongst the vaccinated is, moreover, most marked in the later years of life, when the protective influence of vaccination has died out, and might be prevented by revaccination. Up to the age of 25 the mortality amongst the unvaccinated cases is more than twelve times as great as among the vaccinated.

As regards the distribution of smallpox cases around Westhulme Hospital, the figures, so far as they concern Oldham, were for 1893 based on the same assumptions as in the Report for 1892.

Number of cases per 100 houses within a radius round Westhulme Hospital of

$\frac{1}{4}$ mile .....	12.9
Between $\frac{1}{4}$ and $\frac{1}{2}$ mile .....	6.6
$\frac{1}{2}$ mile and $\frac{3}{4}$ mile .....	2.0
$\frac{3}{4}$ and 1 mile .....	1.5
Outside the mile radius.....	0.8

The steadily diminishing incidence of smallpox as we recede from the Hospital is well marked. To some extent that is of less importance than

the figures previously given, inasmuch as it might be said that such an effect once established tends to perpetuate itself. But this is not altogether so, since there is reason to believe that much more vaccination was practised—with its resulting protection—in the neighbourhood of the Hospital than in the centre of the town.

As in previous years I give tables showing the incidence of various diseases on the different wards of the town, and the time is favourable for giving the mortalities over five years 1889—1893, calculated on the population of the census years. This, of course, is not strictly accurate, but it gives a more reasonable hope of approximity to a useful estimate than any other proceeding.



Number of deaths at all ages from various causes, in the different Wards in 1889, 1890, 1891, 1892, and 1893.

Population.	Census 1893	St. Mary's 10,421	St. Peter's 11,798	Werneth. 11,747	Westwood 11,637	St. Paul's 10,191	Coldhurst. 10,800	Hartford. 12,679	Hollinwood 7,652	Clarksfield 11,615	Mumps. 9,231	St. James's 10,735	Waterhead 12,957
Enteric Fever	1889	1	1	2	4	1	0	2	0	0	3	4	2
	1890	1	2	0	0	0	4	0	0	3	2	1	2
	1891	2	3	3	1	4	5	2	0	0	3	2	2
	1892	1	1	2	3	0	2	0	0	2	3	2	0
	1893	5	3	4	0	0	0	2	2	5	3	0	2
	Total	10	10	11	8	5	11	6	2	10	14	9	8
Phthisis.....	1889	14	18	25	21	19	31	24	13	21	20	17	22
	1890	21	20	17	19	17	29	31	17	15	27	16	35
	1891	22	35	17	20	13	35	27	8	16	22	17	20
	1892	23	23	16	20	14	29	35	15	33	27	19	24
	1893	16	20	21	16	18	24	27	20	23	21	27	22
	Total	96	116	96	96	81	148	144	73	108	117	96	123
Old Age.....	1889	9	6	13	10	13	8	8	4	15	7	6	9
	1890	13	18	12	10	10	11	5	7	13	12	11	11
	1891	5	9	9	9	6	16	8	3	7	7	8	11
	1892	9	9	7	7	7	5	11	6	8	15	9	14
	1893	12	10	14	8	6	11	9	3	6	5	6	6
	Total	48	52	55	44	42	51	41	23	49	46	40	51

CAUSES OF DEATH CONTINUED.

Heart Disease ...	1889	9	21	12	17	18	15	28	5	18	20	13	22
	1890	11	15	22	16	12	17	21	10	21	13	17	22
	1891	17	32	17	13	19	18	17	5	14	14	18	18
	1892	19	13	18	17	15	11	15	6	12	13	12	18
	1893	12	22	22	13	16	19	25	8	10	9	14	20
Total		68	103	91	76	80	80	106	34	75	69	74	100
Pneumonia...	1889	26	39	23	37	21	24	25	22	22	18	26	43
	1890	36	42	27	31	25	49	42	25	21	28	40	36
	1891	28	35	41	50	36	39	47	31	27	35	39	29
	1892	41	22	19	20	16	35	37	13	24	21	32	29
	1893	32	20	26	15	33	34	27	26	31	17	26	32
Total		163	158	136	153	131	181	178	117	125	119	163	169
Other Respiratory Diseases than Phthisis and Pneumonia...	1889	40	23	29	34	40	53	47	16	34	35	24	39
	1890	40	43	51	36	31	52	58	25	34	35	37	54
	1891	42	38	33	57	54	68	56	29	31	40	46	67
	1892	46	37	26	44	26	44	48	23	30	35	44	53
	1893	28	29	17	34	23	37	41	26	37	28	28	36
Total		196	170	156	205	174	254	250	119	166	173	179	249
Septic Disease...	1889	4	1	1	4	1	4	0	0	1	0	1	2
	1890	4	6	2	1	1	5	3	0	0	1	2	4
	1891	1	0	2	3	2	5	3	4	5	0	5	3
	1892	6	1	2	5	0	8	1	2	2	1	5	1
	1893	3	3	1	2	2	2	3	1	4	2	6	6
Total		18	11	8	15	6	24	10	7	12	4	19	16

## CAUSES OF DEATH CONTINUED.

Population.	Census 1893	St. Mary's. 10,421	St. Peter's 11,798	Werneth. 11,747	Westwood 11,637	St. Paul's 10,191	Coldhurst 10,800	Hartford 12,679	Hollinwood 7,652	Clarksfield 11,615	Mumps 9,231	St. James's 10,735	Waterhead 12,957
Alcoholism & Cirrhosis of Liver.....	1889	1	5	2	0	3	5	5	2	0	4	3	2
	1890	5	6	2	1	2	8	1	2	2	3	2	1
	1891	1	4	3	6	1	3	4	0	3	2	0	2
	1892	5	1	2	3	0	1	1	1	0	5	0	0
	1893	1	3	3	2	1	2	3	4	1	2	0	1
	Total	13	19	12	12	7	19	14	9	6	16	5	6
Cancer .....	1889	3	5	7	8	4	2	9	2	7	9	4	3
	1890	6	5	9	3	9	4	4	4	3	3	3	9
	1891	7	10	6	3	6	2	12	3	9	4	0	11
	1892	3	11	8	6	5	9	14	1	6	5	5	7
	1893	8	5	6	1	3	7	12	2	8	9	7	5
	Total	27	36	36	21	27	24	51	12	33	30	19	35
Accident ...	1889	5	4	5	5	9	4	1	4	8	4	3	2
	1890	8	2	3	3	4	6	3	2	5	3	4	4
	1891	6	10	3	6	3	4	5	0	2	6	1	6
	1892	4	5	2	2	5	2	5	2	4	6	7	6
	1893	4	4	5	4	5	7	1	8	4	4	5	5
	Total	27	25	18	20	26	23	15	16	23	23	20	23

CAUSES OF DEATH CONTINUED.

Homicide ...	1889	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1890	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1891	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1892	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1893	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suicide .....	1889	1	2	3	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	1890	1	0	0	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1891	0	2	1	0	0	2	0	0	1	0	1	1	1	2	2	2	2	2	2	2	2	2	1
	1892	0	1	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
	1893	0	0	0	0	0	1	0	0	1	0	0	0	2	1	0	1	0	0	0	0	0	0	1
	<b>Total</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheumatic Fever ...	1889	0	0	1	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1
	1890	0	0	1	1	0	0	0	1	1	1	1	0	3	3	2	4	1	1	1	1	1	1	1
	1891	0	2	1	0	0	1	1	0	0	0	0	1	3	3	0	2	2	2	2	2	2	2	2
	1892	3	3	2	2	0	6	6	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2
	1893	2	0	1	2	1	1	1	2	2	2	1	0	0	0	1	2	2	2	2	2	2	2	2
	<b>Total</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>8</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>5</b>

Death-Rate of 5 years—1889-1893, taking the Census population for the 5 years. (In this Table each figure requires dividing by 5 to arrive at the average annual death-rate.)

