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FIFTEENTH
ANNUAL REPORT
ON THE
HEALTH OF SALFORD,

BY

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MEDICAL OFFICER OF HEALTH; AND

MEDICAL SUPERINTENDENT TO THE FEVER HOSPITAL.

1883.

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Town Hall, Salford,

August 28th, 1884.

TO THE GENERAL HEALTH COMMITTEE.

GENTLEMEN,

I beg herewith to present to you my Report on the Health and Sanitary condition of Salford, for the year 1883.

The satisfactory condition of the Public Health which I was privileged to chronicle in my reports of the two years immediately preceding, has been fully maintained throughout the year under present notice; and I take this opportunity of congratulating the Sanitary Authority, and also the people of Salford on the fact.

As in previous years I have pleasure in returning my grateful acknowledgments to those who have in various ways assisted me in my efforts to improve the conditions of life in Salford. And my especial thanks are due to the Editors of the Manchester and Salford Press, for their generous assistance in gratuitously publishing the returns which are periodically issued by the Health Department.

I remain, Gentlemen,

Your obedient Servant,

JOHN TATHAM.

TABLE OF CONTENTS

OF THE REPORT OF THE MEDICAL OFFICER OF HEALTH, DRAWN
UP IN CONFORMITY WITH THE LOCAL GOVERNMENT
BOARD'S GENERAL ORDER, 1880, No. VII.

HEALTH AND SANITARY PROGRESS.

	PAGE.
I. An account of the Sanitary condition of the Borough of Salford generally at the end of the year 1883	7

WORK OF THE HEALTH DEPARTMENT

II. Summary of the action taken during the year for limiting the spread of preventable disease	11
III. An account of enquiries made by the Medical Officer of Health, as to conditions injurious to health existing in the Borough, and of the proceedings taken by his advice, for the abatement of such conditions, under the Public Health Act, 1875, and the various Local Acts	19
IV. An account of the supervision exercised by the Medical Officer of Health, or on his advice, for sanitary purposes, over places and houses that the Sanitary Authority has power to regulate; with the nature and results of proceedings required, and of action taken with respect to the same, during the year	24
V. An account of the action taken by the Medical Officer of Health, or on his advice, during the year, in regard to offensive trades, and to Factories and Workshops	36

VITAL STATISTICS.

VI. Tabular Statements of the Sickness and Mortality within the Borough classified according to Diseases, Ages, and Localities.....	39
VII. Appendix	67

INDEX.

REPORT.

I. *An Account of the Sanitary condition of the Borough of Salford generally at the end of 1883.*

Constitution of the Borough.—In order to describe satisfactorily the sanitary condition of Salford, it is necessary to premise that although technically under control of a central municipality, the Borough is divided for administrative purposes into three separate districts—Salford, Pendleton, and Broughton, each district being governed by the members which it contributes to the common Council. Thus at the three district Town Halls, the Local Committees, through their respective officers and servants, are responsible for the due regulation of the street scavenging, nightsoil removal, sewerage, and drainage of their townships: and although the Sanitary Authority, under the title of a General Committee, has charge of the health of the entire Borough, still in practice it is found that, with the exception of the abatement of nuisances, all administrative detail is matter of mainly district concern. Although the municipal sub-division of the Borough has the advantage of essential coincidence with that adopted by the Registrar General, it is nevertheless a most unsatisfactory one for sanitary purposes, because of the complex and unstable constitution of the communities in each district. The conditions of existence—the character and occupations of the people, and the nature of their habitations in every case vary; and, as a consequence, the local rate of death varies so widely that it is difficult to find expressions which shall even approximately represent the general sanitary condition of these incongruous areas.

The general mortality of the Borough, or of either of its constituent districts, forms a useful test of local sanitary condition, under certain limitations, which are sufficiently obvious. For example, the existence of a high death-rate, and especially its continuance in an extensive area of mixed constitution, is unquestionable proof of something seriously wrong in some part of that area; in fact it would inevitably understate the truth, inasmuch as the excessive mortality of certain portions would be masked, in the general or average statement, by the countervailing low death-rates in other portions; and thus the district, or the Borough respectively, would be made to appear healthier than it actually was. But on the other hand, the evidence of unimpeachable sanitary condition furnished by a low general death-rate is not equally conclusive; for, as a matter of fact, it has frequently happened that although infectious disease has been fatally prevalent in certain parts of this Borough, the general death-rate has nevertheless shown no

SECTION I.

Sub-division of Borough for Municipal and Statistical purposes.

Necessary reservations as to the use of general death rate as a test of sanitary condition.

SECTION I. significant increase; and it is notorious that the general death-rate of Salford, which the Registrar General computes at less than 23 per 1000, suggests no warning of the excessive mortality normally prevailing in one of its constituent districts.

Public Health in
Salford during
1883.

State of the Public Health in 1883.—Speaking generally, there is no doubt that the sanitary condition of Salford throughout the year under notice has been maintained at an exceptionally high standard. Not only has the general rate of death in all but one of the districts been considerably lower in 1883 than the average, but with the same reservation, the mortality amongst infants and young children has also shown a marked reduction. Infectious diseases have been less fatal, and by inference, less prevalent than in recent previous years, and diarrhoeal diseases have certainly been less deadly than usual amongst infants and young children.

Low rate of mor-
tality partly due
to favourable
weather.

It is necessary, however, to remark with respect to the low mortality of the year 1883 and of its two immediate predecessors, that this has been attributable in no small degree to the exceptionally favourable weather which has prevailed.

In consequence of the mildness of the winters, no excessive fatality from lung disease has been recorded in the death-roll, and on the other hand, the cool weather of the last three summers has spared the lives of hundreds of infants, who, in the crowded dwellings of our labouring quarters, invariably fall victims to excessive summer heat.

Meteorological
Observations.

Meteorology.*—The mean temperature of the year was $49^{\circ}0'$, which is lower by $0^{\circ}6'$ than that of 1882, but higher by $0^{\circ}4'$ than the average of the annual mean temperatures of the preceding ten years.

The mean annual temperature at Greenwich was $49^{\circ}4'$, which is only $0^{\circ}4'$ in excess of that registered in Salford. In the quarter ending March 31st, the mean temperature in Salford was $40^{\circ}5'$, in the June quarter $52^{\circ}2'$, in the September quarter $58^{\circ}1'$, and in the December quarter $45^{\circ}0'$.

Rain fell in Salford on 202 days of the year to the aggregate measure of 35.5 inches, which is less by 5.9 in. than the rainfall in 1882. The rainfall measured at Greenwich was only 22.1 inches, being in defect of the Salford rainfall by 13.4 inches. In the March quarter the rainfall in Salford measured 6.6 inches, in the June quarter 6.6, in the September quarter 11.0 inches, and in the December quarter 11.3 inches.

Saving of human
life.

Table H on page 55 furnishes a comparative view of the groups of disease which have given rise to mortality at certain ages in 1883 side by side with corresponding data for the preceding decade, and the statement on page 49 deduced from Table F shows the life saving represented by the lowered mortality in 1883 under the various headings there given.

* The ordinary Meteorological Table will be found in the Appendix.

Sanitary Progress.—Within the last few years a number of most important agencies have been set on foot by the Corporation and also by private individuals, for the improvement of the health and sanitary condition of Salford. The main sewerage system, which has been so long in course of construction is now practically complete, as are also the extensive works at Mode Wheel for the purification of the sewage of the Borough. The habitations of the people, except in the older parts of the Borough, are steadily undergoing improvement; for, in consequence of the constant action of the Inspectors, property owners have in numerous instances being induced to amend the condition of their houses, and the powers of the Public Health Act have been invoked, to compel obedience to sanitary requirements, in the few cases where default has been persisted in. Although some of the systems in use for the removal of nightsoil are open to objection, there has, nevertheless, obtained throughout the Borough a manifest improvement of late in the carrying out of the systems in vogue. Instances of neglect on the part of the Scavengers have become far less common, and the process of emptying is effected with much less offensiveness than formerly. In place of depositing rubbish of various kinds on tips for the formation of building sites, the Salford Scavenging Committee have erected an efficient destructor, which reduces to a harmless condition the whole of the sweepings and other refuse collected from the middens and highways of the District and which beforetime was deposited on waste places, where it speedily became a nuisance. The practice of storing immense quantities of human excrement at the Corporation Manure Depot has also been discontinued, and at the present moment little if any nightsoil is allowed to remain on the premises at Wilburn Street. The recent operations of the Health Committee have administered an effective check to the spread of infectious disease in the Borough. The Hospital erected by them in 1876, has ever since that date continued to do good service,* and the number of patients applying for admission has recently been so great, that further accommodation has necessarily been provided. The new Steam Disinfector recently erected by Manlove, Alliott and Fryer has enabled us to keep pace with the increased demands now made upon the Department for the purification of bedding. And finally, the power which the Committee have acquired of securing information as to the prevalence of infectious sickness, has most materially strengthened the resources of the Health Department for limiting its spread.

In order to afford the means of personal ablution to those who have no home facilities for that enjoyment, the Baths Committee have recently erected commodious public baths in one of the most populous districts of the Borough; and so general has

SECTION I.

Agencies for improvement of health.

Intercepting Sewer.

Sewage Works.

Sanitary amendment of dwellings.

Improved Scavenging.

Abolition of "Tips" in Salford.

Erection of Destructor.

Fever Hospital.

Extension of Hospital accommodation.

New Disinfector

Public Baths

* See page 16.

SECTION I.

Extension of
Public Baths
in Pendleton.

Public Parks.

Playgrounds
given by Sir E.
Armitage and
Mr. Wright
Turner.

Interest shown
by the Poor in
Sanitary Im-
provement of
their homes.

Lines of future
Sanitary action
suggested by
Medical Officer
of Health.

been the appreciation* shown by the public of this provision for their health and comfort, that the Committee are now engaged in the building of additional and larger baths in another populous portion of the Borough.

For some years past, a salutary and most honourable rivalry has existed between the three districts of the Borough, as to which could best provide for the out-of-door recreation of the people. The Borough of Salford is happy in the fact that she has provided more liberally in this respect, for the health needs of the public, than have most other great English municipalities, some of which possess natural advantages which do not fall to her lot. In addition to the well-known Peel Park, the public recreation grounds of Broughton, Pendleton, and Ordsall, furnish opportunities of recreation which are thoroughly appreciated by the inhabitants of those crowded localities; and the munificence of Sir Elkanah Armitage and of Mr. Wright Turner has recently supplied the residents of Whit Lane with two spacious playgrounds which were sadly wanted by the juvenile population of that fast-increasing district of the Borough.

But there is one other feature to which I would advert, as furnishing evidence of real sanitary progress, even more trustworthy than any here mentioned. I refer to the gratifying fact that the masses of the people are at last awakening to a sense of their own danger in matters of health, and are themselves asking for redress. The anxiety now shown by many of the labouring classes for the sanitary amendment of the conditions in which their lives are spent, whilst encouraging in the highest degree as a sign of the reality of sanitary progress, may I think not unreasonably be taken as a guarantee of its future permanence. And surely those workers amongst the poor, who, in however humble a sphere, have in time past been instrumental in bringing about this happy consummation in the present, may reflect with pardonable pride on this welcome assurance that their labour has not been in vain.

Suggestions for future Preventive Action.—In the accompanying pages the various steps are reviewed, by which the Corporation have effected the reduction of the Salford rate of death from 27·9 per 1,000, the rate in the preceding decade, to 22·7, the average rate obtaining in the last three years. But Mr. Humphreys has shown† that after making allowance for the age and sex constitution of the community, our people are still dying in Salford at a rate which is far from satisfactory; and that, taking as a standard the life table rate based on the mortality occurring in England and Wales from 1876 to 1880, the death rate which ought to occur in Salford should not exceed

* Number of Bathers who have made use of the Blackfriars Baths since their establishment :—

1880-81.	1881-82.	1882-83.	1883-84.
74,395	89,183	95,470	103,855

† See page 46.

19.5 per 1,000. And as this estimate is based, not on the rate prevailing in the healthy districts of the country, but on the average rate throughout England and Wales, including of course the unhealthy areas, there is no reason why this standard or normal rate should ever be exceeded.

For many obvious reasons it is desirable that the general outlines of future preventive action suggested by a study of the present health condition of the Borough, should be here submitted by the Medical Officer of Health for the consideration of the Committee.

The principal weak points in our local sanitary armament appear to be four in number. (1) The unsatisfactory condition of the homes of the people, and of the sewerage* in the oldest parts of the Borough. (2) The filthy condition of the River Irwell. (3) The objectionable system still adopted in certain districts for the removal of nightsoil†. And (4) The continuance of the private slaughter house nuisance‡ amidst the homes of the people.

The recent serious spread of cholera on the continent has not unnaturally awakened the anxiety of Sanitary Authorities at home as to the completeness of their own defences against a possible invasion by this terrible malady. Although I am no alarmist, I feel bound to say that as long as the insanitary conditions here referred to remain in their present force, and as long as enteric fever prevalence continues to emphasize the existence of filth conditions, which, in case cholera was imported among us, might equally tend to promote its spread, we are not in a position to treat with indifference the near approach of that terrible scourge. It is to the removal of the insanitary conditions which I have here specified that we must look for the completion of our defences, already not inconsiderable, against pestilences of this kind, and it is therefore to the completion of this work that I would ask the attention of the Committee during the coming year. With respect to the unsatisfactory condition of the homes of the poor in certain of our worst neighbourhoods, I may say that I have for some time been engaged in preparing information which will enable the Committee for the first time to form an adequate judgment of the effect of local unhealthy conditions on the mortality of small and hitherto undefined areas. This information will, I trust, be in the hands of the Committee by the end of the current year.