	St. Mary's	St. Peter's	Werneth.	Westwood	St. Paul's	Coldhurst.	Hartford.	Hollinw'd.	Clarksfield	Mumps.	St. James's	Waterhe'd
Enteric Fever .....	.96	.85	.94	.68	.49	1.01	.47	.26	.86	1.52	.84	.62
Septic Disease.....	1.72	.93	.68	1.29	.59	2.22	.78	.91	1.03	.43	1.77	1.23
Alcoholism and Cirrhosis of Liver	1.24	1.61	1.02	1.03	.68	1.76	1.10	1.17	.51	1.73	.46	.46
Phthisis.....	9.21	9.83	8.17	8.25	7.95	13.70	11.36	9.54	9.28	12.67	8.94	9.49
Pneumonia .....	15.64	13.40	11.58	13.15	12.85	16.76	14.04	15.29	10.76	12.89	15.18	13.04
Other Respiratory Diseases .....	18.80	14.41	13.28	17.61	17.07	23.52	19.72	15.55	14.29	18.74	16.67	19.21
Heart Disease .....	6.52	8.73	7.74	6.53	7.85	7.40	8.36	4.44	6.45	7.47	6.89	7.72
Rheumatic Fever..	.48	.42	.51	.68	.49	.55	.39	.39	.69	.43	1.02	.39
Cancer .....	2.59	3.05	3.06	1.80	2.65	2.22	4.02	1.57	2.84	3.25	1.77	2.70
Old Age.....	4.60	4.40	4.68	3.78	4.12	4.72	3.23	3.01	4.22	4.98	3.72	3.93
Accident .....	2.59	2.12	1.53	1.71	2.55	2.13	1.18	2.09	1.98	2.49	1.86	1.77
Homicide .....	0	0	0	0	.09	.18	0	0	0	.22	.09	0
Suicide .....	.19	.42	.34	.60	.09	.27	.15	1.31	.26	.43	.46	.38

It will be remembered that on the basis of similar figures the wards first selected for house-to-house inspection were Coldhurst, St. Mary's, and Mumps. It is desirable that this inspection should be continued, a record being kept of the condition of each house visited. In that case probably Hartford, with its high mortality from phthisis and respiratory diseases, would be the ward which would best repay attention in the next instance. St. Peter's and Westwood also require inspection as soon as possible. Next to the wards which have been already inspected these show the greatest alteration in their mortalities consequent on the distribution of deaths from the institutions into the wards. The figures (in Table 2) showing these alterations I have called poverty indices, and they necessarily imply so many insanitary conditions that they are useful confirmations of conclusions drawn from other sources. The figures in former years are in general accordance with those for 1893, except that Hartford stands out more conspicuously than in 1893 in respect of its high poverty index. If the total mortalities given in Table 2, after redistribution of deaths, are to be taken as a measure of the need for attention, then taking the three years 1891, 1892, 1893, Hartford clearly has a strong claim on your attention.

During the year 1893, in spite of the demands of smallpox, it was found possible to do a fair amount of house-to-house inspection, the summary of which I here insert.

SUMMARY OF HOUSE TO  
ST. MARY'S

	Dirty.	Crowded.	Defective Drainage	Sewer Gas.	Defective Ventila- tion.	Damp.		Lock-up Shops.	Empties.
						Above.	Below.		
	72	14	276	54	83	57	59	...	17
	43	8	66	50	50	5	17	26	36
	38	12	57	78	27	40	29	19	12
	59	19	140	40	6	40	52	3	17
	115	12	198	95	38	92	76	6	40
<b>TOTAL.</b>	327	65	737	317	204	234	233	54	122
PART OF									
	33	5	65	16	18	28	20	6	16
PART OF									
	69	8	138	29	76	62	68	13	46
PART OF									
	105	11	157	39	62	62	68	27	31
PART OF ST.									
	69	3	135	53	39	25	29	18	28

HOUSE INSPECTION OF  
WARD.

Nature of House.				Total Number of Houses.	Average Occu- pants per House.	
Cellars.	Single.	Back to Back.	Through.			
...	30	48	269	364	5.65	DR. NIVEN.
7	50	93	168	380	3.48	INSPECTOR THOMAS.
29	39	61	258	418	3.87	„ HOPKINSON.
4	16	88	330	458	4.16	„ GILLESPIE.
1	33	28	669	777	4.78	„ BURNETT.
41	168	318	1694	2397	4.39	
WERNETH WARD.						
1	9	48	182	262	4.11	INSPECTOR BURNETT.
HARTFORD WARD.						
7	55	82	150	353	4.51	INSPECTOR BURNETT.
COLDHURST WARD.						
9	74	102	409	652	4.64	INSPECTOR BURNETT.
PETER'S WARD.						
15	26	61	125	273	4.59	INSPECTOR BURNETT.



A careful perusal of this summary reveals the fact that a varying standard must have been applied to the houses in respect of such matters as cleanliness, drainage, and damp. But there stands out unmistakeably the enormous number of houses in which a direct connection with the sewers still exists. In fact the table bristles with evidences of conditions inimical to health. I do not hesitate to say that, considering the staff at work, a large amount of useful work has been done in Oldham in late years, except in one respect, viz.—in the removal of manifestly insanitary dwellings. The standard has been certainly pitched very low. But even with that low standard a large number of dwellings quite unfit for habitation are now occupied. Even with comparatively new dwellings many of the old insanitary conditions are being renewed and perpetuated. The amount of work demanded of the Sanitary Department shown by this and previous summaries is so great that a staff of double the size would take a considerable time to make any great impression on it.

In the course of the house-to-house inspection which I made in 1893, I was much struck with the numerous encroachments which had been made on the yards of houses by the creation of outbuildings, greenhouses, henhouses, &c. This practice is calculated altogether to defeat the object of your building bye-laws, which is to provide an unobstructed circulation of air round the back portion of the house, and should be most strenuously repressed.

The figures summarising the observations on black smoke emitted from mill chimneys may be here inserted. They come in at this point without any forced construction.

## TO THE MEDICAL OFFICER OF HEALTH.

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I herewith present you with a Summary of Smoke Observations taken during the year 1893. Owing to the lock-out in the cotton trade and the wages dispute in the coal trade there is a considerable falling off in the number of observations taken, as compared with the previous year, the numbers being 1250 and 784 respectively, per centage of excesses of black smoke over 9 minutes in the hour being  $11\frac{1}{2}$  per cent. in 1893 and  $9\frac{1}{2}$  per cent. in 1892.

There has been no further advance made in the Borough during the year as regards adopting Machine Stoking, as there seems to be a decided objection on the part of many Owners and Engineers to these Machines.

I beg to remind you that the Cass Coking Machines have now been working at the West End Mills over  $4\frac{1}{2}$  years and at the Pine Mill over 12 months, the chimneys in connection with these boilers being very satisfactory, and being, in fact, the best in the town.

In accordance with instructions a short time ago, I visited Bolton and found there that during the previous two years Cass's Machines had been adopted by six firms, with a total of 35 boilers and 11 chimneys; and from information received, and from my own personal observation at the time of my visit, all these chimneys are practically smokeless.

Yours truly,

CHARLES BROADBENT,

Smoke Inspector.

SMOKE OBSERVATIONS TAKEN DURING THE YEAR ENDING DECEMBER 20TH, 1893.  
BLACK SMOKE.

Fortnight ending	None,	Under 1 Minute.	1 Min. and under 2 Minutes.	2 Min. and under 3 Minutes.	3 Min. and under 4 Minutes.	4 Min. and under 5 Minutes.	5 Min. and under 6 Minutes.	6 Min. and under 7 Minutes.	7 Min. and under 8 Minutes.	8 Min. to 9 Minutes, inclusive.	Over 9 Minutes.	Total Observations taken.
Jan. 4	0	0	4	4	8	5	1	4	2	3	2	33
" 18	2	1	6	5	4	7	7	1	0	2	1	36
Feb. 1	0	0	1	11	5	4	3	2	2	1	0	29
" 15	0	0	1	3	4	3	3	1	0	0	0	15
Mar. 1	0	0	2	2	3	5	4	4	1	0	1	22
" 15	0	0	0	0	0	0	0	0	0	0	0	0
" 29	0	1	1	9	7	7	1	5	1	1	1	34
April 12	0	0	3	4	6	8	5	7	2	2	5	42
" 26	0	1	2	0	2	4	9	7	6	4	10	45
May 10	0	0	2	4	7	4	4	6	6	4	9	48
" 24	0	0	2	4	7	4	8	9	5	3	1	47
" 7	0	0	3	3	7	11	9	6	2	1	2	46
June 21	1	0	6	10	11	6	6	2	1	4	5	48
" 5	0	2	6	8	5	8	3	4	3	2	5	46
July 19	0	0	6	9	8	6	9	3	5	2	2	50
" 2	0	0	6	9	8	7	8	8	8	4	8	53
Aug. 16	0	0	3	3	4	7	9	5	3	6	13	60
" 30	3	0	2	0	9	3	2	2	2	1	3	19
Sept. 13	5	0	0	4	3	4	3	4	3	2	7	35
" 27	0	0	2	3	4	4	5	6	5	1	5	35
Oct. 11	0	0	0	0	0	0	0	0	0	0	0	0
" 25	0	0	0	0	0	0	0	0	0	0	0	0
Nov. 8	0	0	0	0	0	0	0	0	0	0	0	0
" 22	0	0	0	0	0	0	0	0	0	0	0	0
Dec. 6	0	0	1	4	1	3	3	0	1	0	3	16
" 20	0	0	3	3	3	5	5	2	1	0	5	27
	11	8	58	98	107	122	102	88	59	43	88	784

As I have formerly pointed out the great amount of black smoke sent out by these chimneys forms a serious impediment to the adequate ventilation of houses. Wherever the bedroom windows are left open, soot and other forms of dirt rapidly effect an entrance. The Lancashire people are not without pride in a clean house, and I can testify that it is a very serious cause indeed for the want of ventilation so much observed in Oldham, that the black smoke emitted in such quantities by mill chimneys is not more stringently dealt with. It is no mitigation, but the reverse, to insist that cottage chimneys make so much of the smoke.