II. Summary of action taken during the year, for limiting the spread of preventable disease.

- A. Prevalence of Epidemic disease.
- B. Preventive measures.

A. **Distribution of Infectious Sickness in 1883.**—Throughout the autumn of this year, Measles was exceptionally prevalent in the neighbourhood of Weaste, the epidemic assuming such

* See Tenth Annual Report, page 2. † Referred to in several previous reports.

‡ See page 1 of Appendix to Tenth Annual Report.

SECTION I.

Sanitary amendment of homes of people.

Drainage.

Nightsoil system.

Slaughter-houses

Completion of defences against Cholera, &c.

New Sanitary Map of Salford.

SECTION II.

Prevalence of Measles at Weaste.

- SECTION II. proportions that not less than 100 children were absent from the Church School at one time in the month of December.
- Closure of Sunday Schools. The Sunday Schools were at my suggestion temporarily closed, and the same course would have been adopted with the day schools, but for the fact that the school term was within a few days of expiring, and it was thought undesirable to anticipate that event. Several social meetings of children, however, which had been arranged for at the schools, were postponed, and every effort was made to put a stop to the epidemic.
- Typhus Fever prevalence in Spring and Autumn. Typhus fever, a disease which in recent years has happily been less frequent in Salford than formerly, assumed unusual prevalence during the spring months of the year, and again, throughout September and October. In each case the disease was imported from outside Salford, and would certainly have become widely epidemic in the Borough, had not first cases been promptly notified and removed to the Hospital. As it was, the attacks during the two outbreaks were limited to 15, the fatal cases being three in number.
- Scarlatinoid Disease at Weaste. Throughout the year, and especially towards the end of September, several cases (38 in all), of *throat illness* occurred at Weaste, under circumstances which led to the suspicion that the untrapped manholes in the street sewers were concerned in their causation. A large proportion of the cases were probably scarlatinoid in character, but in at least five of the attacks no rash was present, and the disease appeared rather to assume the diphtheritic type. Five cases of Enteric Fever also occurred during the year in the same neighbourhood, but there was no real evidence to connect them with the emanations from the sewers.
- Definition of preventable diseases. **Injury to the Community by Preventable Sickness.**—In a certain sense, perhaps, all diseases may be said to be preventable, and this is certainly true of the vast majority of them. But there are sundry prevalent diseases, or groups of disease, with respect to which it may be affirmed not only that they are eminently preventable, but that their prevention, or, if possible, their permanent suppression, is the duty of the State, and constitutes the chief object for which sanitary authorities have been called into existence. In this category are included those diseases which are due—either to the spread of infection, or to overcrowding, bad drainage, filth-pollution of air, food, or drink; to unhealthy occupation, or to some other definite and flagrant evil, the removal of which would not only ensure their extermination, but would also tend to promote most materially the general enjoyment of life. In endeavouring to assess the damage to the people done by preventable diseases, it is well to remember that this is by no means limited to the death-toll which they levy, and that with such excessive severity, upon the helpless and the poor. For, in addition to this, there is the vast aggregate of sickness which is “not unto death,” but which, inasmuch as it implies loss of work to those who have to minister to the sufferers, deprives them, to a greater or less

extent, of their only means of subsistence. During the last ten years there have died in Salford from preventable causes not less than 9,465 persons, and if the moderate estimate be adopted of twenty sick cases to each death, which is probably less than the truth, we shall obtain an aggregate of 189,300 cases as the amount of unnecessary sickness occurring in Salford within the past decade. Apart from the question of humanity involved in the toleration of so much uncalled-for suffering as this, it would not be difficult, from the above figures, to form a fairly approximate money estimate of the value of lost life and lost labour in Salford during this interval of time.

SECTION II.

Estimate of Sickness caused by preventable diseases.

Registration of Infectious Sickness.—From time to time during the last quarter of a century attempts have been made by Sanitarians—and notably by Dr. W. B. Richardson, F.R.S.—to obtain some measure of the prevalence of avoidable diseases throughout the country more reliable than that afforded inferentially by the death returns of the Registrar-General. Previously to the year 1880, the Manchester and Salford Sanitary Association had been engaged for upwards of twenty years in collecting and publishing sickness returns for these towns: and from the discontinuance of these returns in that year, up to the end of 1882*, I myself succeeded in collecting periodical reports of disease treated at the public expense in our own borough. But all efforts of this kind have hitherto fallen short of the success they deserved because of the merely permissive character of the undertaking, and for want of power on the part of compilers to enforce systematic notification. Within the last few years many of the more important towns of England have taken statutory powers to acquire from local practitioners reliable information as to the whereabouts of infection, and there is little doubt that the information thus gained has proved of sterling worth. But, besides serving its primary and locally preventive purpose, there is no doubt that the mass of information now regularly supplied to the 38 towns thus fortunately circumstanced, if tabulated and regularly published by some competent authority, might be made to furnish statistical data of the very first importance to the health of the nation.

Infectious disease Registration.

Should be undertaken by a State Department.

Compulsory Notification of Infectious Disease.—Up to the latter part of the year 1882, when the Provisional Order came into force requiring notification to the Medical Officer of Health of certain specified kinds of sickness, the Salford public were without adequate protection against the spread of dangerous infectious disease. It is true that persons in good circumstances had previously derived from their private medical attendants many of the advantages which preventive skill can render, and I am the last to under-rate the timely assistance thus given. But the fact remains that the majority of the population, and es-

Salford Provisional Order for compulsory notification of infectious disease

* The new Notification Act came into force at the end of this year and supplied information on this point, which rendered the continuance of the hospital returns unnecessary.

SECTION II.

In full operation
by beginning of
year.

pecially that necessitous part of it which is most in need of such protection, has hitherto been absolutely at the mercy of whatever infectious pestilence has from time to time been prevalent; and it may safely be contended that in order to enable the Sanitary Authorities to fulfil this important part of their responsibility, it was essential that they should be fortified with timely warning of impending danger. Subsequent to our receipt of the necessary powers from Parliament, much time was unavoidably absorbed in the necessary preliminary arrangements; but the beginning of the year 1883 saw the Compulsory Notification Act in full operation, and the due administration of its provisions has ever since received the anxious care of the Health Department.

In the preliminary discussion of the suggested clauses, before their presentation to Parliament, much consideration had naturally been devoted to the delicate task of specifying the persons to be held responsible for the Act of Notification to the Authority. The advantages of what is termed the dual system of notification, as well as that by the householder alone, were carefully weighed; but it was ultimately resolved to adopt the principle recently sanctioned by Parliament, which imposes on medical practitioners the sole responsibility of notification.

Acknowledg-
ments to Medical
Profession of
Salford.

Before proceeding further, I desire to offer to the members of the Medical Profession practising in Salford, my sincere acknowledgment for the loyal assistance they have rendered the Health Department in their endeavours to administer successfully the powers with which they have so recently been entrusted. It is no exaggeration to say that, as regards its effect upon the spread of infection, the Act would have remained practically a dead letter had we not received from these gentlemen the intelligent support which they alone can render, and which they have so heartily and so promptly given. Although so short a period of time (barely 15 months) has elapsed since the passing of the Act, yet I have learned enough of it to warrant my saying that the working of the compulsory clauses in Salford has been of essential assistance to the department in dealing with infectious disease, and that the results already obtained are such as in my judgment to fully justify the expenditure necessarily incurred.

B.—Preventive Measures.

Sanitary Educa-
tion of the Public

Sanitary Supervision and Advice.—Amongst the advantages which accrue from the registration of infectious sickness, a very important one in a preventive sense, is the power we thus acquire of communicating to the public, through the Inspectors, information on the best means of checking the spread of contagion. Thus, on the receipt of information as to the presence of infectious disease in a house, the Inspector at once pays a visit and proffers his assistance to the inmates. He endeavours to trace infection to its source, and to ascertain whether the cause of present illness arises within the premises or from elsewhere. With the same object in view, he makes enquiry into the origin of the milk supply and the condition of the drinking

water. He carefully examines the sanitary condition of the premises, and recommends the abatement of any nuisances which may be discoverable. All these particulars the Sanitary Inspector notes in his diary, and reports to the Medical Officer of Health on his return to the office. In cases where the means of isolation are insufficient, or in which the medical attendant desires it, the Inspector effects the removal of patients to the Hospital, and the subsequent disinfection of houses, clothing, and bedding. Should the circumstances of the patient allow of his treatment at home, the inspector gives directions for preventing the spread of infection in the neighbourhood, and in suitable cases, leaves printed instructions as to the best mode of dealing with infected bedding, and with the discharges from the sick. On the termination of sickness the inspector again offers the services of the disinfecting staff, and procures the thorough disinfection of rooms, bedding, and clothing at the expense of the Health Department.

SECTION II.

Action of the
Sanitary
Inspector.

Control of Infectious Sickness in Schools.—In no particular has disease notification proved more uniformly helpful than in the control which it has enabled us to exercise over the dissemination of infection by schools. It is well known, at least by practical sanitarians, that this is at once the most common and the least manageable of all the modes of disease propagation with which we have ordinarily to contend. In order to explain this difficulty it is necessary to emphasize two prominent considerations: (1) The inconvenience to mothers involved in the keeping at home of the brothers and sisters of a patient, acts as a powerful inducement to concealment in the case of infectious sickness in a family: and (2) the direct loss to the school teachers, which until recently* followed the absence of a child from school, tended in the same direction: and as a further consequence the relations of the sanitary officers with the school authorities were, if the former acted conscientiously, severely strained. The latter of these evils has disappeared under the recent conciliatory action of the legislature, but for the amelioration of the former, I fear we shall have to wait for the more general appreciation by mothers of the principle, that we should do to others as we would be done by. On paying a visit to a house infected with scarlet fever or other similar disease, it is the duty of the inspector to inquire whether any children of the family are in attendance at school; and if so, notice is at once given to the school authorities, who are thus warned at the first possible moment of impending danger. I have had good reason to believe that the observance of this precaution has, in more than one instance, obviated the necessary alternative of temporarily closing the school.

Infectious
disease in Schools

Information to
Schoolmasters as
to infectious
disease.

* It is satisfactory to note that the Education Commissioners have recently issued instructions to their inspectors that whenever the absence of a child from school is caused by infectious disease, such absence should not entail pecuniary loss on the teacher.

SECTION II.

Fever Hospital
Report.Admissions and
discharges in
1883.Admissions since
opening of
Hospital in 1876.

Hospital Isolation of Infectious Cases.—There are few English towns which are better supplied with hospital accommodation for infectious diseases than is the Borough of Salford. At the Wilton Hospital, in Cross Lane, 365 cases of dangerous infectious disease were isolated during the year, and one case of smallpox was sent to Monsall, because of the impracticability of treating smallpox at Wilton Hospital at the same time with cases of other specific fevers. The admissions during the year included 205 cases of scarlet fever, 9 of diphtheria, 14 of typhus, and 93 of enteric fever. Of the total number under treatment during the year, 271 were discharged cured, 48 still remained in hospital at the end of the year, and 47 died. The table on the opposite page gives the usual particulars for the year 1883. Since the opening of the hospital in 1876, not less than 1991 patients have been isolated by the Health Committee for the protection of the public health. The following table shows the ages of the patients admitted since the year 1876, and also the number of deaths occurring at each age:—

AGES. Years.	All Causes.		Measles.		Scarlet Fever.		Enteric Fever.		Typhus Fever.	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Under 1 year	69	26	43	15	14	8	1	..	1	..
1-2 ..	95	33	34	9	34	12	3	..	..	..
2-3 ..	124	34	24	6	67	27	3	1	..	..
3-4 ..	143	38	29	2	90	28	8	1	3	1
4-5 ..	134	26	25	4	95	20	2	..	2	..
5-6 ..	135	24	19	2	90	18	11	..	1	1
6-7 ..	121	21	14	..	86	13	9	6	3	..
7-8 ..	98	10	1	..	66	7	20	3	3	..
8-9 ..	81	10	3	..	49	6	12	..	5	1
9-10 ..	65	5	1	..	43	2	10	2	6	..
10-11 ..	64	10	..	..	34	4	13	4	2	..
11-12 ..	29	4	..	..	10	..	11	2	2	..
12-13 ..	61	8	2	..	23	1	16	4	9	..
13-14 ..	35	5	..	..	13	..	13	3	2	..
14-15 ..	34	5	..	..	7	1	18	2	3	1
15-20 ..	165	27	4	..	19	..	58	13	16	2
20-30 ..	276	45	2	..	27	3	80	16	25	5
30-40 ..	160	52	1	..	7	..	54	15	36	15
Over 40 ..	102	48	..	..	3	..	33	17	25	16
All Ages ..	1991	441	202	38	777	150	375	89	144	42

Increasing
appreciation of
Hospital by the
Public.

The subjoined statement relating to Scarlet Fever and Enteric Fever—the two infectious diseases most commonly admitted to Hospital—shows the proportion of hospital admissions to total deaths in the Borough from these diseases. This plainly indicates the growing appreciation of the hospital by the Salford public, as the institution becomes better known.

SCARLET FEVER AND ENTERIC FEVER.

SECTION II.

	1876-82.	1883.
Deaths in the Borough from both Diseases..	1340 ..	146
Sick cases admitted to Hospital	865 ..	298
Proportion of admissions to Boro' deaths ..	1 to 1½	2 to 1

I desire here to state the opinion that the increasing popularity at present enjoyed by the Wilton Hospital, is attributable in no small degree to the skill and untiring energy of Dr. Mullen and Miss Kate Thomas, respectively the Resident Medical Officer and Matron of that institution.

Disinfection or Burning of Infected Clothing, &c.—During the year under notice, 66 parcels of infected bedding or clothing have been destroyed. In my last report I mentioned the decision of the Committee to provide the Health Department with a new apparatus for the disinfection of clothing, &c., by means of high pressure steam, to replace the old disinfector, which had become useless and unreliable. It gives me pleasure to notice that such an apparatus has been purchased by the Committee, who have also provided a suitable building at Wilton Hospital for its reception. The difficulty at first experienced in the management of the new disinfector has now disappeared, and I confidently believe that the apparatus at present in use will satisfy the needs of Salford in this particular for many years to come.

Infected
bedding and
clothing purified

STATEMENT OF COST OF MAINTENANCE AT WILTON HOSPITAL,
IN THE YEAR ENDING DECEMBER, 1883.

	£	s.	d.
Salaries of Resident Medical Officer and Matron.....	250	0	0
Wages of Nurses.....	584	18	5
Rates, Taxes, and Insurance.....	100	1	8
Coal, Gas, Water, and Cleaning Materials.....	439	3	4
Meat, Provisions, and Groceries	916	19	6
Medicine and Stimulants	352	18	11
Repairs	257	6	7
Provender and Farriery.....	59	2	4
Printing, Stationery, &c.	9	7	5
Collecting Hospital Charges	5	15	7
Bedding, &c.	30	7	0
Stamps and Sundries	54	0	5
	£ 3060	1	2

HOSPITAL REPORT FOR THE YEAR 1883.

(52 Weeks ending December 31st, 1883.)

	WILTON HOSPITAL.				MONSAL HOSPITAL.				Total.
	Males.		Females.		Males.		Females.		
	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	
I.—Patients remaining in Hospital on Dec. 31st, 1882, affected with									
Measles	..	..	..	1	..	..	..	..	1
Scarlet Fever	2	2	..	3	..	..	..	..	7
Typhus Fever	..	1	..	1	..	..	..	..	2
Enteric Fever	..	6	..	6	..	..	..	..	12
Pertussis	..	1	..	..	..	..	..	..	1
Total	2	10	..	11	..	..	..	..	23
II.—Admitted during the 52 Weeks ending Dec. 31st, 1883, affected with									
Small Pox	..	..	..	..	..	..	..	1	1
Measles	1	4	..	1	..	..	..	..	6
Scarlet Fever	44	55	41	65	..	..	..	..	205
Diphtheria	1	1	1	6	..	..	..	..	9
Typhus Fever	1	4	..	9	..	..	..	..	14
Enteric Fever	6	48	2	37	..	..	..	..	93
Simple Continued Fever ..	..	..	1	1	..	..	..	..	2
Pertussis	..	1	..	2	..	..	..	..	3
Erysipelas	..	..	..	1	..	..	..	..	1
Other Acute Diseases	..	3	..	6	..	..	..	..	9
Total	53	116	45	128	..	..	..	1	343
Total under Treatment in 1883	55	126	45	139	..	..	..	1	366
III.—Of the above there were discharged recovered from									
Small Pox	..	..	..	..	..	..	..	1	1
Measles	1	3	..	2	..	..	..	..	6
Scarlet Fever	29	46	28	57	..	..	..	..	160
Diphtheria	..	1	..	5	..	..	..	..	6
Typhus Fever	1	2	..	8	..	..	..	..	11
Enteric Fever	6	35	1	31	..	..	..	..	73
Simple Continued Fever ..	..	..	1	1	..	..	..	..	2
Pertussis	..	2	..	2	..	..	..	..	4
Erysipelas	..	..	..	1	..	..	..	..	1
Other Acute Diseases	..	3	..	4	..	..	..	..	7
Total	37	92	30	111	..	..	..	1	271
IV.—Died from									
Scarlet Fever	6	3	6	3	..	..	..	..	18
Diphtheria	1	..	1	1	..	..	..	..	3
Typhus Fever	..	3	..	2	..	..	..	..	5
Enteric Fever	..	11	1	7	..	..	..	..	19
Other Acute Diseases	..	..	..	2	..	..	..	..	2
Total	7	17	8	15	..	..	..	..	47
V.—Remaining in Hospital on Dec. 31st, 1883, affected with									
Measles	..	1	..	..	..	..	..	..	1
Scarlet Fever	11	8	7	8	..	..	..	..	34
Enteric Fever	..	8	..	5	..	..	..	..	13
Total	11	17	7	13	..	..	..	..	48
Total under Treatment in 1883	55	126	45	139	..	..	..	1	366

III.—*An account of the inquiries made by the Medical Officer of Health as to conditions injurious to health existing in the Borough, and of proceedings taken by his advice for the abatement of such conditions, under the Public Health Act, 1875, and the various Local Acts.* SECTION III.

A. Social conditions inimical to health.

B. Abatement of Nuisances under the Public Health Act.

A. **Scarcity of Lady Visitors amongst the Poor.**—In addition to the physical conditions or “nuisances” mentioned under Section B, which are so well known to be prejudicial to health that they are prohibited by statute law, there exist other conditions intimately connected with the social life of the working classes which influence very prejudicially their health and happiness. From the very nature, however, of these conditions, it is obviously impossible to legislate for their removal, inasmuch as they depend more on the ignorance than on the viciousness of the people, and in many instances result from circumstances which are beyond their control; but I feel confident that if the ladies of Salford would take the matter resolutely in hand they would shortly achieve results that would amply repay the necessary demand upon their time. I am, of course, aware of, and grateful for, the assistance so long rendered by the emissaries of the Ladies’ Sanitary Association in the back slums of Salford. If, however, I might be permitted the suggestion, I would ask for a little more personal visitation of the poor on the part of the ladies themselves; and I do not think I should have to ask in vain if it were generally known how gratefully the visits are appreciated, of those few ladies who do at present encourage us, by their personal presence in the homes of the poor.

Social conditions
inimical to health

Scarcity of Lady
Visitors amongst
the poor.

Want of Medical Aid in Sickness.—It is a pleasing reflection, that in this country generally, and especially in our great hospital towns, no person, however poor, need want medical attendance in the hour of sickness. Our poor-laws supply gratuitous assistance to the destitute, and our hospitals and other charitable institutions furnish aid to the more provident of our poorer brethren who struggle to support themselves until disabled by sickness. But yet we find that, year after year, a very considerable proportion of the people die without the assistance which our charitable institutions have rendered practically available to all.

Medical certifi-
cates of the cause
of death.

Table A on the following page shows that of the 21,812 deaths registered within the last five years, not less than 1072 persons have died without proper medical attendance. In addition to these, 962 other deaths, many of them due to violence, were made the subject of inquiry by the Coroner. It is impossible, however, to doubt from the character of the verdicts returned, that in a large number of these latter cases the fatal issue might have been avoided by timely medical assistance. Although it

SECTION III. is at present impossible to ascertain the extent in which the poor suffer from want of skilled attendance and nursing in the time of sickness, we have positive evidence that for many years past, out of every twenty cases terminating fatally, one person has passed away without competent medical aid.

TABLE A.

CERTIFICATION OF THE CAUSES OF DEATH IN THE BOROUGH OF SALFORD, AND IN ITS FOUR REGISTRATION SUB-DISTRICTS, IN THE YEAR 1883.

	Total Deaths.*	Certified by		Not Certified.	Proportion per cent. of Deaths.		
		Registered Medical Practitioners.	Coroner.		Certified by		Not Certified.
					Registered Medical Practitioners.	Coroner.	
Borough	4253	3869	186	198	91·0	4·4	4·6
Regent Road District.	1834	1649	87	98	89·9	4·7	5·3
Greengate „	897	805	42	50	89·7	4·7	5·6
Pendleton „	958	892	38	28	93·1	4·0	2·9
Broughton „	564	523	19	22	92·7	3·4	3·9

CORRESPONDING DATA FOR THE FOUR YEARS 1879-82.

Borough	17559	15909	776	874	90·6	4·4	5·0
Regent Road District.	7538	6847	289	402	90·9	3·8	5·3
Greengate „	3844	3385	247	212	88·1	6·4	5·5
Pendleton „	3838	3515	160	165	91·5	4·2	4·3
Broughton	2339	2164	80	95	92·5	3·4	4·1

* The gross numbers referred to in the above table are the deaths registered in the Borough, without correction for mortality in Public Institutions.

The percentage of uncertified deaths, although slightly lower in 1883 than in former years, still continues excessively high in Salford. I have previously remarked that this unsatisfactory state of things mainly results from the laxity of the law, which not only fails to control unqualified practice, but imposes no effective check on the burial of persons* whose deaths are uncertified.

SECTION III.

Infantile Neglect and Female Factory Labour.—Of the many causes which contribute to the excessive death toll which the social conditions of our great towns impose on infant life, probably the most mischievous is the constant habit amongst mothers of resorting to factory employment within a few weeks of confinement—a practice which of course necessitates the relegation of maternal duties to persons other than those specially fitted by nature to fulfil them. To this heartless and unnatural conduct the physician can frequently trace a regular sequence of evils, which as they depend on maternal neglect he is powerless to remedy, but which only too certainly terminate in early and untimely death. In my successive reports of past years I have directed attention to this important flaw in our social system, and have endeavoured to obtain the assistance of our local philanthropists for the extension, on something like an adequate basis, of the day nursery or crèche system, which has proved so successful elsewhere. The small Day Nursery in Arlington Street has for many years been doing good work, and I am thankful to observe that the residents in that locality appreciate the boon it confers. The Nursery recently established at Ordsall Hall by the Manchester and Salford Sanitary Association is also in full operation, and with results that make me long for the further extension of a system which probably offers the only practical solution of this great social problem, “how to diminish the slaughter of the innocents.” I beg therefore once again to commend the extension of the Day Nurseries in our poorer neighbourhoods, to the attention of the thoughtful and benevolent friends of our labouring population.

Employment of
child-bearing
women in
factories.Day Nurseries in
Arlington street
and Ordsall Hall.

Illegitimacy as affecting Infantile Mortality.—Of the total births registered in the Borough during the 52 weeks of the year under notice, 302, or 4·5 per cent., were illegitimate. This proportion is identical with that obtaining in the four years 1879-1882. As in previous years, a table (B) has been inserted, showing the proportional mortality incidental to children illegitimately born, in comparison with the rates obtaining amongst those born in wedlock. Taking the Borough as a whole, we find that in 1883 the rate of mortality amongst the former was equal to 318 per 1,000, whereas it did not exceed 164 amongst the latter. The rates obtaining in the four years 1879-82 were even more disastrous to the unfortunates, being equal to 364 per 1,000, or more than double the rate amongst legitimate children. The facts for 1883 thus adduced, confirm our pre-

Illegitimate
births and deaths

* See also on this subject remarks on page 23.

TABLE B.

BIRTHS IN THE BOROUGH OF SALFORD AND IN ITS FOUR REGISTRATION SUB-DISTRICTS—DISTINGUISHING LEGITIMATE AND ILLEGITIMATE BIRTHS; ALSO THE PROPORTION OF MORTALITY AMONG LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD.

IN THE YEAR 1883.

	Births.		Percentage of Illegitimate Births to Total Births.	*Deaths under One Year.		Proportion of Deaths under One Year per 1,000 Births.		
	Total.	Illegit.		Total.	Illegit.	Total.	Legit.	Illegit.
Borough	6778	302	4.5	1156	96	171	164	318
Regent Road District..	2882	145	5.0	522	35	181	178	241
Greengate „ ..	1214	61	5.0	239	25	197	186	410
Pendleton „ ..	1584	58	3.7	254	23	160	151	397
Broughton „ ..	1098	38	3.5	141	13	128	121	342

CORRESPONDING DATA FOR THE FOUR YEARS 1879-82.

Borough	28352	1276	4.5	5016	464	177	168	364
Regent Road District..	11623	578	5.0	2183	221	188	178	382
Greengate „ ..	5238	258	4.9	992	98	189	180	380
Pendleton „ ..	6906	296	4.3	1129	85	163	158	287
Broughton „ ..	4585	144	3.1	712	60	155	147	417

* The gross numbers referred to in the above table are the deaths registered in the Borough, without correction for mortality in Public Institutions.

vious experience as to the shameful neglect to which children born out of wedlock are systematically condemned; and emphasises most strongly the need of some charitable organization for the preservation of a class of sufferers who, from the very circumstances of their birth, are felt to be an encumbrance by those who ought to be their natural protectors.

SECTION III.

Sick-Club Insurance and Infantile Mortality.—Within the last few years the conviction has steadily gained strength with thoughtful people, that the provident principle—so manifestly desirable in the case of adults—is one which acquires a dangerous aspect when resorted to for the so-called “insurance” of infant life. So great has been the success of provident societies and sick clubs amongst the poor, that at the present day few infantile deaths are registered upon which an insurance has not been effected. It therefore becomes a serious question whether some provision is not necessary to restrain the operation of a system by which, in consideration for a small weekly payment, a poor and ignorant mother is taught to anticipate the consolation of a large money payment on the death of her child. From what I know of the treatment received by the wretched infant denizens of our back slums, I freely confess my inability to contemplate, without a shudder, the effect of such an incentive as this to the perpetration of secret crime.