It is the poco piu that forms the aggravation. And in Oldham it is by no means a little increase as it is in districts where the mill chimneys are better attended to. The contrast between the atmosphere in Oldham on Sundays and on week-days is most marked and painful. I do not know of any sufficient reason why this should continue. It has been proved that, at all events in the vast majority of mills, by putting in and maintaining adequately a machine such as that devised by Cass, of Bolton, and improved by Mr. Mellor, late of the West End Mills, a great improvement can be effected. And here I hope you will allow me to pay a tribute to the late Dr. Thomas Patterson, who singly and at much wear and tear to a highly sensitive disposition fought the battle of a pure atmosphere for the toilers of Oldham and Chadderton. Even those who may have disagreed with him at earlier epochs of his career, must recognise the singleness of his aim, as well as the self-sacrifice and fortitude which animated him in his determination to improve the air breathed by his fellow-townsmen.

The remaining statistics for the year 1893 comprise the tables relating to the adulteration of food, the return of inquests held, the return of work done by the nightsoil and ashes department, and the summary of meteorological observations made during the year. With regard to the first of these it will be seen that the proportion of samples of milk found not genuine is larger than in 1891 or 1892. This is partly the result of

additional care in selecting the milks submitted for analysis. But that so large a proportion of milks and butters should have been found not genuine points to the necessity of an increased number of samples being taken.

Following on these tables is the record of nuisances reported, and work executed by the Sanitary Department during the year. It has been already said that the Inspectors were very severely taxed during a considerable part of the year by the work of removal and disinfection of smallpox cases, often at long distances. Nevertheless it will be seen on examination of the return of house-to-house inspections, and of the nuisance table so far as it relates to conditions appertaining to houses that the work is considerably in excess of previous years. The number of houses disinfected is recorded as 1,005, against 641 in 1892. In connection with the return of clothing disinfected I would point out to you that a much greater destruction of articles takes place in the hot-air oven than in the steam disinfector, and that many of the articles classed as disinfected were no doubt considerably damaged. For this reason alone, even if steam disinfection were not much more efficient, the present system should be replaced as soon as possible by disinfection by steam.

In conclusion, I would commend to your earnest consideration, these matters :—

1. The necessity of a much larger staff to overtake the work.
2. The importance of the house-to-house inspection being continued with an adequate record of the improvements effected.
3. The alteration of the objectionable system of back-to-back houses with privies in stacks, so as to give each house its own yard and closet accommodation.
4. The importance of providing each new house with adequate protection from damp.

5. The urgency of altering the system of collecting house refuse, and in other ways preventing the subsoil from being polluted.
6. The advisability of extending the provision for destroying house refuse.
7. A Steam Disinfector should, in the interests of economy and efficiency, be erected as soon as possible.
8. Although I regard water-carriage as being a great improvement on the pail system of collecting nightsoil, it should not be introduced except *pari passu* with a reconstruction of defective drainage, and with the utmost care in the true levelling and jointing of drains, so as to secure a permanently uninterrupted fall to the sewers. Certainly it should not be introduced without a survey of house drainage, and the complete separation of drains from the houses.
9. The importance of a more continuous and adequate inspection of workshops, bakehouses, slaughter-houses, dairies, and cow-sheds
10. Additional Hospital provision is required, especially for Smallpox.
11. Consumption should be added to the list of Notifiable Diseases, and the insanitary conditions so often associated with its production adequately dealt with.

The necessity of altering the system of collecting house rates and in other ways governing the entire local body politics. The necessity of providing for the collection of house rates.

A Public Health Act should be the interest of economy and efficiency in every respect.

It is not sufficient to say that the system of collecting rates should not be altered until the system of collecting rates is improved in every respect. The system of collecting rates should be improved in every respect and the interest of economy and efficiency in every respect should be the interest of the system. It is not sufficient to say that the system of collecting rates should not be altered until the system of collecting rates is improved in every respect.

The importance of a new constitution and the importance of the system of collecting rates should be the interest of the system.

The system of collecting rates should be improved in every respect and the interest of economy and efficiency in every respect should be the interest of the system.

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## VITAL STATISTICS, 1893.

Population estimated by the Registrar General to the middle of						
the year 1893	...	...	...	...	...	136,469
Births registered in the 52 weeks ending December 30th, 1893:—						
	Males	...	1979	}		3,895
	Females	...	1916			
Deaths registered in the 52 weeks ending December 30th, 1893:—						
	Males	...	1472	}		2,860
	Females	...	1388			
Excess of Males over Females						84
Deaths from the Seven Principal Zymotic Diseases						348
Deaths under 1 year to 1,000 Births						186
Annual Rate of Births per 1,000 living population						28·5
Annual Rate of Mortality per 1,000 Living Population						20·96
Annual Rate of Mortality per 1,000 living population from the Seven Principal Zymotic Diseases						2·55

Of the 2,860 deaths registered during the year 1893, 1,160, or 40·6 per cent. were those of children under 5 years of age, and 726, or 25·4 per cent. were under 1 year.

### PRINCIPAL CAUSES OF DEATH.

Pneumonia	...	...	319	Debility, Atrophy, Inanition	130
Bronchitis	...	...	303	Apoplexy	127
Phthisis...	...	...	255	Old Age...	96
Heart Disease	...	...	191	Inflammation of Brain	83
Diarrhoea	...	...	140	Cancer	74
Convulsions	...	...	131	Premature Birth	69



TABLE No. 1.

showing the Population, Births and Birth-Rate per 1,000 Population in each Ward, in the 52 weeks ending December 30th, 1893.

Ward.	Population.	Births.			Rate per 1,000 Population.
		Males.	Females.	Total.	
St. Mary's .....	9,375	159	175	334	35·6
St. Peter's .....	12,247	171	164	335	27·3
Werneth .....	12,195	145	147	292	23·9
Westwood .....	12,080	201	164	365	30·2
St. Paul's .....	10,578	143	152	295	27·8
Coldhurst .....	14,209	164	155	319	22·4
Hartford.....	13,162	193	191	384	29·1
Hollinwood .....	7,944	151	132	283	35·6
Clarksfield .....	12,058	187	177	364	30·2
Mumps .....	8,027	107	115	222	27·6
St. James's.....	11,144	145	150	295	26·4
Waterhead .....	13,450	213	194	407	30·2
Totals.....	136,469	1979	1916	3895	28·8

TABLE No. 2.

Showing the Population, Deaths and Death-Rates per 1,000 Population in each Ward, in the 52 weeks ending December 30th, 1893.

Ward.	Population.	Deaths.			Rate per 1,000 Population	Mortality after distribution of deaths in Institutions into the Wards	Difference made by distribution
		Males	Femal's	Total			
St. Mary's...	9,375	105	129	234	25·0	26·4	1·4
St. Peter's...	12,247	99	101	200	16·3	18·7	2·4
Werneth ...	12,195	107	108	215*	17·6	18·8	1·2
Westwood...	12,080	97	96	193†	16·0	18·2	2·2
St. Paul's ...	10,578	89	91	180	17·0	18·3	1·3
Coldhurst ...	14,209	128	100	228	16·0	19·2	3·2
Hartford ...	13,162	143	116	259	19·7	21·6	1·9
Hollinwood .	7,944	105	72	177	22·3	24·2	1·9
Clarksfield ..	12,058	105	118	223	18·5	20·1	1·6
Mumps .....	8,027	88	76	164	20·4	23·5	3·1
St. James's..	11,144	103	134	237	21·3	21·7	·4
Waterhead ..	13,450	127	135	262	19·5	20·6	1·1
Out-Town- ships ...	...	...	...	...	...	·28	·28
<b>Total .....</b>	<b>136,469</b>	<b>1,296</b>	<b>1,276</b>	<b>2,572</b>	<b>18·8</b>	<b>20·96</b>	<b>—</b>

\* In addition to this number 58 deaths (40 males and 18 females) occurred in the Infirmary.

† In addition to this number 166 deaths (98 males and 68 females) occurred at the Workhouse, and 64 (38 males and 26 females) at West-hulme Hospital.