Insurance of infant life.

Clandestine Burial of Still-born Infants.—I am indebted to Mr. Walker, the Registrar of the Salford Cemetery, for the information that, during the year 1883, 267 infants were brought to the cemetery for burial as still-born,—the number in the preceding year being 287, and 299 in 1881. In the year 1882 not less than 139 of these still-births were attested by midwives merely, and, in 1883, 133 were thus entered in the Register, no qualified medical practitioner having in any of these cases been present at the birth. In previous reports I have drawn attention to the facilities offered for the illicit disposal of the dead bodies of infants by the laxity of the law, which makes no provision for the compulsory registration of still-births. It is impossible to view this state of things otherwise than with suspicion, especially in view of the well-known neglect to which children illegitimately born are subjected by their mothers.

Still-births.

Should be registered.

B. Abatement of Nuisances under the Public Health Act.

Systematic Inspection.—In a large town like Salford, where a permanent staff of inspectors are necessarily employed in the constant search for and abatement of nuisances, under the Public Health Act; the personal action of the Medical Officer of Health as regards these, must ordinarily be confined to the supervision of the work of such officers. The Salford Inspectors of Nuisances are required to attend at the Health Office every morning at nine o'clock, in order to submit to the Medical

Sanitary Inspection.

SECTION III. Officer of Health a written report as to their proceedings of the previous day, and to receive his instructions with respect to them. This hour has been fixed for the attendance of the inspectors, in order to accommodate those of the public who may desire their assistance for the abatement of nuisances or the removal of patients to hospital. The accompanying table gives a detailed account of the work done by the inspectors and the other members of the staff during the year.

Duties of
Inspectors.

Fortnightly
Reports of
Medical Officer
of Health.

Periodical Reports of the Medical Officer of Health.—At each of their fortnightly meetings I have presented to the Health Committee a report, in which the current details of official work have been submitted, and the necessary authority obtained for the initiation of legal proceedings where required. This report has contained particulars of the health and sanitary condition of the various districts of the borough. The fluctuations of the death-rate have been commented on, and the Committee have been kept informed of the local prevalence of infectious sickness. They have also been furnished with particulars of the admissions and discharges of patients at the Fever Hospital, and of the number of premises requiring systematic disinfection or sanitary amendment. Details have likewise been given of the nuisances abated from time to time, of the unwholesome meat destroyed, and of the samples of food and drugs submitted to the Public Analyst. These particulars, together with other special matters requiring their attention, have been regularly supplied to the Committee at each of their meetings, in order to facilitate the administration by them of the various sanitary powers with which they have been invested by the Council.

IV.—An account of the supervision exercised by the Medical Officer of Health, or on his advice for sanitary purposes, over houses and places which the Sanitary Authority has power to regulate; with the nature and results of proceedings required, and of action taken with respect to them, during the year.

SECTION IV.

Common
Lodging-houses.

Supervision of Common Lodging-Houses.—There were 24 common lodging-houses in the Borough at the end of 1883, being an increase of four upon the number on the register in the previous year. These houses provide accommodation, in 87 rooms, for 465 lodgers. Although the statutory measure of cubic space is still preserved in every case, it is unsatisfactory to find, from Inspector Wilkinson's report, that in several instances the keepers of lodging-houses have abandoned their old and roomy houses, and now occupy dwellings which are smaller and less airy. The houses, however, which by night and by day are kept under constant supervision, have been generally well conducted. They have been regularly lime-washed, according to the regulations, and old or ragged bedding has been renewed where necessary. Only one case of infectious disease occurred during the year in any of the common lodging-

PARTICULARS OF WORK DONE BY THE HEALTH DEPARTMENT
DURING THE YEAR 1883.

	Borough.	Regent Road.	Greengate.	Pendleton.	Broughton.
No. of Complaints lodged at Health Office	3265	1378	703	172	1012
Inspections made.					
Of Dwelling-houses	15691	5301	2834	6574	982
„ Lodging-houses	2100	1130	860	110	..
„ Slaughter-houses	2288	780	364	832	312
„ Dairies and Milkshops	920	467	163	231	59
„ Shippens	1820	260	..	884	676
By Smoke Inspector—Observations taken	598	169	228	181	20
Under Adulteration Act—Samples collected for Analysis	497	238	100	70	89
By Meat Inspector—Seizures made	144	98	43	3	..
Miscellaneous Sanitary Inspections	872	290	39	385	158
Re-inspections after Service of Notice	7282	3181	420	1651	2030
Total Inspections made by Staff ..	32212	11914	5051	10921	4326
Orders issued for Abatement of Nuisances	2379	960	545	622	252
Nuisances abated pursuant to order.					
Houses and Premises cleansed, repaired and limewashed	1006	358	237	411	..
Houses disinfected after infectious disease	1225	432	147	483	163
House Drains repaired, trapped, or disconnected	1119	236	101	599	183
Ashpits and Privies repaired or reconstructed	582	111	55	366	50
Accumulations of Manure and Refuse removed	113	23	13	61	16
No of Ashpits attended to after complaint	3061	572	385	13	2091
Improperly kept Animals removed ..	87	18	1	62	6
Overcrowding of Dwellings abated ..	63	27	36	..	..
Passages and Yards repaired, drained and flagged	1026	333	179	425	89
Total number of Nuisances abated ..	8282	2110	1154	2420	2598
Registered.					
Lodging-houses	334	200	130	4	..
Slaughter-houses	47	18	7	16	6
Dairies and Milkshops	589	244	94	97	154
Shippens	35	5	..	17	13
Marine and Second-hand Stores	201	86	70	35	10
Patients removed to Fever Hospital	342	159	73	78	32
Infected bedding and clothing disinfected ..	..	..	..	..	..
Infected bedding destroyed	66	35	21	5	5
Legal proceedings taken (see page 35) ..	..	..	..	..	..

SECTION IV. houses—namely, a case of scarlet fever at 6, Brown Street, which was promptly removed to Wilton Hospital, due precautions being subsequently taken against the further spread of the disease.

Sub-let houses.

Constant source
of trouble to
Inspector.

Convictions of
lodging-house
keepers.

Prevalence of
infectious disease
in sub-let houses.

Regulations
under Sanitary
Act as to
Lodging-houses.

Houses Sub-let in Lodgings.—In addition to the common lodging-houses, there were at the end of the year 365 houses, or parts of houses, let in lodgings in Salford, which are regulated by a special code of bye-laws, but are not amenable to the regulations applicable to common lodging-houses. The number of sub-let houses now on the register is less by 16 than the number registered in 1882. Lodging-houses of this class are a constant source of trouble to the inspector, and inasmuch as they are by no means so well managed as the common lodging-houses, they afford much greater facilities for the spread of infectious disease. All these establishments are kept under careful supervision in order to secure obedience to the regulations, and, as far as possible, attention to personal cleanliness on the part of the tenants. Speaking generally, the internal condition of the lodging-houses has been satisfactory. The usual appointments have been kept in repair, and the bedding has been fairly clean. The frequent nocturnal visits of the inspectors reveal the fact that the provisions of the Lodging Houses Act are frequently evaded in Salford. During the year under notice 2,100 visits have been paid by the inspector to the lodging-houses of Salford, and as a result of these inspections, which have of necessity been made at or after midnight, 12 persons have been summoned and 11 convicted for letting apartments without registration.

Contagious disease has recently been unusually prevalent in sub-let houses, not less than 29 cases of infectious sickness having been detected in houses of this description during the past year. It is worthy of note, however, that only seven of the infected houses were on the register at the time of the inspector's visit. In the remaining 22 cases the lodging-houses were under no supervision whatever, and but for the early removal of first cases which the timely information afforded by the Notification Act enable us to effect, it is certain that infection would have spread from these centres throughout the crowded districts in their immediate neighbourhood. The infectious attacks were thus distributed:—Of the 19 scarlet fever cases, three occurred at No. 4, Sussex Street, and two at No. 18, Collier's Buildings; an attack of scarlet fever and another of enteric fever occurred at 68, Woden Street; a case of typhus fever occurred at 11, Chief Street; and a case of diphtheria at No. 28, Barrow Street. All the patients were promptly removed to hospital, and disinfection of the houses and bedding was in every case thoroughly effected.

It is desirable again to draw public attention to the Regulations under the Sanitary Act, 1866, which prohibit the letting in lodgings, without previous registration, of any house or part of a house in which more than two adult persons sleep in

one room. Compliance with this regulation may be enforced by heavy penalty. The following offences were committed against the Lodging-house Regulations during the year:—Twelve persons were summoned and eleven fined for letting houses without being registered. Twelve registered lodging-house keepers were summoned and eight fined for breaches of the Lodging-house Regulations.

SECTION IV.

Registration of Houses under 90th Section of the Salford Improvement Act.—In my last annual report I mentioned that, in the case of 73 exceptionally troublesome houses in the neighbourhood of the Regent Road Barracks,—the Health Committee had agreed to make trial of the provisions of the 90th section of the Salford Improvement Act, which provides, with respect to small dwellings consisting of not more than four rooms, that the Corporation may prescribe the number of persons by whom they may lawfully be occupied, and may require the occupiers permanently to mark on such houses the numbers so prescribed. The Act also prohibits, under penalty, the occupation of these rooms by a greater number of persons than that allowed by the Corporation, and thus enables the Health Department to control a class of houses which, under ordinary circumstances, are a source of public danger. It gives me pleasure to report that the application of the 90th section to the above-mentioned property has acted most beneficially, both on the sanitary condition of the houses, and on the health of the tenants. The Committee will therefore be encouraged to apply the powers they possess under this Act, to other similar property in case further occasion should arise.

Application to property in Regent Road of 90th Section of Salford Improvement Act.

"Dairies, Cowsheds, and Milkshops Order, 1879."—This important enactment continues to do good service in Salford. The regulations* of the Health Committee, made in pursuance of the order, have been systematically enforced during the year,

Registration of Dairies and Milkshops.

* REGULATIONS OF THE HEALTH COMMITTEE, UNDER THE DAIRIES, COWSHEDS, &c., ORDER, 1879.

1. No room used for the storage or sale of milk shall be occupied as a living room, or communicate by door, window, or otherwise with any bedroom, and the walls of such room must not be papered, but they may be either limewashed, coloured in distemper, or painted.
2. Every milk vessel, table, bench, and all other utensils and furniture shall be washed and thoroughly cleansed every day.
3. The words "Registered for the Sale of Milk" shall be painted and kept clean and legible over the entrance door of every room used for the sale of milk.
4. All premises used for the sale of milk shall be open at all times to the inspection and examination of the officers appointed by the Local Authority for the purpose.
5. Every cowshed shall contain for each cow a superficial area of not less than 42 square feet, nor less than 380 cubic feet of space. The sheds must have satisfactory provision for light and ventilation.
6. The floors of all cowsheds shall be of cement concrete, brick, stone, or other non-absorbent material, and the joints thoroughly grouted with cement.
7. All cowsheds shall be drained by means of an open channel which must be continued to the outside of the wall, and there deliver itself on a

SECTION IV. with the result of effecting a marked improvement in the condition of the dairies and milkshops on the register.

It was of course scarcely to be expected that a sweeping measure of reform like the above could be inaugurated without at first inflicting apparent hardship, especially upon the shopkeepers in our poorer neighbourhoods, who endeavour to add to their slender incomes the profit arising from the daily sale of a few pints of milk. There is good reason however to hope that the instances of real hardship have been comparatively few, and that compliance with our requirements has seldom involved vexatious inconvenience, or the expenditure of unreasonable sums of money.

Dangers of milk pollution.

Scientific opinion seems to be unanimous, at any rate on this point, that in the interest of health it is necessary to limit very carefully the traffic in milk to suitable persons and places; and especially to guard this most unstable commodity against contamination by infectious germs, as well as by household filth. The rigid enforcement of our regulation No. 1, which prohibits the storage of milk in a living room, has been found effective as a preventive of milk contamination after its arrival in Salford. But a little consideration will show that in order to complete the defences of our large urban populations against the dangers of milk pollution, some guarantee should be available to the consumer, that the milk he purchases in town should not have been tampered with elsewhere. In this particular, however, we are at present entirely at the mercy of the farmer, who, as long as he avoids the provisions of the Adulteration Act, may please himself as to the cleanliness of his arrangements for the "preparation" of his milk, and also as to the purity of the water used in the process. Unfortunately the action of the Dairies and Milkshops Order is limited to town districts, and consequently Rural Sanitary Authorities, even when favourably disposed, are deprived of that local control over the milk trade which their urban colleagues enjoy. If, therefore, the purity of the milk supply of England is to be maintained, it is essential that the provisions of this or of some similar enactment should be extended throughout the kingdom, so that the treatment to which the milk is subjected at its source may be controlled as effectively as are the arrangements for its distribution to consumers.

Desirability of extending powers to Rural Districts for the protection of milk supply.

trapped gulley, or otherwise drained to the satisfaction of the Local Authority.

8. The floors of all cowsheds shall have the manure, &c., cleaned off at least twice daily, and must be thoroughly cleansed with water once a week.

9. The walls shall be lime-washed at least twice in every year, namely, in March and October, and also at such other times as may be deemed necessary by the Officer of Health.

10. The manure of the cowshed shall be kept in a properly constructed "sewered middenstead," and removed once a month, or oftener if deemed necessary by the Officer of Health.

Any person doing anything in contravention of the Order of Council, or of these Regulations, will be liable to a penalty of not exceeding twenty pounds.

The subjoined list gives particulars of the milkshops registered since the passing of the Act (1879):—

SECTION IV.

	Borough.	Regent Road.	Green-gate.	Pendleton.	Broughton.	Register of milkshops, 1883.
Number on Register, end of 1882	604	252	92	94	166	
Registered during 1883 ..	107	27	10	34	36	
Discontinued in 1883	122	35	8	31	48	
Still remaining on Register, end of 1883	589	244	94	97	154	

At the close of the year 1883, there were 589 milkshops and dairies on the register, as compared with 604 at the end of the previous year. These have been inspected at least three times on the average during the year, and 21 notices have been issued under the new regulations, to improve the sanitary condition of the milkshops, or to effect their more perfect separation from dwelling rooms. At the present time there are no milkshops or dairies in the borough which do not fairly comply with the regulations in force.

At the end of 1883, there were 35 cowsheds and shippens on the Salford register. These have been regularly inspected by Inspector Fordham, M.R.C.V.S., of this department, who reports favourably as to their general condition.

Register of cowsheds and shippens, 1883.

Private Slaughter-Houses.—The glaring nuisance to which private slaughter-houses in most cases give rise continues still unabated in Salford, and until the market authorities provide public abattoirs for the use of the butchers I see no reasonable hope of improvement in this particular. I do not know that I can add anything to the arguments which I have previously advanced against the continuance of this system; but I may assure the Markets Committee that the denizens of the back slums of Salford, where the private slaughter-houses exist, would be grateful for their removal, and that such a step would certainly be followed by a considerable improvement in the health and morality of these neighbourhoods.

Slaughter-house nuisance.

There are at present 47 private slaughter-houses in the Borough, which are under the constant supervision of Inspector Fordham. I have repeatedly urged that the great distances apart at which these establishments are situated renders their due supervision by a single officer a matter of considerable difficulty, whilst it offers at the same time dangerous facilities for the traffic in unsound and diseased meat.

Undue facilities for disposal of unsound meat.

Seizure of Unwholesome Meat.—In the course of his inspections, Mr. Fordham has made the following seizures of bad

Bad meat seized and destroyed.

SECTION IV. meat and other unwholesome commodities exposed for sale, or deposited in some place by way of preparation for sale, and intended for the food of man. The food seized has in all cases been submitted to a magistrate for condemnation, and the result of subsequent legal action will be found in the summary on page 35.

	No. of Seizures.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Beef	21	3	15	2	7
Mutton and Lamb	94	2	17	0	10
Veal	21	0	18	2	25
Pork and Bacon	4	0	4	3	1
Horse Beef	2	0	6	1	10
Fish	2	0	1	3	9
	144	8	4	1	6

Analysis of food
and drugs.

Proceedings under the Adulteration Act.—Mr. Joseph Carter Bell, F.C.S., F.I.C., the Salford Public Analyst, has examined 497 samples of food and drugs submitted to him by Inspector Thompstone during the year. The figures given below show the percentage of adulteration detected in the samples analysed during 1883, and in each of the preceding eight years.

As in past years, a table is also given* showing the number of milk samples taken by the food inspector at the railway stations, whilst on the way from the producer to the retailer of milk in Salford. Particulars of Mr. Carter Bell's reports on these samples are also appended, with the object of showing the degree in which Salford milk is tampered with by the farmers outside the borough.

SAMPLES COLLECTED BY THE INSPECTOR FROM 1875 TO 1883.

	Total No. of Samples	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875 ..	60	37	1	1	1	..	7	4	9
1876 ..	119	43	2	18	34	17	..	..	5
1877 ..	390	114	7	159	22	30	18	37	3
1878 ..	418	197	10	35	31	25	24	70	26
1879 ..	518	306	16	130	15	28	10	13	..
1880 ..	506	269	12	48	5	52	71	18	31
1881 ..	478	376	11	1	..	61	..	8	21
1882 ..	465	300	7	47	13	3	58	20	17
1883 ..	497	436	1	29	1	12	..	2	16

PERCENTAGE OF THE ABOVE ARTICLES RETURNED AS ADULTERATED.

	Total No. of Samples	Milk.	Butter.	Bread and Flour.	Drugs.	Gro- ceries.	Beer and Porter.	Wines and Spirits.	S'ndries
1875 ..	66.6	62.1	100.0	..	..	..	100.0	75.0	66.6
1876 ..	40.3	55.8	50.0	27.8	35.3	17.6	..	..	60.0
1877 ..	27.4	40.3	28.6	11.3	13.6	6.7	..	97.3	..
1878 ..	29.9	29.4	10.0	2.9	51.6	4.0	4.2	67.1	..
1879 ..	12.0	13.1	25.0	5.4	26.6	10.7	10.0	2.3	..
1880 ..	20.2	25.2	75.0	6.3	..	17.3	11.3	11.1	9.7
1881 ..	16.3	18.1	9.1	..	..	1.6	..	37.5	23.8
Average,									
1875-81	30.4	34.8	42.5	7.7	21.2	9.7	25.1	48.4	26.7
1882 ..	15.5	19.0	14.3	2.1	53.8	..	1.7	10.0	17.6
1883 ..	6.6	6.7	..	3.4	..	8.3	..	50.0	6.3

List of Samples taken from Farmers during the year 1883, at the place of delivery:—

No.	Name and Address.	Results of Analysis.	Place of Delivery.
1	J. H., Gisburn, Lancashire	Pure	Pendleton Station
2	B. R., Wilpshire, Lancashire ..	6 % of water	Do.
3	Do. do. do.	Very poor milk	Do.
4	G. M., Whitworth, Lancashire..	Do.	Victoria Station
5	P. J., Grindleton, Lancashire ..	Do.	Pendleton Station
6	B. R., Wilpshire, Lancashire ..	Pure	Do.
7	Do. do. do.	Do.	Do.
8	P. G., Prestwich, Lancashire ..	Do.	Kersal Bar
9	Do. do. do.	Very poor milk	Do.
10	H. T., Heaton Mersey, Cheshire	Pure	Salford Workhouse
11	Do. do. do.	Do.	Do.
12	Do. do. do.	Do.	Do.
13	Do. do. do.	Do.	Do.
14	B. E., Levenshulme, Manchester	Do.	Hope Hospital
15	Do. do. do.	Do.	Do.
16	H. J., Birmingham	10 % of water	Hope Street, Salford
17	Do. do.	Very poor milk	Do.
18	B. E., Levenshulme, Manchester	Do.	Hope Hospital
19	Do. do. do.	Do.	Do.
20	Do. do. do.	Do.	Do.
21	Do. do. do.	Pure	Do.
22	Do. do. do.	Do.	Do.
23	P. J., Frodsham, Cheshire	Do.	Old Trafford
24	A. W., Dunham-o'th-Hill, do...	Do.	Do.
25	W. J., Clitheroe, Lancashire ..	Do.	Pendleton Station
26	Do. do. do.	Do.	Do.
27	B. E., Levenshulme, Manchester	Very poor milk	Hope Hospital
28	Do. do. do.	Pure	Do.
29	Do. do. do.	Do.	Do.
30	B. J., Mobberley, Cheshire	Do.	Old Trafford
31	Do. do. do.	Do.	Do.

No	Name and Address.	Results of Analysis.	Place of Delivery.
32	C. J., Northwich, Cheshire	Pure	Old Trafford
33	C. M., Ollerton, Cheshire	3 % of water	Do.
34	C. J., Barrow, Cheshire	Pure	Do.
35	J. R., do. do.	Do.	Do.
36	S. J., Northwich, Cheshire	Do.	Do.
37	O. J., Lostock Gralam, Cheshire	Very poor milk	Do.
38	Do. do. do.	Do.	Do.
39	B. J., Plumbley, Cheshire	Pure	Do.
40	Do. do. do.	Very poor milk	Do.
41	H. W., Warrington, Lancashire ..	Do.	Do.
42	S. W., High Leigh, Cheshire ..	Pure	Do.
43	M. J., Grapenall, Lancashire	Do.	Do.
44	H. T., Knutsford, Cheshire	Very poor milk	Do.
45	D. T., do. do.	Do.	Do.
46	P. R., Plumbley, Cheshire	Do.	Do.
47	Do. do. do.	Pure	Do.
48	H. T., Thelwall, Lancashire	Do.	Do.
49	D. W., Ashley, Cheshire ..	Very poor milk	Do.
50	S. W., Tabley, Cheshire	Do.	Do.
51	H. T., Knutsford, Cheshire	Pure	Do.
52	P. T., Mobberley, Cheshire	Do.	Do.
53	B. J., Plumbley, Cheshire	Do.	Do.
54	C. D. T., Bury, Lancashire	Do.	Kersal Bar
55	Do. do. do.	Do.	Do.
56	M. T., Newton-le-Willows, do...	Do.	Ordsal Lane Station
57	Do. do. do.	Do.	Do.
58	B. J., Kenyon, Lancashire	Do.	Do.
59	G. J., Newsholme, Lancashire ..	Do.	Pendleton Station
60	M. E., Newton-le-Willows, do...	2 % of water	Ordsal Lane Station
61	T. M. J., Glasgow, Scotland	Pure	Do.
62	Do. do. do.	Do.	Do.
63	Do. do. do.	Do.	Do.
64	Do. do. do.	Very poor, robbed of a portion of cream	Do.
65	Do. do. do.	Pure	Do.
66	Do. do. do.	Do.	Do.
67	F. W., Barrow, Cheshire	Do. ..	Old Trafford Station
68	T. M. J., Glasgow, Scotland	Very poor milk	Ordsal Lane Station
69	Do. do. do.	Pure	Do.
70	Do. do. do.	Very poor milk	Do.
71	Do. do. do.	Do.	Do.
72	Do. do. do.	Pure	Do.
73	Do. do. do.	Do.	Do.
74	C. C., Dunragit, Scotland	Do.	Do.
75	Do. do. do.	Do.	Do.
76	Do. do. do.	Do.	Do.
77	A. R., Frodsham, Cheshire	Do.	Do.
78	Do. do. do.	Do.	Do.

Smoke Nuisance.—Throughout the year under notice Inspector Thompson has continued to devote his energies to the abatement of the smoke nuisance. He has taken and reported to the Committee 598 observations,* each of an hour's duration; and, as a result, 18 persons or firms have been summoned before the magistrates. In four cases the offence consisted in using furnaces improperly constructed; and in the remaining 14 the parties were proceeded against for negligently using furnaces which had been constructed to burn their own smoke. Of the 18 persons prosecuted, 14 were fined, to the aggregate amount of £42, and in the remaining four cases the charges were withdrawn. I am pleased to announce that the Committee have discontinued the practice of levying fines at their fortnightly meetings for offences against the Local Act.

SECTION IV.
Action of Smoke
Inspector.

At the end of the year 1882 the approximate nominal power of the steam boilers used in the borough was equal to 19,342 horses. During the year 1883 many firms, either in consequence of the exigencies of trade, or in order to meet the demands of the Smoke Inspector, have been induced to replace their old and partially worn out boilers by new ones of greater capacity. These alterations have raised the aggregate horse power employed in the borough to 20,300. Inspector Thompson is decidedly of opinion that the large manufacturers of the borough are now doing their best—either by replacing their old boilers with larger ones, or by the application of mechanical stokers, at considerable cost—to reduce as far as possible the emission of dense smoke from their works. He still finds, however, that in certain instances where mechanical stokers are in operation, their good effects have been neutralised by systematic overloading—a practice which of course only leads to disaster.

Nominal horse
power of the
Steam Boilers in
use in 1883.

The following list gives particulars of the boilers and furnaces now in use in Salford, together with the number of notices served for their amendment:—

Boilers and
Furnaces now
in use.

District.	Boilers and Furnaces.		Notices to properly construct Furnaces.	
	Properly constructed.	Improperly constructed.	Number served.	Number complied with
Borough, Total	417	226	16	8
Regent Road ..	123	82	6	4
Greengate. . . .	103	87	6	2
Pendleton	174	44	4	2
Broughton ..	17	13	..	..

* See table on page 25.

SECTION IV. NUMBER OF BLACKSMITHS' FORGES AND BAKERIES IN
SALFORD IN 1883.

Blacksmiths'
Forges and
Bakeries.

	Borough, Total.	Regent Road.	Green- gate.	Pendle- ton.	Brough- ton.
Blacksmiths' shops ..	47	19	11	12	5
Bakeries	75	39	15	13	8

Only two complaints were made during the year of smoke nuisance from the chimneys of blacksmiths' forges, and in both instances the raising of the chimneys to a sufficient height effectually abated the nuisance.

One baker was charged with permitting dense smoke to issue from his chimney, but this nuisance was also abated in the same way, after service of notice.

Sanitary
supervision of
Bakeries.

Supervision of Bakehouses.—In my annual report for 1879 the following passage occurs:—"I notice with regret that the bakehouses of Salford have been removed from the supervision of the Health Department. From what I know by experience of these houses, I am convinced that this change is a retrograde one." This paragraph had reference to a recent change in the law at that time, which transferred to H.M. Inspectors under the Factory Act, the duty of supervising bakehouses. It is satisfactory to note that after a short trial, the authorities have decided to revert to the practice primarily in force, of committing these establishments to the care of the Local Authorities, and I have little doubt that the old arrangement will be found in all respects the preferable one. By the end of the year 1883 neither the sanitary inspectors nor myself had been able to complete a survey of the numerous bakehouses in the Borough, but I hope to be able to furnish a detailed account of them in my next annual report. It is, however, known that the number of these establishments exceeds one hundred.