The total number of death is 2860 (1472 males and 1388 females), giving a death-rate of 20·96 per 1,000 population.

TABLE No 3.

**33 TOWNS, BIRTH and DEATH-RATES, and ANALYSIS of MORTALITY, in the 52 Weeks of 1893.**

In this Table 0·00 indicates that the deaths were too few to give a rate of 0·005 : when *no death* occurred — is inserted.

CITIES AND BOROUGHES.	ANNUAL RATES PER 1,000 PERSONS LIVING.															Annual Rate of Mortality per 1000 living			Percentage to Total Deaths.		
	Total Deaths.					Deaths from										Deaths under 1 year to 1000 Births	Aged 1 to 60 Years	Aged 60 Years and upwards	Deaths in Public Institutions.	Deaths in Inquest Cases.	Uncertified Causes of Death.
	52 or 53 Weeks ending			Principal Diseases.		Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhea.	Violence.	15	16						
	3rd Jan. 1891.	2nd Jan. 1892.	31st Dec. 1892.	30th Dec. 1893.	6											7	8	9	10	11	12
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Cols.																					
33 Towns .....	31·9	22·4	22·2	20·7	21·6	0·07	0·44	0·29	0·43	0·48	0·24	1·23	0·73	181	12·0	79·6	6·7	19·2	1·8		
London* .....	31·0	21·5	21·4	20·6	21·3	0·05	0·39	0·37	0·76	0·54	0·17	0·80	0·80	164	12·3	79·3	8·1	26·9	0·9		
West Ham .....	35·6	19·5	17·8	18·6	18·9	0·24	0·16	0·35	0·42	0·68	0·30	1·24	0·52	170	10·2	76·6	3·7	8·8	4·5		
Croydon .....	26·2	16·3	14·5	15·8	16·3	0·01	0·18	0·10	0·78	0·25	0·11	0·78	0·50	155	8·2	67·1	7·5	13·9	—		
Brighton .....	25·4	19·1	18·2	19·2	18·4	—	0·11	0·10	0·28	0·48	0·13	0·75	0·53	169	9·7	63·4	4·4	17·6	2·7		
Portsmouth.....	28·2	17·9	19·0	18·5	18·2	—	0·68	0·20	0·17	0·22	0·31	1·23	0·53	164	9·9	64·5	6·2	13·4	0·8		
Plymouth.....	29·9	21·1	22·5	18·8	21·2	—	0·98	0·25	0·16	0·53	0·12	0·73	0·60	169	11·4	66·6	7·0	9·5	0·5		
Bristol .....	30·4	20·2	20·9	19·5	18·9	0·08	0·11	0·16	0·22	0·34	0·11	0·63	0·63	141	9·9	79·7	6·9	20·1	1·6		
Cardiff .....	36·1	19·5	22·1	18·8	19·7	—	0·70	0·27	0·68	0·28	0·19	1·18	0·80	179	11·0	67·6	8·3	11·9	1·0		
Swansea .....	35·1	22·3	22·0	20·4	19·6	—	0·18	0·35	0·05	0·32	0·20	0·74	0·59	170	10·6	74·7	5·3	7·1	2·0		
Wolverhampton	34·5	22·2	24·2	21·5	23·3	0·01	0·25	0·31	0·06	0·05	0·33	1·83	0·82	208	11·7	81·2	7·1	18·7	1·0		
Birmingham ...	32·7	22·4	22·2	20·4	22·0	0·15	0·10	0·14	0·13	0·66	0·20	1·66	0·65	198	11·6	86·2	2·7	17·9	4·9		
Norwich .....	30·9	20·1	19·3	20·0	19·3	—	0·50	0·19	0·22	0·64	0·36	1·05	0·40	195	8·5	63·9	6·8	8·9	1·1		

Leicester .....	32.6	19.7	21.7	18.2	20.0	3.95	0.08	0.28	0.43	0.11	0.61	0.25	2.19	0.92	220	9.4	12.9	9.4	12.2	3.4
Nottingham ...	30.2	19.2	19.9	18.7	18.5	2.62	0.02	0.11	0.37	0.07	0.27	0.31	1.47	0.75	170	9.2	75.0	5.9	14.9	1.7
Derby .....	32.2	20.1	19.1	18.3	18.2	2.07	0.07	0.18	0.14	0.07	0.45	0.23	0.93	0.59	156	9.7	76.9	8.2	13.7	0.8
Birkenhead.....	33.1	21.1	20.9	19.6	20.5	2.82	0.01	0.14	0.12	0.15	0.67	0.26	1.47	0.66	196	10.4	82.3	7.9	11.9	1.1
Liverpool.....	36.0	27.8	27.0	24.7	27.3	3.90	0.02	0.54	0.45	0.12	0.55	0.53	1.69	1.47	211	16.6	83.8	6.9	19.5	3.7
Bolton .....	33.1	26.1	21.9	22.8	24.1	4.65	0.06	1.42	0.29	0.10	0.66	0.31	1.81	0.55	199	13.7	97.6	6.1	7.5	0.8
Manchester.....	33.6	29.7	26.5	23.8	24.9	3.72	0.09	0.58	0.27	0.32	0.47	0.25	1.74	0.84	203	14.6	92.7	7.2	19.1	1.3
Salford.....	34.7	27.6	26.0	24.6	24.1	4.14	0.11	0.45	0.20	0.29	0.49	0.49	2.11	0.71	210	13.4	92.5	5.3	14.2	3.3
<b>OLDHAM</b> .....	<b>28.6</b>	<b>24.0</b>	<b>25.7</b>	<b>22.0</b>	<b>21.0</b>	<b>2.48</b>	<b>0.48</b>	<b>0.21</b>	<b>0.12</b>	<b>0.13</b>	<b>0.40</b>	<b>0.19</b>	<b>0.95</b>	<b>0.55</b>	<b>187</b>	<b>12.6</b>	<b>78.7</b>	<b>6.1</b>	<b>10.1</b>	<b>1.1</b>
Burnley* .....	33.9	23.0	21.6	20.4	21.9	3.80	0.06	0.29	0.55	0.15	0.36	0.30	2.09	0.54	223	11.7	76.7	3.6	5.9	1.4
Blackburn .....	30.9	24.4	25.8	21.7	23.3	4.08	0.06	1.16	0.04	0.02	0.27	0.24	2.29	0.53	241	12.1	89.9	3.6	9.6	3.4
Preston .....	35.1	27.0	27.3	24.1	26.4	6.01	—	1.63	0.25	0.13	0.43	0.46	3.11	0.49	269	13.4	81.0	2.6	7.0	3.8
Huddersfield ...	23.8	20.0	23.0	18.1	17.2	1.24	—	0.24	0.26	0.03	0.13	0.12	0.46	0.36	141	10.0	75.4	3.1	8.1	2.9
Halifax .....	24.6	22.4	22.8	19.5	17.4	1.71	0.38	0.05	0.03	0.25	0.35	0.14	0.51	0.41	173	9.0	73.0	3.6	11.5	4.3
Bradford .....	27.7	22.8	22.2	18.0	21.0	3.43	0.52	0.31	0.32	0.10	0.50	0.22	1.46	0.45	197	11.7	84.0	4.8	11.6	1.5
Leeds .....	32.4	22.7	22.9	19.8	22.3	3.47	0.05	0.89	0.08	0.16	0.44	0.29	1.56	0.57	206	12.2	81.7	6.7	10.1	1.0
Sheffield .....	34.8	25.8	23.9	20.8	22.3	3.52	0.02	0.53	0.27	0.18	0.38	0.27	1.87	0.53	191	12.1	87.0	3.8	11.3	3.5
Hull .....	34.2	20.9	21.0	19.6	21.8	4.14	0.04	0.61	0.16	0.11	0.38	0.48	2.36	0.61	206	11.1	77.9	4.4	12.2	3.3
Sunderland.....	35.6	23.9	25.0	20.9	22.5	3.36	0.04	0.13	0.19	0.08	0.18	0.98	1.76	0.67	188	12.3	80.1	7.2	11.3	0.9
Gateshead* .....	36.5	21.3	23.1	18.9	19.3	3.46	0.02	0.78	0.10	0.21	0.58	0.23	1.54	0.56	170	10.3	71.4	6.6	6.1	2.5
Newcastle .....	33.7	23.1	23.8	19.7	21.0	2.55	—	1.08	0.12	0.16	0.17	0.13	0.89	0.74	174	12.0	79.6	7.4	13.2	0.9

TABLE No. 4.

Showing the Annual Death Rate per 1,000 of Population from  
Bronchitis, Phthisis, and Pneumonia.  
1877—1893.

Years.	Population.	Bronchitis.	Phthisis.	Pneumonia.
1893	136,469	2·2	1·9	2·3
1892	134,221	2·7	2·1	2·3
1891	132,010	3·7	1·9	3·3
1890	129,878	3·4	2·0	3·1
1889	127,781	2·8	1·9	2·6
1888	125,717	2·6	1·9	2·6
1887	123,687	3·2	2·0	2·1
1886	121,690	3·1	2·3	1·9
1885	119,724	2·7	2·4	2·2
1884	117,791	2·8	2·6	2·3
1883	115,888	2·9	2·3	1·8
1882	114,017	3·4	2·3	2·1
1881	112,176	3·4	2·3	2·0
1880	106,880	3·3	2·3	1·7
1879	105,679	3·4	2·1	1·8
1878	102,573	3·5	2·3	1·5
1877	99,557	3·3	2·2	1·6

TABLE NO. 2.

Deaths from Zymotic Disease, 1893.  
 (The Deaths of Persons in Public Institutions are distributed over the Wards from which they came.)

Ward.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough	Typhus Fever.	Typhoid Fever.	Simple Continued Fever.	Diarrhoea.	Total.
St. Mary's.....	5	2	...	1	3	...	5	...	21	37
St. Peter's.....	3	...	2	...	7	...	3	...	10	25
Werneth .....	7	7	1	3	3	...	4	...	10	35
Westwood.....	9	1	2	...	7	...	...	...	12	31
St. Paul's .....	3	4	1	...	2	...	...	...	9	19
Coldhurst .....	8	3	...	...	9	...	...	...	12	32
Hartford .....	3	3	3	4	6	...	2	...	8	29
Hollinwood .....	3	3	...	2	5	...	2	...	8	23
Clarksfield .....	1	1	2	2	4	...	5	...	14	29
Mumps .....	...	...	1	...	2	...	3	...	9	15
St. James's .....	...	4	3	1	...	...	...	1	16	25
Waterhead .....	1	1	1	3	8	...	2	...	11	27
From Out-Townships .....	22	...	...	...	...	...	...	...	...	22
<b>Totals .....</b>	<b>65</b>	<b>29</b>	<b>16</b>	<b>16</b>	<b>56</b>	<b>...</b>	<b>26</b>	<b>1</b>	<b>140</b>	<b>349</b>

TABLE

Showing the Number of Deaths from the Seven  
during the Years

	1893	1892	1891	1890	1889	1888	1887
Population .....	136,469	134,221	132,010	129,878	127,781	125,717	123,687
Smallpox .....	65	15	...	...	...	13	...
Measles .....	29	139	97	95	126	53	176
Scarlet Fever .....	16	42	25	25	54	66	103
Diphtheria .....	16	18	18	6	16	36	62
Whooping Cough.....	56	68	71	82	127	40	100
Fever (Typhus & Typhoid),	26	16	27	15	20	24	25
Diarrhoea .....	140	56	68	96	78	43	89

TABLE

Table of Zymotic Diseases, and of New Cases of Infectious Diseases, over 1877, in the Urban Sanitary District of Oldham.

No. 6.

Principal Zymotic Diseases, in the Borough of Oldham,  
1877—1893.

1886	1885	1884	1883	1882	1881	1880	1879	1878	1877
121,690	119,724	117,791	115,888	114,017	112,176	108,880	105,679	102,573	99,557
...	...	...	2	4	9	...	...	1	19
89	54	193	6	69	7	96	9	114	11
32	20	33	21	58	87	131	136	240	58
29	14	7	9	10	10	9	19	26	11
57	104	36	38	77	36	70	60	77	111
30	18	22	26	26	39	28	25	36	28
134	46	149	76	74	69	142	46	93	58



TABLE

Table of Population, Births, and of New Cases of Infectious Sickness,  
year 1893, in the Urban Sanitary District  
Ages and

NAMES OF LOCALITIES.	Population at all Ages.		Registered Births.	Aged under 5 or over 5.	New Cases of Sickness knowledge of the		
	Census 1891.	Estimated to middle of 1893.			Smallpox.	Scarlatina.	Diphtheria.
St. Mary's ...	9,031	9,375	...	Under 5	6	6	...
				5 upwards.	46	15	...
St. Peter's ...	11,798	12,247	...	Under 5	2	19	...
				5 upwards.	16	24	1
Werneth .....	11,747	12,195	...	Under 5	3	12	2
				5 upwards.	21	21	1
Westwood (H)	11,637	12,080	...	Under 5	7	11	...
				5 upwards.	116	15	1
St. Paul's .....	10,191	10,578	...	Under 5	2	14	1
				5 upwards.	11	39	1
Coldhurst .....	13,688	14,209	...	Under 5	10	7	...
				5 upwards.	59	14	...
Hartford .....	12,679	13,162	...	Under 5	3	15	2
				5 upwards.	29	26	4
Hollinwood ...	7,652	7,944	...	Under 5	1	2	1
				5 upwards.	14	3	1
Clarksfield ...	11,615	12,058	...	Under 5	2	25	2
				5 upwards.	17	44	...
Mumps .....	7,733	8,027	...	Under 5	4	7	1
				5 upwards.	21	17	1
St. James's ...	10,735	11,144	...	Under 5	2	17	1
				5 upwards.	14	36	...
Waterhead ...	12,957	13,450	...	Under 5	1	13	...
				5 upwards.	9	40	5
<b>Totals .....</b>	<b>131,463</b>	<b>136,469</b>	...	Under 5	<b>43</b>	<b>148</b>	<b>10</b>
				5 upwards.	<b>373</b>	<b>294</b>	<b>15</b>
				<b>GrandTotal</b>	<b>416</b>	<b>442</b>	<b>25</b>

## No. 7.

coming to the knowledge of the Medical Officer of Health, during the of Oldham; classified according to Diseases, Localities.

in each Locality, coming to the Medical Officer of Health.				Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.						
Fevers.			Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.	Fevers.			Erysipelas.
Typhus.	Enteric or Typhoid.	Puerperal.					Typhus.	Enteric or Typhoid.	Puerperal.	
..	1	..	..	6	..	..	..	..	..	..
..	9	1	..	46	..	..	..	..	..	..
..	2	..	..	2	..	..	..	..	..	..
..	3	1	..	16	..	..	..	..	..	..
..	3	..	..	2	..	..	..	..	..	..
..	13	..	..	20	..	..	..	..	..	..
..	..	..	..	7	..	..	..	..	..	..
..	1	..	..	115	..	..	..	..	..	..
..	..	..	..	2	..	..	..	..	..	..
..	5	..	..	10	..	..	..	..	..	..
..	..	..	..	10	..	..	..	..	..	..
..	3	2	..	59	..	..	..	..	..	..
..	..	..	..	2	..	..	..	..	..	..
..	6	1	..	29	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	..
..	3	..	..	14	..	..	..	..	..	..
..	..	..	..	2	..	..	..	..	..	..
..	10	1	..	17	..	..	..	..	..	..
..	3	..	..	4	..	..	..	..	..	..
..	4	..	..	21	..	..	..	..	..	..
..	..	..	..	2	..	..	..	..	..	..
..	2	1	..	14	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	..
..	2	2	..	9	..	..	..	..	..	..
..	9	..	..	41	..	..	..	..	..	..
..	61	9	..	370	..	..	..	..	..	..
..	70	9	..	411	..	..	..	..	..	..

Table of Deaths during the year 1893, in the Urban Sanitary District

NAMES OF LOCALITIES.	Mortality from all Causes at subjoined Ages.							Mortality		
	At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Smallpox.	Scarlatina.	
St. Mary's .....	248	71	38	10	13	88	28	Under 5 5 upwards.	2 3	... ...
St. Peter's .....	229	52	32	13	12	85	35	Under 5 5 upwards.	1 2	1 1
Werneth .....	229	49	33	13	19	71	44	Under 5 5 upwards.	3 4	... 1
Westwood .....	220	67	33	14	14	66	26	Under 5 5 upwards.	2 7	1 1
St. Paul's .....	194	40	26	6	13	83	26	Under 5 5 upwards.	... 3	1 ...
Coldhurst .....	274	69	35	9	17	100	44	Under 5 5 upwards.	2 6	... ...
Hartford .....	284	77	42	15	10	105	35	Under 5 5 upwards.	1 2	3 ...
Hollinwood .....	192	48	33	9	7	72	23	Under 5 5 upwards.	1 2	... ...
Clarksfield .....	243	68	41	13	11	81	29	Under 5 5 upwards.	1 ...	2 ...
Mumps .....	189	44	25	9	5	79	27	Under 5 5 upwards.	... ...	1 ...
St. James's .....	242	56	50	14	17	75	30	Under 5 5 upwards.	... ...	3 ...
Waterhead .....	277	80	41	11	19	92	34	Under 5 5 upwards.	... 1	... 1
Total Deaths (deaths in Institutions are distributed over the Wards).	2,821	721	429	136	157	997	381	Under 5 5 upwards.	13 30	12 4
Westhulme Hospital...	64	8	14	7	8	27	...	Under 5 5 upwards.	20 42	... ...
Union Workhouse	166	8	5	1	4	97	51	Under 5 5 upwards.	... ...	... ...
Infirmary .....	58	2	4	7	9	32	4	Under 5 5 upwards.	... ...	... ...