Record of Cases taken before the Magistrates during 1883, with Result of Proceedings.

Particulars of Complaint.	No. of Cases.	How disposed of.	Amount of Fines.
Adulteration of food and drugs..	18	{ Fifteen fined, in all £66 10s. ; one withdrawn, one not served, and one dismissed	£ s. d. 66 10 0
Being in possession and exposing for sale diseased meat .. }	7	{ Six fined, in all £27 3s. 4d. ; one dismissed	27 3 4
Offences in contravention of the Contagious Diseases (Animals) Act	9	{ Four fined, in all £9 7s. 6d. ; one dismissed, two withdrawn, and two not served	9 7 6
Using furnaces not constructed to consume their own smoke }	4	{ Three fined, £15 in all ; one withdrawn	15 0 0
Negligently using furnaces constructed to consume their own smoke }	14	{ Eleven fined, in all £27 ; three withdrawn	27 0 0
Permitting chimneys to be on fire	2	Two fined, in all £1	1 0 0
Ashpits, privies, drains, and premises in such a state as to be a nuisance	3	One order to abate ; two withdrawn.	....
Letting houses in lodgings without being registered	12	{ Eleven fined, in all £5 2s. ; one withdrawn	5 2 0
Permitting females to occupy rooms used as sleeping rooms by males over ten years	7	Seven fined, in all £5	5 0 0
Permitting rooms to be occupied by more persons than they were registered to accommodate	3	One fined 1s. ; two withdrawn	0 1 0
Removing offensive matter through the streets during prohibited hours	14	{ Thirteen fined, in all £10 ; one withdrawn	10 0 0
Throwing manure on the street..	2	Two fined, in all £1 12s. 6d.	1 12 6
Burning refuse within 200 yards of dwelling house.... }	1	Fined 10s.	0 10 0
Permitting privies to be in a filthy condition	2	One fined 5s. ; one withdrawn.....	0 5 0
Neglecting to comply with lodging-house regulations .. }	2	Two fined, in all 5s.	0 5 0
	100		£ 168 16 4

V.—An account of the action taken by the Medical Officer of Health, or on his advice, during the year, in regard to Offensive Trades and to Factories and Workshops. SECTION V.

Supervision of Offensive Trades.—In my annual report for 1879, page 41, particulars were given of all the offensive trades carried on at that time in the Borough. The list has not materially changed since that period, but the following remarks are offered with respect to a few of the more important industries coming under the designation of "Offensive Trades."

Nuisance from Gas Works.—As in former years complaints have reached this office at intervals during 1883 as to nuisance arising from the Gas Works in Regent Road, either on account of the clouds of dense smoke emitted from the works during the process of firing the retorts, or in consequence of the alleged escape of gas-water into the sewers, the effluvia from which find their way through the drains into the neighbouring dwelling-houses. Some time since, in company with Mr. Hunter and the Smoke Inspector, I paid a visit to these works, and suggested the use of mechanical stokers—a practice which, I am informed, has been attended with the best results at the Rochdale Road Gas Works. May I take this opportunity of urging on the Gas Committee the advisability of adopting this system, which I believe has the full approval of the Gas Engineer himself?

Brick-burning Nuisance.—In consequence of the recent depression in the building trade, complaints are not now so frequent as they formerly were of nuisance arising from the burning of bricks. In two cases only during the year were offenders of this class brought before the Committee, and in these cases no prosecution was undertaken. There are, however, several uncovered plots of clayey land in Salford, which, as soon as revival takes place in the building trade, are likely to be converted into brickfields; and in view of this probability it is desirable that the Committee should consider the advisability of extending beyond sixty yards, the distance from the nearest dwelling-house within which it shall be illegal to burn bricks. I am certain that the irritating fumes emitted from a brick kiln are perceptible far beyond the limit at present fixed by the Local Act.

Supervision of other Offensive Trades.—During the year under notice complaints have been received as to the accidental occurrence of minor nuisances in the course of many of the processes of trade carried on in this Borough. As, however, these nuisances have been effectively dealt with at the suggestion of the sanitary inspectors, it is only necessary to record here that these officers are fully alive to this portion of their duty, and that during the year 1883 little complaint has reached the Health Department of serious nuisance from trades of this description.

Offensive trades.

Dense smoke and offensive emanations from Gas Works.

Irritating fumes from brick kilns.

Desirability of extending the limit now prescribed by Local Act.

Other offensive trades.

VITAL STATISTICS.

VI.—VITAL STATISTICS.

SECTION VI.

Area.—The Municipal Borough of Salford,—comprising the Townships of Broughton, Salford, and Pendleton, together with a detached portion of Pendlebury,—contains an area of 5,170 acres, or rather more than eight square miles.*

General
Statistics.

Elevation.—The population of the Borough resides at a *mean* elevation above the sea level of 140 feet. The greatest height is 250, and the least 85 feet. The low-lying land predominates in extent over that at higher levels.

Inhabited Houses.—There are about 36,981 inhabited houses in the Borough. At the Census Enumeration in 1881 each house was found to contain an average of 5.15 persons.

Annual Ratable Value.—The ratable value of the Borough in 1883 was £804,046. In the year 1873 it was £580,825. The increase in the ratable value of property in Salford within the last decade has therefore been equal to 38.4 per cent.

Population.—The number of persons estimated to be living at the middle of the year is 190,455—namely, 91,437 males and 99,018 females. This estimate is based on the hypothesis that the rate of increase continues to be the same now as it was found to be during the interval between the two last Census years 1871 and 1881.

Density.—The mean density of the population in the middle of the year 1883, expressed as so many persons living on an acre of land, was 36.8. The density in the district of Regent Road was 70.8, in Greengate 117.4, in Pendleton 19.7, and in Broughton 25.6.

Increase of Population.—The excess of births over deaths in the Borough during the year 1883 was 2,525, and this increment—which is equal to 1.4 per cent. of the number estimated to be living in the middle of 1882—is the natural increase of the population. The *actual increase*, however, is estimated to amount to 6,454 persons. The balance, therefore, must be due to the excess of immigration over emigration.

Marriages.—1,494 marriages were contracted last year within the Registration District† of Salford, as compared with 1,552, 1,489, and 1,468 in the three preceding years respectively. The

Marriage-rate.

* Areas of Districts:—Regent Road, 1,066 acres; Greengate, 263; Pendleton, 2,415; and Broughton, 1,426.

† The marriages and marriage rates are unavoidably those for the Registration District of Salford, which includes a small extra Municipal area, in addition to the Borough. As, however, the marriages are calculated on the entire district population, the rates may be accepted as approximately those of the Borough. The marriages registered in the Borough are not separately recorded.

POPULATION, DENSITY, ANNUAL RATE OF MARRIAGES, BIRTHS, AND, DEATHS, IN
EACH OF THE TWENTY-ONE

YEARS.		POPULATION Estimated to middle of each year.					DENSITY. Persons per Acre.				
		Borough.	Regent Road.	Green- gate.	Pendle- ton.	Brough- ton.	Boro'.	Regnt Road.	Green- gate.	Pen- dleton.	Bro'h- ton.
Quinquennial Means.	1863-67	111,436	38,679	37,424	23,636	11,896	21'6	36'2	141'5	9'8	8'3
	1868-72	123,578	45,762	36,626	26,453	14,738	23'9	42'9	139'2	10'9	10'3
	1873-77	144,690	55,967	34,845	33,027	20,852	28'0	52'5	132'4	13'7	14'6
	1878-82	171,932	67,951	32,251	41,726	30,004	33'3	63'7	122'6	17'3	21'0
	1863 ..	107,075	36,134	37,389	22,636	10,916	20'7	33'9	142'2	9'4	7'7
	1864 ..	109,212	37,374	37,313	23,132	11,393	21'1	35'0	141'8	9'6	8'0
	1865 ..	111,393	38,646	37,231	23,633	11,883	21'6	36'2	141'5	9'8	8'3
	1866 ..	113,614	39,949	37,144	24,136	12,385	22'0	37'4	141'2	10'0	8'7
	1867 ..	115,885	41,294	37,045	24,644	12,902	22'4	38'7	140'8	10'2	9'1
	1868*..	118,198	42,674	36,941	25,152	13,431	22'9	40'0	140'4	10'4	9'4
	1869 .	120,536	44,087	36,823	25,658	13,968	23'3	41'3	140'0	10'6	9'8
	1870 ..	122,965	45,551	36,704	26,177	14,533	23'8	42'7	139'4	10'8	10'2
	1871 ..	125,890	47,195	36,517	26,920	15,258	24'3	44'2	138'8	11'1	10'7
	1872 ..	130,301	49,301	36,145	28,357	16,498	25'2	46'3	137'4	11'7	11'6
	1873*..	134,883	51,463	35,747	29,847	17,826	26'1	48'3	135'7	12'4	12'5
	1874 ..	139,618	53,670	35,319	31,386	19,243	27'0	50'3	134'3	13'0	13'5
	1875 ..	144,518	55,921	34,868	32,977	20,752	27'9	52'4	132'6	13'6	14'6
	1876 ..	149,591	58,219	34,393	34,617	22,362	28'9	54'7	130'6	14'3	15'7
	1877 ..	154,842	60,561	33,898	36,308	24,075	29'9	56'8	128'8	15'0	16'9
	1878 ..	160,277	62,945	33,379	38,054	25,899	31'0	59'1	126'9	15'8	18'2
	1879*...	165,899	65,371	32,843	39,848	27,837	32'1	61'4	124'9	16'5	19'5
	1880†..	171,727	67,839	32,291	41,697	29,900	33'2	63'6	122'8	17'2	21'0
	1881†..	177,755	70,343	31,724	43,597	32,091	34'4	65'9	120'5	18'0	22'5
	1882†..	184,001	73,255	31,018	45,434	34,293	35'6	68'7	118'0	18'8	24'0
	1883†..	190,455	75,470	30,889	47,551	36,545	36'8	70'8	117'4	19'7	25'6

* In the years 1868, 1873, and 1879, the facts are those registered in 53, instead of 52 weeks.
Corrections have therefore been made in calculating the rate.

† In calculating the rates of mortality for the several Registration Sub-Districts of the patients originally came in each

THE BOROUGH OF SALFORD AND IN ITS FOUR REGISTRATION SUB-DISTRICTS, IN YEARS 1863-1883.

ANNUAL RATE PER 1,000 OF THE POPULATION.											YEARS.	
Marriages (Boro').	BIRTHS.					DEATHS.						
	Boro'.	Reg'nt Road.	Green- gate.	Pen- dleton.	Bro'h- ton.	Boro'.	Reg'nt Road.	Green- gate.	Pen- dleton.	Bro'h- ton.		
13.0	38.3	38.4	42.8	36.8	26.4	..	30.7	31.8	..	14.7	1863-67	
14.2	40.0	41.6	43.6	38.0	29.2	27.7	31.5	30.1	24.2	15.5	1868-72	
17.6	43.6	46.6	41.7	41.2	41.8	28.4	33.1	29.5	24.4	19.7	1873-77	
16.5	41.3	42.6	41.0	41.4	38.5	25.5	27.7	29.7	22.7	19.8	1878-82	
											Quinquennial Means.	
11.7	†38.0	37.9	42.0	37.0	26.9	..	28.3	29.2	..	14.9		1863
12.7	†38.6	37.3	44.3	38.2	24.7	..	28.6	31.1	..	14.6		1864
12.9	37.8	37.4	42.8	36.2	26.4	29.1	32.3	32.8	25.2	14.8		1865
13.4	37.9	38.5	42.8	35.6	25.9	28.8	32.2	33.9	23.0	13.6		1866
14.3	39.0	40.7	42.1	37.0	28.2	28.2	32.0	31.9	22.8	15.7		1867
13.3	39.3	38.4	43.4	40.3	27.9	30.5	34.1	32.9	28.6	14.8		1868
14.1	38.8	39.1	43.1	38.3	27.6	26.4	29.2	29.2	23.3	15.8		1869
14.1	39.6	41.7	43.1	36.3	30.3	25.8	30.4	27.3	21.3	15.3		1870
14.6	40.7	43.6	44.2	39.4	26.2	30.3	34.9	32.4	27.2	16.2		1871
15.1	41.5	45.3	44.1	35.7	34.0	25.3	28.9	28.8	20.4	15.6		1872
14.3	41.6	43.6	42.8	40.4	33.9	28.3	32.1	30.0	26.4	16.6		1873
16.2	42.1	45.9	40.9	37.3	41.8	28.2	32.6	29.2	24.9	19.5		1874
17.5	44.4	48.9	41.0	40.9	43.5	29.5	34.8	32.0	23.7	20.6		1875
20.5	45.5	47.7	43.3	44.1	45.3	29.5	34.4	30.2	24.9	22.4		1876
19.6	44.4	47.0	40.7	43.1	44.7	26.3	31.8	26.3	21.9	19.6		1877
17.9	44.7	46.5	42.5	42.9	45.6	27.1	29.9	28.8	23.6	23.2		1878
15.2	43.0	44.6	40.2	44.9	38.7	26.7	27.4	31.6	24.6	21.4		1879
16.6	41.3	41.3	41.7	42.7	39.5	27.9	31.5	33.3	23.3	20.6		1880†
16.3	38.8	40.2	39.3	39.0	34.8	22.5	24.8	24.9	21.5	16.5		1881†
16.4	38.8	40.6	41.5	37.7	33.9	23.2	24.9	29.8	20.5	17.1	1882†	
15.2	35.6	38.2	39.3	33.3	30.1	22.5	24.7	29.2	20.1	15.5	1883†	

† The Birth-rates in the years 1863 and 1864, and all the Marriage rates are unavoidably those for the Registration District, and not for the Borough of Salford.