The subjoined numbers have also to be taken into

Deaths occurring within the district among persons not belonging thereto	*39	5	5	3	3	23	...	Under 5 5 upwards.	8 14	... ...
--	-----	---	---	---	---	----	-----	-----------------------	---------	------------

\*These are not included in the above Total Deaths of 2,821, but they are included in the

No. 8.

of Oldham, classified according to Diseases, Ages, and Localities.

from subjoined causes, distinguishing deaths of Children under five years of age.

Diphtheria.	Membranous Group.	Fevers.			Erysipelas.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Rheumatic Fever.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases	Total.
		Enteric or Typhoid.	Continued.	Puerperal.											
1	...	...	...	...	1	3	19	...	...	26	...	...	57	109	
...	...	5	...	2	1	1	...	2	2	16	28	12	4	63	139
...	2	2	...	...	...	...	7	8	...	2	14	1	1	45	84
...	1	1	...	2	...	...	...	2	...	18	31	21	3	63	145
2	1	...	...	...	...	7	3	6	...	1	17	...	1	41	82
1	1	4	...	1	...	...	...	4	1	20	23	22	4	61	147
...	2	...	...	...	...	1	7	7	...	1	19	...	2	58	100
...	...	...	...	1	...	...	...	5	1	15	22	13	2	53	120
...	...	...	...	...	...	4	2	5	...	...	26	...	1	27	66
...	...	...	...	2	...	...	...	4	2	18	27	16	4	52	128
...	1	...	...	...	...	3	9	7	...	...	26	...	4	52	104
...	...	...	...	2	...	...	...	5	2	24	41	19	3	68	170
1	2	...	...	...	1	3	6	6	...	1	36	...	...	59	119
3	...	2	...	1	...	...	...	2	1	26	28	25	1	74	165
1	1	...	...	...	...	3	5	6	...	2	18	1	2	41	81
1	...	2	...	1	...	...	...	2	...	18	30	7	6	42	111
2	4	...	...	...	1	1	4	11	...	1	28	1	1	52	109
...	4	5	...	4	...	...	...	3	...	22	27	9	3	57	134
...	1	1	...	...	1	...	2	6	...	1	18	...	1	37	69
...	...	2	...	1	...	...	...	3	1	20	25	9	3	56	120
1	1	...	1	...	...	4	...	12	...	3	26	...	2	53	106
...	...	...	...	4	1	...	...	4	2	24	25	14	3	59	136
1	3	...	...	...	...	1	8	9	...	1	31	...	2	65	121
2	...	2	...	4	1	...	...	2	1	21	32	20	3	66	156
9	18	3	1	...	3	28	56	102	...	13	285	3	17	587	1150
7	6	23	...	25	3	1	...	38	13	242	339	187	39	714	1671
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
...	...	...	...	...	...	...	2	1	...	1	...	...	...	9	13
...	...	...	...	2	...	...	...	11	1	36	24	12	...	67	153
...	...	...	...	...	...	...	...	...	...	...	...	...	2	4	6
...	...	...	...	...	...	...	...	...	...	1	...	3	22	23	52

account in judging of the above records of mortality.

...	...	...	...	...	...	...	...	...	...	...	...	1	1	10
...	...	...	...	...	...	...	...	...	...	...	1	9	5	29

Deaths at Westhulme Hospital and the Infirmary, in which Institutions they occurred.

TABLE No. 9.  
Showing the Births and Birth-Rates and the Deaths and Death-Rates during the  
Years 1881 to 1893.

Year.	Population.	Deaths		Death-Rates		Births.	Birth-Rates.
		From all Causes.	From Seven Principal Zymotic Diseases	From all Causes.	From Seven Principal Zymotic Diseases		
1881	112,176	2,544	257	22.7	2.3	3,957	35.3
1882	114,017	2,835	318	24.9	2.8	4,022	35.3
1883	115,888	2,609	178	22.5	1.5	4,176	36.0
1884	117,791	3,046	440	25.9	3.7	4,408	37.4
1885	119,724	2,772	256	23.2	2.1	4,485	37.5
1886	121,690	2,940	371	24.2	3.0	4,221	34.7
1887	123,687	3,190	555	25.8	4.5	4,185	33.8
1888	125,717	2,799	275	22.3	2.2	4,183	33.3
1889	127,781	2,901	421	22.7	3.3	4,030	31.5
1890	129,878	3,163	320	24.4	2.5	4,022	31.0
1891	132,010	3,374	306	25.6	2.3	4,060	30.8
1892	134,221	2,945	354	21.9	2.6	3,881	28.9
1893	136,469	2,860	348	20.96	2.55	3,895	28.5

TABLE No. 10.

Showing the number of New Cases of Sickness coming to the knowledge of the Medical Officer of Health during the Years 1881 to 1893.

	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893
Smallpox .....	15	13	6	2	4	5	3	104	1	...	...	75	416
Scarlet Fever...	434	465	301	289	229	391	1775	985	680	320	238	667	442
Diphtheria.....	20	27	15	20	28	44	127	86	39	11	29	27	25
Typhus Fever ..	...	...	...	1	...	12	2	...	...	2	...	...	...
Typhoid Fever	131	117	96	100	58	100	119	106	56	63	112	83	70
Puerperal Fever	3	3	3	...	2	7	5	3	5	7	4	9	9
	603	625	421	412	321	559	2031	1284	781	403	383	861	962

TABLE

SUMMARY OF CASES ADMITTED INTO WESTHULME																					
	1879.			1880.			1881.			1882.			1883.			1884.			1885.		
	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.
Smallpox .....	3	3	..	5	5	...	39	30	9	18	16	2	6	6	...	2	2	...	5	5	...
Measles.....	..	..	..	2	2	...	..	..	..	2	2	...	1	1	...	5	5	...	..	..	..
Scarlet Fever ...	71	58	13	73	61	12	60	45	15	30	28	2	91	88	3	111	101	10	90	82	4
Diphtheria .....	2	1	1	..	..	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Typhus .....	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	1	...	..	..	..
Typhoid Fever ...	13	8	5	28	23	5	56	48	8	29	25	4	32	25	7	36	32	4	31	24	1
Simple Continued Fever .....	2	2	...	2	2	...	4	3	1	2	2	...	..	..	..	..	..	..	1	1	...
Puerperal Fever..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas.....	3	2	1	..	..	..	..	..	..	..	..	..	5	4	1	4	2	2	1	1	..
Ill-defined.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	0	4	1	..
	94	74	20	110	93	17	162	127	35	81	73	8	135	124	11	165	149	16	132	114	11

\* 4 of these were treated

No. 11.

HOSPITAL DURING THE YEARS 1879 TO 1893.

1886.			1887.			1888.			1889.			1890.			1891.			1892.			1893.			
Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	
5	5	...	3	3	...	123	107	16	1	1	...	...	...	...	...	...	...	136	120	16	638	575	63	
...	...	...	1	...	1	...	...	...	...	...	...	3	3	...	...	...	...	1	1	...	...	...	...	
205	195	10	571	544	27	203	195	8	222	209	13	134	127	7	81	77	4	246	231	15	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	
12	8	4	2	1	1	...	...	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	
52	44	8	40	34	6	23	16	7	12	7	5	28	23	5	46	36	10	12	10	2	...	...	...	
1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
2	1	1	1	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	4	4	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...	
277	254	23	619	583	36	354	323	31	236	218	18	166	154	12	128	114	14	397	364	33	*	638	575	63

at Moscow Hospital.



TABLE No. 12.

Showing the number of Cases (all Smallpox) admitted from each Ward into Westhulme and Moscow Hospitals during the year 1893.  
All Smallpox Cases (no other admitted).

WARDS.	Admitted.	Discharged.	Died.
St. Mary's .....	52	47	5
St. Peter's.....	18	17	1
Werneth .....	22	16	6
*Westwood .....	114	104	10
St. Paul's .....	12	9	3
Coldhurst .....	69	60	9
Hartford .....	31	29	2
Hollinwood .....	15	13	2
Clarksfield .....	19	17	2
Mumps .....	25	25	0
St. James's .....	16	16	0
Waterhead .....	10	9	1
Total from Wards .....	403	362	41
*From Workhouse .....	8	8	0
Chadderton .....	167	149	18
Royton .....	41	37	4
Crompton .....	14	14	0
Lees .....	2	2	0
Ashton .....	3	3	0
Total No. of cases admitted.	638	575	63

\*The Workhouse is in Westwood Ward. The 8 cases from this Institution are not included in the 114 cases admitted from Westwood Ward.

TABLE No. 13.  
 SAMPLES OF FOOD, &c., ANALYSED, 1893.

No. of Samples.	Description of Samples.	Genuine.	Not Genuine.	Summoned		Cautioned
				Before Committee	Before Magistrate	
84	Milk.....	77	7	...	6	1
6	Lard .....	6	...	...	...	...
7	Butter.....	4	3	2	...	1
2	Scotch Whiskey	1	1	...	1	...
1	Irish Whiskey ..	1	...	...	...	...
3	Vinegar .....	3	...	...	...	...
3	Sweets.....	3	...	...	...	...
106		95	11	2	7	2

TABLE No. 14.  
 MAGISTERIAL PROCEEDINGS, 1893.

Particulars of Complaint.	No. of Cases.	How Disposed of.	Penalties		
			£	s.	d.
Smoke Nuisance .....	25	Two fined 40/- each and costs; eight 20/- each and costs; fourteen 10/- each and costs; and one withdrawn .....	19	0	0
Milk Adulteration.....	6	1, £5 and costs, 1, 20/- and costs, and 4, 5/- and costs each.	7	0	0
Adulterated Whiskey..	1	20/- and costs .....	1	0	0
Stop-pipe connected with Drain .....	1	Order made to abate ...	0	0	0
	33		27	0	0

TABLE No. 15.

Return of Inquests held in the Jurisdiction, touching the cause of death of any person, for the year ended 31st December, 1893.

INQUESTS.	Males.	Females.
Infants (Legitimate), under 1 year .....	15	18
Do. 7 years and above 1 year.....	11	8
Infants (Illegitimate or Unknown), under 1 year .....	3	3
Do. 7 years and above 1 year .....	...	...
Children, above 7 years and under 16 .....	4	3
Youths, 16 years and under 25.....	5	3
Adults, 25 years and under 60 .....	55	19
Aged, 60 years and above .....	21	7
Total.....	114	61
VERDICTS.	Males	Females.
Murder .....	...	...
Manslaughter .....	...	...
Suicide, while Insane.....	5	3
Accidental Death .....	41	15
Injuries, causes not known .....	...	...
Suffocated whilst in Bed with their parents .....	...	3
Found Drowned .....	3	1
Found Dead.....	...	1
Excessive Drinking.....	2	1
From Want, Cold, Exposure, &c .....	...	...
Natural Causes .....	33	37
Total Costs .....	£309	4 9

TABLE No. 16.  
NIGHTSOIL AND ASHES DEPARTMENT.  
1893.

Number of Sanitary Pans in the Borough .....	23,000
Do. Cesspools .....	75
Do. Water Closets .....	900
Do. Ashpits .....	10,100
Do. Ashpans and other collecting places .....	600
Do. Sanitary Pans Emptied (No. of Times) .....	1,138,720
Do. Cesspools Emptied.....	221
Do. Slaughter Houses Cleansed .....	6,301
Do. Fish Offal Places Cleansed .....	7,180
Do. Loads of Shoddy Dirt Received .....	5,152
Tons of Nightsoil, Butchers' Offal, &c. Collected .....	19,405
Number of Loads of Ashes Removed to Corporation Tips .....	14,583
Do. Do. Other Tips.....	14,654
Do. Do. Destructor.....	7,819
Tons of Ashes, Fish Offal, Garbage, &c., Consumed at the Destructor .....	10,086

TABLE 17.

Prices of Coal, Bread, Flour, Butchers' Meat, and Potatoes, and the number of Paupers relieved in Oldham, 1885—93.

	Coal per Ton.	Bread per doz. lbs.	Flour per load.	Meat per lb.	Potatoes per load.	Weekly No. of Indoor Poor.
1885	s. d. 7 9	d. 11 $\frac{1}{4}$	s. d. ...	d. 5	s. d. 6 5	890
1886	8 0	11 $\frac{1}{4}$	...	5 $\frac{1}{4}$	7 4	931
1887	7 6	...	24 6	4 $\frac{1}{2}$	8 10	910
1888	7 6	...	25 3	5	6 4	936
1889	8 4	...	26 10	5	7 6	946
1890	10 10	...	26 10	4 $\frac{7}{8}$	6 11	921
1891	10 7	...	29 2	4 $\frac{7}{8}$	10 2	901
1892	9 7	...	26 3	4 $\frac{3}{8}$	7 4	937
1893	11 7	...	21 6	4 $\frac{1}{2}$	6 6	1,011

TABLE No 18.  
Weekly Means of Meteorological Observations for the year 1893.

DATE.	Barometer reduced to Sea Level at 32°.	Thermometer.	HYGROMETER.		TEMPERATURES.								Distance travelled by the Wind in 24 hours.	Pressure of Wind in lbs. per square foot.	Rainfall 12th. above ground.	Clouds covered = 10.	
			Dry.	Wet.	Maximum in Shade.	Minimum in Shade.	Maximum in Sun Bulb.	Maximum in Sun Black Bulb in cno.	Minimum on Grass.	Temperature 12th. below Surface.	Temperature 4ft. below Surface.						
1893																	
January 7	30.27	29	28	28	32	21	36	47	21	30	39	75	.04	.00	9		
14	30.01	33	34	34	35	31	38	43	30	30	38	174	.26	.01	8		
21	30.27	37	36	39	39	31	42	47	30	30	37	120	.12	.06	10		
28	30.08	40	40	44	44	37	46	50	37	30	37	154	.21	.06	9		
February 4	29.97	42	43	47	47	38	50	58	38	35	38	159	.22	.15	10		
11	29.91	40	40	44	44	36	47	55	35	34	39	209	.38	.18	8		
18	29.72	41	41	46	46	35	49	57	35	36	39	195	.33	.20	9		
25	29.40	36	37	41	41	33	45	54	33	37	40	154	.21	.06	9		
March 4	29.72	39	39	43	43	33	45	54	33	34	39	223	.43	.13	10		
11	30.34	42	42	48	48	39	52	63	35	39	40	153	.20	.02	9		
18	29.90	43	42	49	49	35	57	76	38	37	40	182	.29	.14	8		
25	30.45	48	48	55	55	35	61	83	42	37	41	37	.01	.00	0		
April 1	30.07	51	51	60	60	39	66	86	44	40	41	160	.22	.00	5		
8	30.43	50	50	60	60	39	68	88	44	42	42	91	.07	.03	1		
15	30.49	48	47	56	56	36	64	86	44	43	44	150	.19	.00	5		
22	30.19	58	56	61	61	45	71	90	52	45	44	147	.18	.05	5		
29	30.13	58	58	65	65	43	70	95	48	49	47	105	.09	.00	5		
May 6	30.25	54	53	59	59	48	67	87	49	48	47	103	.09	.04	6		
13	30.48	57	56	62	62	43	...	100	55	51	49	151	.19	.00	3		
20	29.82	56	55	63	63	47	...	92	50	53	50	212	.39	.46	7		
27	30.11	55	54	59	59	46	68	89	49	52	51	173	.25	.08	8		