Borough, the Institution deaths have been distributed to the districts from which the year from 1880 onwards.

SECTION VI.	rate of persons married in 1883 was equal to 15·23 per 1,000 of the population. The rates in the three years 1880, 1881, and 1882 were severally 16·6, 16·3, and 16·4.
Birth-rate.	Births.—During the 52 weeks of the year the births of 6,778 children were registered—namely, 3,449 males and 3,329 females. These births are equal to a rate of 35·6 per 1,000, which is the lowest birth-rate ever recorded in Salford. The proportion of births to population has been falling almost steadily ever since 1871, in which year it reached its highest point—namely, 45·5 per 1,000. Vaccinations.—I am indebted to the Salford Registrars for the information that of the total number of children born in 1883,—80·8 per cent. were duly vaccinated, 0·1 per cent. were returned as insusceptible of vaccination, 10·7 per cent. died unvaccinated, in the case of 2·8 per cent. of the births, vaccination was postponed by Medical Certificate, and 5·6 per cent. of the children born during the year, remained unaccounted for at its close. After making due allowance for removals, it remains evident that the proportion of unprotected children in Salford is a large and an increasing one. In view of the fact that Small Pox is prevalent in London and many other large towns in constant communication with Salford, it is a disquieting reflection that one infant out of every 18 still remains unprotected:—moreover Table I on page 63 indicates that according to past experience another Small Pox visitation may be expected in Salford at an early date.
Mortality.	Deaths.—During the 52 weeks of the year 4,253 deaths were recorded by the Salford Registrars, and the deaths of 55 Salford residents were registered as having occurred at the Royal Infirmary in Manchester, or at the Monsal or the Pendlebury Hospitals. On the other hand, 21 persons died at the Salford Royal Hospital, who had been attracted to that institution from country districts outside the Borough, and who consequently could not properly be considered residents of Salford. The Salford Register thus corrected, records the deaths of 4,287 persons during 1883, as compared with 4,262 in the preceding year. The rate of mortality was, therefore, equal to 22·5 per 1,000, or one in every 44 persons living. This rate of mortality, which is identical with that recorded in 1881, is the lowest on record, and is less than the rate in 1882 by 0·7 per 1,000. The average death-rate in Salford during the ten years, 1871-1880, averaged 27·9 per 1,000; but during the last three years, 1881-1883, the rate has not exceeded an average of 22·7. It is obvious, therefore, that during the triennium just completed the death-rate has been reduced by nearly 19 per cent. In other words, had the rate of mortality which obtained during the decennium terminating in 1880 been continued throughout the three years 1881-1883, not less than 2,855 lives would have been sacrificed during the latter period, in excess of the number actually lost; and we are fairly entitled to congratulate ourselves on this important saving of human life.
Correction of Register.	
Reduction of mortality.	
Life-saving effected.	

TABLE D.

ANALYSIS OF THE MORTALITY IN THE BOROUGH OF SALFORD IN EACH OF THE TEN YEARS, 1873 TO 1882; AND IN THE YEAR 1883.

Year.	Deaths of Infants under One year.	DEATHS.						
		From All Causes.		At All Ages from				
		Of children under Five Years.	Of persons over 60 years.	All Causes.	Six Miasmatic Diseases.	Diar-rhœa.	Acute Lung Diseases.	Phthisis.
1873	1055	1863	616	3884	512	278	674	374
1874	1110	1923	546	3935	569	296	693	339
1875	1141	2039	654	4271	699	283	890	382
1876	1286	2170	596	4407	910	263	842	405
1877	1108	1988	589	4079	574	207	927	413
1878	1324	2262	616	4336	529	340	946	434
1879	1230	2215	708	4495	572	141	1102	480
1880	1403	2592	604	4799	784	477	1003	459
1881	1122	1802	674	4000	367	160	1012	451
1882	1261	2130	624	4265	499	240	904	437
1883	1156	1986	697	4287	440	210	986	489
DEATH-RATES PER 1000 LIVING.								
Year.	Proportion of Deaths under One Year per 1000 Births	From All Causes.		At All Ages from				
		Of children under Five years.	Of persons over 60 years.	All Causes.	Six Miasmatic Diseases.	Diar-rhœa.	Acute Lung Diseases.	Phthisis.
1873	185	96.0	90.6	28.3	3.8	2.1	4.9	2.7
1874	189	97.0	78.9	28.2	4.1	2.1	5.0	2.4
1875	178	99.6	91.3	29.5	4.8	2.0	6.2	2.6
1876	189	102.4	80.4	29.5	6.1	1.8	5.6	2.7
1877	161	90.7	76.8	26.3	3.7	1.3	6.0	2.7
1878	185	99.7	77.5	27.1	3.3	2.1	5.9	2.7
1879	170	92.8	84.7	26.7	3.4	0.8	6.5	2.9
1880	198	106.6	70.9	27.9	4.6	2.8	5.8	2.7
1881	163	71.6	76.5	22.5	2.1	0.9	5.7	2.5
1882	177	81.7	68.4	23.2	2.7	1.3	5.0	2.4
Mean 1873-82.	180	90.4	86.6	26.8	3.8	1.7	5.7	2.6
1883	171	71.1	80.6	22.5	2.3	1.1	5.1	2.6

SECTION VI.

Local variations
of mortality.

In the four Registration Sub-Districts of the Borough the rate varied extremely. In Regent Road it was 24·7 per 1,000, or 19 per cent. below the decennial average; in Pendleton 20·1, or 14 per cent. below; and in Broughton 15·5, or 22 per cent. below; but in Greengate, where the density, or nearness of person to person, was 117 per acre, the rate of mortality still stood at 29·2 per 1,000, or 1·4 per cent. only in defect of the decennial average rate.

Seasonal
variation of
mortality.

The subjoined figures show the fluctuation of the death-rate with the season of the year:—

	Spring Quarter.	Summer Quarter.	Autumn Quarter.	Winter Quarter.
Average, 1873-82 ..	28·7 ..	25·2 ..	26·3 ..	27·7
Year 1883 ..	22·9 ..	20·6 ..	21·1 ..	24·7

It will thus be seen that in each quarter of the year the rate of mortality in Salford was very much below the average.

Deaths at
certain ætal
periods.

Age at Death.—During the year under notice the deaths of 1,156 infants under one year old were registered—a number equal to 27·0 per cent. of the deaths at all ages, and to 17·1 per cent. of the total births. There were also registered the deaths of 830 children, aged from one to five years, which, together with those occurring within the first year, make 1,986, or 46·3 per cent. of the total mortality, as the death-toll within the first five years of life. At the age group 5-20 years, 349 deaths were recorded; 536 deaths from 20-40 years; 719 from 40-60 years; and 697, or 16·3 per cent. of the total mortality, at ages above 60 years.

Infantile
mortality.

Infantile Mortality.—In all sanitary literature a conspicuous place is given to infantile mortality, because of the extreme sensitiveness shown by children at an early age to conditions unfavourable to health. Even when the rate of mortality at all ages indicates nothing amiss, a careful examination of the causes of mortality under five years frequently reveals the existence of unhealthy surroundings, which, unless timely warning be taken, are apt to culminate in a widespread and disastrous epidemic.

Deaths under one
year to births
registered.

Infantile mortality—measured by the proportion of deaths under one year to births registered in the Borough of Salford—was equal last year to 171 per 1,000,* as compared with 180, the average rate obtaining in the previous ten years. In the first or spring quarter of the year the rate was 158, or 1 per 1,000 in defect of the average rate in the previous three years. In the summer quarter the rate was 139, or 7 per 1,000 below; in the autumn quarter 200, or 32 per 1,000 below; and in the December quarter 188, or 2 per 1,000 in excess of the rate obtaining in the corresponding quarter of the previous three years.

Seasonal and
local variation
of infantile
mortality.

Locally† the rate varied, as usual, through an extremely wide range; for whereas it did not exceed 128 per 1,000 births in the Broughton district, it was equal to 197 in that of Green-

* See Table D, page 43.

† See Table B, page 22.

gate. Further remarks on this subject will be found on page 21, where the subject of illegitimacy as influencing infantile mortality is specially considered. SECTION VI.

Arranged in the increasing order of their rates of Infantile Mortality in the last decade, the twenty great English towns stand as follows; the table also shows the variation which has taken place in the mortality of each town during 1883, as compared with the decennial average rate:—

	Ten Years. 1873-82.	1883.		Ten Years. 1873-82.	1883.
Portsmouth	137	138	Newcastle-on-Tyne	169	167
Bristol	150	133	Oldham	172	159
Brighton	151	146	Bradford	176	146
London	155	146	Manchester	178	177
Plymouth	160	150	Norwich	178	150
Sunderland	161	135	Nottingham	180	164
Wolverhampton . .	162	146	Leeds	180	166
Sheffield	167	163	Salford	180	171
Hull	168	171	Liverpool	195	185
Birmingham	169	160	Leicester	206	189

Infantile mortality in 20 great English towns.

The average rate in the above twenty towns during the ten years ending 1882 was 170 per 1,000; and as the corresponding rate in 1883 was 157, the average reduction in the twenty towns was equal to nearly 8 per cent. In Salford the reduction did not exceed 5 per cent. In some of the above towns, however, it is here shown that the infantile mortality was actually higher in 1883 than the ten years' average. Table D, on page 43, shows that out of every 1,000 children living at the age 0—5 years during the decade 1873-82, there died from all causes 90·4 on the average. In the year 1883 the proportion fell to 71·1, which is equal to a decrease of 21·3 per cent.; and as this decrease has been effected in spite of increasing density of the population, the fact is so far encouraging. On turning, however, to Table E, on page 48, we find that, compared with the English Life-Table standard, the Salford rate in 1883 was still in excess by 16·6 per cent. Unfortunately, the Registrar-General does not as yet publish the rates of mortality under five years even in the 28 great towns, for which he issues periodical statistics. It would be a great boon if this addition could be made to the valuable information periodically issued by the Statistical Department of Somerset House.

Mortality amongst children under 5 years.

The following table shows, for the eleven years 1873-1883, the relative fatality of the diseases to which infants are chiefly subject in Salford within the first year of life; the figures represent annual rates of death under one year per 1,000 births:—

	Ten Years. 1873-82.	1883.		Ten Years. 1873-82.	1883.
All Causes	179·5	171·4	Tubercular Disease . .	12·4	15·1
Measles	4·6	5·3	Premature Birth	11·8	14·3
Scarlet Fever	1·5	0·9	Convulsions & Brain	32·4	27·6
Whooping Cough . . .	7·3	5·2	Disease		
Diarrhœa	25·9	20·2	Found dead in bed . .	..	4·1
Lung Disease	31·7	32·6	Syphilis	4·2	7·1

SECTION VI.

New English
Life Table,
1876-1880.

New English Life Table 1876-1880.—The purpose Mr. Humphreys had in view, in projecting his new Life Table for comparison with Dr. Farr's Life Table 1838-54, may be stated in his own words. "The sole object of the construction of this new Life Table, is to show what the effect would be upon the mean duration of life in England of a continuance of the recent reduction (during 1876-80) of the death-rate which set in so soon as the Public Health Acts of 1872 and 1875 had fairly come into operation." "An examination of the new Life Table teaches us, that the true import of the reduced death-rate of 1876-80, is an increased expectation of life at birth (as compared with 1838-54) of two years among males, and nearly three and a half years among females."*

Reduction in
Normal Rate of
Mortality.

With the help of the new Life Table I have re-calculated the normal rate of mortality for Salford, which shows as compared with the old Life Table rates a reduction for persons of both sexes, from 21.5 to 19.5. The reduction in the two sexes is shown in Table E, on page 48.

New Normal
Rate for Salford.

Normal Rate of Mortality, Male and Female.—Table E, on page 48, shows that, of the 4,287 deaths registered in 1883, 2,219 were males and 2,068 females. The normal rate of mortality in Salford, calculated on Mr. Humphrey's New Life-Table Standard, with due allowance for age and sex proportions of the population, is 19.5 per 1,000—namely, 20.5 for males and 18.5 for females. The Salford rate of mortality at all ages in 1883 exceeded the corrected normal rate by 15.4 per cent.; the excess was 18.5 per cent. among males, and 13.0 per cent. among females.

Assigned causes
of death.

Registration of Causes of Death.—With a view of drawing medical attention to the desirability of exercising care and precision in certifying the causes of death, I inserted in my last annual report† a copy of the revised nomenclature of disease recently published by the Royal College of Physicians, and since adopted by the Registrar-General throughout his reports. I am glad to record that since the issue of that document a very great improvement has taken place in the character of the information furnished by the death certificates. There is still, however, room for further amendment in this respect. Thus, for instance, the term "dropsy" is frequently returned as a cause of death, without specification as to its hepatic, its renal, or its pulmonary origin. All these cases of dropsy are, therefore, referred to "ill-defined" causes, and are consequently worthless for purposes of classification. Peritonitis, too, and septicæmia or pyæmia—although closely following childbirth—are frequently returned as causes of death, without remark as to their puerperal origin. I have frequently been

Ill-defined death
causes.