June	3	30-13	56	54	50	61	45	69	95	50	52	51	127	.14	.13	7
	10	30-44	60	58	53	65	48	73	97	55	55	52	126	.13	.06	8
	17	30-23	63	61	56	69	50	77	103	59	58	53	200	.34	.00	1
	24	29-89	62	60	55	68	51	76	94	57	59	55	120	.12	.10	7
July	1	29-92	60	60	55	64	51	72	94	55	56	55	205	.36	.13	6
	8	30-14	70	68	60	73	56	83	109	65	60	56	216	.40	.03	5
	15	29-82	60	59	54	65	53	73	95	53	59	57	170	.25	.21	8
	22	29-89	59	58	54	63	51	71	95	54	57	57	171	.25	.07	7
	29	30-08	59	58	54	64	52	71	91	54	57	56	147	.18	.13	8
August	5	29-94	59	58	53	63	52	71	96	52	57	56	195	.33	.19	8
	12	30-14	68	67	60	70	56	78	104	62	59	56	172	.25	.06	4
	19	30-15	72	69	63	78	58	85	111	68	62	57	85	.06	.00	7
	26	29-95	60	59	55	66	53	74	102	54	59	59	305	.80	.15	7
Sept'ber	2	30-29	61	59	55	63	50	71	91	...	57	57	101	.09	.02	8
	9	30-07	60	59	55	66	51	73	94	43	57	57	85	.06	.12	7
	16	30-25	58	56	51	61	46	69	90	40	54	56	131	.15	.02	6
	23	29-60	51	51	48	57	43	64	80	37	53	56	103	.09	.18	7
	30	29-78	52	52	49	54	45	59	75	39	50	54	166	.24	.19	9
October	7	29-45	49	49	47	55	40	61	82	32	48	53	70	.04	.10	6
	14	29-97	51	50	48	54	43	62	78	37	47	52	123	.13	.18	8
	21	30-18	53	53	51	57	48	60	68	41	50	51	138	.16	.05	9
	28	30-15	49	49	45	53	43	58	72	36	47	51	179	.27	.07	8
Nov'ber	4	29-97	40	41	40	47	35	51	60	28	42	49	149	.19	.16	8
	11	30-40	42	40	38	43	34	49	59	27	39	48	136	.15	.02	8
	18	29-82	43	42	41	48	37	52	60	30	40	46	164	.24	.04	8
	25	30-22	38	38	38	41	32	44	52	26	37	45	237	.48	.05	10
Dece'ber	2	30-14	37	38	37	45	34	47	51	29	39	44	123	.13	.20	7
	9	29-95	41	41	40	45	33	46	47	28	36	43	102	.18	.13	7
	16	29-69	40	41	39	46	33	47	52	26	35	43	141	.16	.17	8
	23	29-72	41	41	40	44	37	47	52	31	37	42	178	.27	.15	8
	30	30-52	41	41	40	45	38	45	50	31	38	42	64	.03	.08	8
		30-05	50	50	46	55	42	58	77	41	46	48	149	.19	.09	7

## Nuisances Reported and Work Executed.

1892-3.

	1892.	1893.
Total Number of Reports of Nuisances and Sanitary Requirements from January 1st to December 31st, 1892-93. ... ..	4,263	6,028
The number which have been Abated, or Complied with, or re-noticed ... ..	3,601	5,580
The number of cases dealt with by the Sanitary Committee	593	586
Number of Complaints Received and Visited ... ..	264	484
House-to-House Inspections ... ..	2,408	3,909
Re-inspection of Nuisances under Notice ... ..	12,299	13,922
Insufficient Privy Accommodation ... ..	37	21
Dirty Privies Cleaned and Whitewashed ... ..	733	539
Dangerous Places reported ... ..	68	92
Defective or no Ashpits, and Ashplaces built ... ..	119	123
Number of Sanitary Pans found requiring emptying ...	311	386
Number of Ashpits do. do. ... ..	444	293
Number of Defective Water Pipes and Taps ... ..	92	78
Number of Coal Gas Nuisances and Escapes reported ...	5	2
Number of Street Grids blocked &c.... ... ..	79	66
Defective Urinals: Repaired, 19; Urinals Built, 8... ..	39	27
Defective Drains, blocked, &c.... ... ..	1,768	1,272
Defective Downspouts and Eaves Gutters ... ..	666	632
Damp Houses (Defective Roofs, &c.)... ..	575	561
Slopstone Pipes (emitting Sewer Gas) disconnected ...	657	793
Defective Slopstone Pipes (Broken, blocked, &c.) ... ..	446	618

Manure Heaps ... ..	92	24
Ventilating Grids fixed to Traps ... ..		417
Workshops repaired ... ..		35
Workshops cleaned ... ..		83
Workshops visited ... ..		439
Accumulation of Offensive Matter ... ..	386	150
Pigsty Nuisances ... ..	1	4
Poultry in Houses ... ..	61	177
Dirty Houses and Premises ... ..	644	698
Houses Stripped and Cleaned after Infectious Disease ... ..	66	277
Offensive Mill Lodges ... ..	6	17
Stable, Slaughter-house, and Tripe-boiling Nuisances ... ..	59	42
Low or Defective Chimneys ... ..	34	13
Offensive Trades ... ..	6	4
Defective Cellars ... ..	95	114
No Water Supply to Houses and Water Closets ... ..	19	12
Carcases of Animals in Water ... ..	57	75
Stagnant Water ... ..	90	80
Dust and Fly from Mills ... ..		2
Number of Notices, Committee Summonses, and Committee Orders Served ... ..	5,195	6,892
Houses Visited where bread is baked for sale ... ..	291	220
Shippons Cleansed and Limewashed... ..	65	6
Daries Visited ... ..	230	175
Privies Reconstructed and Repaired ... ..	395	285
New Privies and Water Closets provided ... ..	45	72
Water Closets Repaired, Reconstructed, and Ventilated ... ..	25	43
Water Closets Abolished ... ..	2	8
Bath and Lavatory Pipes disconnected ... ..	6	23
Yards and Passages Repaired and Flagged ... ..	218	288
Yard and Cellar Drains Relaid and Reconstructed... ..	318	699
Traps fixed in Cellars, Yards and Houses ... ..	1,505	2,264
Improved Ventilation to Houses ... ..	226	61



Ventilating Shafts to Cellar and House Drains	...	...	9	7
Drains connected with Main Sewers...	...	...	61	172
Houses closed, unfit for Habitation	...	...	47	4
Manure Pits built	...	...	11	3
Erections in Yards Reported	...	...	7	18
Farm Premises visited...	...	...	88	62
Cesspools abolished	...	...	1	3
Overcrowding abated	...	...	10	11
Animals and unsound food destroyed at Destructor and Knacker's Yards, 1 calf and 1 pig in lbs	...	...	2,296	1,324
Dead Bodies removed to Mortuary	...	...	18	24
Contagious Diseases (Animals) Act (Horses), Rabies in dog			1	
Letters written to Property Owners or Agents	...	...	113	157
Circular Letters sent out	...	...	667	172
Enquiries re Smallpox...	...	...		116

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DISINFECTION.

1892-93.

	1892.	1893.
Houses Disinfected during the year	641	1,005
Rooms Disinfected during the year	1,702	3,052

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CLOTHING, &c., 1892-93.

Articles.	Disinfected.		Destroyed.		Totals.	
	1892	1893.	1892.	1893.	1892.	1893.
Blankets	1,384	1,946	—	—	1,384	1,946
Sheets	1,226	1,822	—	—	1,226	1,822
Pillows	1,451	1,959	12	10	1,463	1,969
Bolsters	705	1,055	14	11	719	1,066
Quilts	788	1,319	—	1	788	1,320
Mattresses	355	275	29	34	384	309

Beds	762	1,185	44	25	806	1,210
Carpets	376	215	—	1	376	216
Rugs	374	459	1	5	375	464
Curtains	378	135	—	—	378	135
Clothes	3,272	7,712	9	6	3,281	7,718
Sundry Articles	1,263	1,732	—	5	1,263	1,737
	—	—	—	—	—	—
	12,334	19,814	109	98	12,443	19,912

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INFECTIOUS CASES.

1892-93.

(Cases and Visits.)

						1892.	1893.
Number of Cases	...	...	...	...	...	561	960
Number of Visits	...	...	...	...	...	1,643	1,996
House to House Inspections	...	...	...	...	...	2,408	3,909

TABLE 21.

Showing the number of Smoke Observations taken and Inspections of Mill Lodges and Slaughter Houses made, during the year 1892-93.

FORTNIGHT ENDING.		SMOKE OBSERVATIONS.		MILL LODGE INSPECTIONS.		SLAUGHTER-HOUSE INSPECTIONS.	
1892.	1893.	1892.	1893.	1892.	1893.	1892.	1893.
Jan. 6	4...	29	33	146	184	127	127
„ 20	18...	34	36	56	106	85	136
Feb. 3	1...	37	29	183	123	107	107
„ 17	15...	50	15	91	84	117	125
Mar. 2	1...	60	22	219	197	107	126
„ 16	15...	46		69	67	127	145
„ 30	29...	66	34	195	177	117	119
Apr. 13	12...	62	42	78	73	152	119
„ 27	26...	29	45	188	147	133	133
May 11	10...	56	46	109	120	115	117
„ 25...	June 7...	64	93	99	248	159	306
June 22	21...	116	48	255	146	247	139
July 6	4...	55	46	113	149	139	93
„ 20	19...	54	50	105	77	136	107
Aug. 3	2...	55	53	176	171	115	108
„ 17	16...	56	60	93	57	89	119
Sep. 14	13...	84	54	215	323	191	216
„ 28	27...	53	35	173	167	124	75
Oct. 12	11...	48		82	122	129	107
„ 26	25...	53		187	157	129	126
Nov. 9	8...	42		73	91	119	89
„ 23	22...	41		147	126	138	147
Dec. 7	6...	29	16	137	175	105	119
„ 21	20...	31	27	133	103	120	121
Totals.....		1,250	784	3,323	3,390	3,125	3,126