* The recent decline in the English Death-Rate and its effect upon the duration of life by Noel A. Humphreys, Esq., *Journal of the Statistical Society*, April 17th, 1883.

† Fourteenth Annual Report on the Health of Salford, 1882, page 34.

NEW ENGLISH LIFE TABLE, 1876-1880.

BY NOEL A. HUMPHREYS, Esq., F.S.S.

Normal Death-rate in the Borough of Salford, calculated on the New Life Table Standard, with due allowance for the Sex and Age proportion of the Population.

AGES.	MALES.		FEMALES.	
	(P_x) Years of Life.	(l_x) Number of Deaths.	(P_x) Years of Life.	(l_x) Number of Deaths.
All Ages	21,347,815	509,208	22,209,287	490,792
0-5 years	2,046,005	134,210	2,038,893	114,857
5-20 years	5,401,263	26,242	5,422,893	25,613
20-40 years	6,459,660	57,944	6,518,768	53,081
40-60 years	4,906,451	100,329	5,187,212	84,828
60 and upwards	2,534,436	190,483	3,041,521	212,413

AGES.	MALES.		FEMALES.		DEATHS IN 1000 OF THE SALFORD POPULATION.		
	Annual Rate of Mortality per 1000 according to New English Life Table.	SALFORD. Proportion to 1000 Persons Living, 1881.	Annual Rate of Mortality per 1000 according to New English Life Table.	SALFORD. Proportion to 1000 Persons Living, 1881.	Males.	Females.	Persons.
Cols.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All ages	23·8529	480·10	22·0985	519·90	9·8401	9·6105	19·4506
0-5	65·5961	73·20	56·3330	73·45	4·8016	4·1377	8·9393
5-20	4·8585	160·14	4·7231	163·12	0·7780	0·7704	1·5484
20-40	8·9701	154·02	8·1428	170·46	1·3816	1·3880	2·7696
40-60	20·4484	74·78	16·3533	85·41	1·5291	1·3967	2·9258
60 and upwds. }	75·1579	17·96	69·8387	27·46	1·3498	1·9177	3·2675

* These numbers are obtained by casting the deaths at each group of ages, and not by the application of the life-table rates at "all ages." The deaths of persons in the last column are obtained by casting the deaths at each group of ages that should occur amongst males and females, given in the two preceding columns.

N.B.—Each 1000 of the population of Salford, enumerated in 1881, contains (as shown in cols. 2 and 4) 480·10 males and 519·90 females, variously distributed at five groups of ages. Figures in cols. 5 and 6 show the yearly number of deaths that should occur at life-table rates, at each group of ages, and of each sex. The true normal rate for each sex is obtained by dividing the total deaths of males and females in cols. 5 and 6, by the total numbers living of each sex in cols. 2 and 4. This gives a normal rate of 20·5 per 1000 for males and 18·5 per 1000 for females.

TABLE E.

POPULATION, DEATHS, AND ANNUAL RATE OF MORTALITY DURING THE FIFTY-TWO WEEKS OF THE YEAR 1883, AT FIVE GROUPS OF AGES, COMPARED WITH THE AVERAGE RATE AT THOSE AGES IN THE TEN YEARS 1873-82, AND WITH THE NEW ENGLISH LIFE TABLE RATE—FOR PERSONS, MALES AND FEMALES.

	PERSONS.		MALES.		FEMALES.	
	Estimated Population, 1883.	Deaths, 1883.	Estimated Population, 1883.	Deaths, 1883.	Estimated Population, 1883.	Deaths, 1883.
All Ages	190,455	4287	91,437	2219	99,018	2068
Under 5 years ..	27,930	1986	13,941	1056	13,989	930
5-20 years	61,566	349	30,499	179	31,067	170
20-40 years	61,799	536	29,334	283	32,465	253
40-60 years	30,509	719	14,242	404	16,267	315
60 and upwards ..	8,651	697	3,421	297	5,230	400
ANNUAL DEATH-RATES PER 1,000 LIVING IN 1883, AMONG						
	PERSONS.		MALES.		FEMALES.	
	Salford.	New Engl. Life Table.	Salford.	New Engl. Life Table.	Salford.	New Engl. Life Table.
All Ages	22·5	19·5	24·3	20·5	20·9	18·5
Under 5 years ..	71·1	61·0	75·7	65·6	66·5	56·3
5-20 years	5·7	4·8	5·9	4·9	5·5	4·7
20-40 years	8·7	8·5	9·6	9·0	7·8	8·1
40-60 years	23·6	18·3	28·4	20·4	19·4	16·4
60 and upwards ..	80·6	71·9	86·8	75·2	76·5	69·8
AVERAGE DEATH-RATES IN THE TEN YEARS 1873-82.						
All Ages	27·9	19·5	29·0	20·5	25·1	18·5
Under 5 years ..	93·8	61·0	99·0	65·6	88·6	56·3
5-20 years	6·4	4·8	6·7	4·9	6·1	4·7
20-40 years	10·4	8·5	11·4	9·0	9·6	8·1
40-60 years	25·7	18·3	28·8	20·4	23·0	16·4
60 and upwards ..	79·6	71·9	83·6	75·2	76·7	69·8

able, by private correspondence, to rectify omissions thus caused; but it would obviously be preferable that the medical certificates should contain all necessary particulars on transmission to the Registrar.

SECTION VI.

The following table, taken from columns 1 and 2 of Table F, on page 50, shows the number of lives saved and the number lost during 1883, as compared with the previous decennial average, under each of the more important headings:—

Saving and loss of life in 1883.

Causes of Death.	Diminution in 1883.	Excess in 1883.
Smallpox	61	.. —
Measles	6	.. —
Scarlet Fever.....	118	.. —
Typhus	11	.. —
Whooping Cough.....	62	.. —
Diphtheria.....	—	.. 4
Enteric Fever	13	.. —
Diarrhœa	111	.. —
Venereal Diseases	—	.. 15
Cancer	17	.. —
Phthisis and other Tubercular Diseases	20	.. —
Convulsions and Nervous Diseases	67	.. —
Heart Diseases	—	.. 10
Croup	—	.. 8
Lung Diseases	139	.. —
Childbirth	22	.. —
Atrophy and other ill-defined Causes	139	.. —
	786	.. 37
All other Causes	115	.. 42
	822	.. —
Total diminution in 1883 ...	822	.. —

Classification of the Causes of Death.—The 4,287 deaths registered in the 52 weeks of the year 1883 were thus distributed, the classification adopted being the recently amended one of the Registrar-General:—

Grouping of causes of death according to new classification.

	Deaths. 1883.	Percentage to Total Deaths. 1883.	1873-82.
Specific Febrile or Zymotic Diseases	749	.. 17.5	.. 22.6
Constitutional Diseases	815	.. 19.1	.. 16.4
Developmental Diseases	261	.. 6.1	.. 5.2
Local Diseases.....	2,066	.. 48.1	.. 44.6
Other Diseases not classified	396	.. 9.2	.. 11.2

The deaths here returned as unclassified consist of those referred to violence, or to some ill-defined cause, such as Atrophy, Dropsy, Hæmorrhage, &c., which cannot usefully be classified.

Comparing the proportion which the mortality under each of the four classes bears to the total mortality, we find that even a larger share than in past years was contributed in 1883 by the "Local Diseases," which accounted for not less than 48 per cent.

TABLE F.

DEATHS FROM SEVERAL CAUSES, AT ALL AGES, AND AT SIX GROUPS OF AGES, IN THE BOROUGH, AND IN ITS REGISTRATION SUB-DISTRICTS, DURING THE YEAR 1883.

	All Ages.		Deaths at the following Ages.							Deaths in the Registration Sub-districts.			
	Corrected Average, 1873-82.	1883.	Under 5 years.		5-20.	20-40.	40-60.	60 and upwards.		Regent Road.	Greengate.	Pendleton.	Broughton.
			0-1.	1-5.									
All Causes	5109	4287	1160	826	349	536	719	697		1862	901	957	567
Small Pox	61	..	..	..	..	..	..	..	..	..	..	..	..
Measles	162	156	36	111	9	..	..	..	..	75	15	55	11
Scarlet Fever	200	82	6	50	25	1	..	..	..	35	13	20	14
Typhus	14	3	..	..	..	1	2	..	..	1	2	..	..
Whooping Cough	167	105	35	63	7	..	..	..	..	43	38	15	9
Diphtheria	20	24	1	13	9	1	..	..	..	4	8	1	11
Ill-defined Fever	22	6	..	3	1	1	1	..	..	4	2	..	..
Enteric Fever	77	64	..	7	28	18	10	1	..	29	9	15	11
Simple Cholera	2	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea, Dysent:	321	210	137	57	1	3	9	9	..	95	52	40	23
Venereal Affections	41	56	48	3	..	2	3	..	..	31	14	8	3
Erysipelas	22	19	7	..	..	2	4	6	..	8	2	5	4
Pyæmia	7	9	2	..	2	4	..	1	..	2	2	2	3
Puerperal Fever	11	9	..	..	1	7	1	..	..	4	1	1	3
Other Zymotics	23	6	2	1	1	1	1	..	..	3	1	1	1
Parasitic Diseases	3	4	4	..	..	..	..	..	..	..	..	..	4
Dietic Dis: Intemp:	20	17	..	..	..	4	13	..	..	5	8	2	2
Rheumatic Fever	23	15	..	..	10	3	1	1	..	7	1	4	3
Cancer	90	73	..	..	..	8	44	21	..	24	18	15	16
Tabes Mesent:	84	82	42	24	12	2	2	..	..	25	24	24	9
Tubercul: Mening:	90	96	37	43	12	3	1	..	..	52	18	10	16
Phthisis	506	489	17	21	83	240	114	14	..	198	100	135	56
Scrofula	34	27	6	19	2	..	..	..	..	8	3	11	5
Constit: Dis: (other)	14	33	4	11	5	4	7	2	..	15	7	4	7
Prem: Birth	95	97	97	..	..	..	..	..	..	46	17	19	15
Devel Dis: and Cong: Def:..	17	20	18	2	..	..	..	..	..	6	2	5	7
Old Age	156	144	..	..	..	..	1	143	..	74	27	31	12
Apoplexy and Paralysis	140	182	1	4	..	19	62	96	..	74	47	39	22
Epilepsy	22	27	2	2	6	5	7	5	..	11	8	2	6
Convulsions	272	171	139	30	1	..	1	..	..	85	42	26	18
Brain and Nerv: Dis: (other)	201	188	48	52	21	13	21	33	..	69	31	64	24
Heart Diseases	201	211	5	5	18	54	68	61	..	77	40	57	37
*Croup	46	54	9	36	9	..	..	..	..	25	18	8	3
Bronchitis	677	544	130	78	5	18	132	181	..	239	133	114	58
Pneumonia	312	317	76	94	24	33	62	28	..	138	53	76	50
Lung and Respir: Dis: (other)	82	71	15	14	6	12	12	12	..	36	8	16	11
Teething	20	13	8	5	..	..	..	..	..	9	2	1	1
Dig: Orgs: Dis: of	177	181	43	13	10	24	63	28	..	75	39	38	29
Urinary Org: Dis: of	75	65	..	11	11	11	17	15	..	24	18	11	12
Parturition, dis: of	34	12	..	..	..	12	..	..	..	4	3	2	3
Gener: Orgs: dis: of	8	11	..	2	1	2	4	2	..	4	2	2	3
Local Dis: (other)	13	19	2	2	1	2	7	5	..	6	3	3	7
Accident	125	90	7	17	21	18	19	8	..	52	12	17	9
Homicide	2	3	1	..	..	..	1	1	..	3	..	..	..
Suicide	11	12	..	..	..	2	7	3	..	4	3	3	2
Atrophy	301	186	143	26	1	..	9	7	..	99	35	33	19
Ill-defined Causes	108	84	32	7	6	6	19	14	..	34	20	22	8

* i.e., Membranous Croup = Laryngeal Diphtheria.

TABLE G.

RATE OF MORTALITY FROM CERTAIN DISEASES—AT ALL AGES, AND AT TWO GROUPS OF AGES—PER 1,000 PERSONS, ESTIMATED TO BE LIVING AT THOSE AGE GROUPS RESPECTIVELY, AFTER DISTRIBUTION OF THE DEATHS OCCURRING IN PUBLIC INSTITUTIONS.

CAUSES OF DEATH.	REGISTRATION SUB-DISTRICTS.											
	All Ages.				Under 5 Years.				Over 60 Years.			
	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.	Regent Road.	Green-gate.	Pendle-ton.	Brough-ton.
ALL CAUSES	24·7	29·2	20·1	15·5	78·4	95·3	63·1	46·2	84·3	88·7	74·5	72·7
I.—SPECIFIC FEB: DIS: OR ZYMOTICS.												
1.—Miasmatic Diseases	2·5	2·8	2·2	1·5	12·2	14·5	12·2	7·3	..	..	0·5	..
2.—Diarrhoeal Diseases	1·3	1·7	0·8	0·6	7·8	11·5	5·1	3·8	0·6	1·3	1·4	1·3
3.—Other Zymotics	0·6	0·6	0·4	0·4	2·7	3·9	1·7	0·8	0·6	..	1·4	1·3
II.—PARASITIC DISEASES	..	..	..	0·1	..	..	..	0·8	..	..	..	..
III.—DIETIC DISEASES	0·1	0·2	..	..	..	..	..	..	..	..	..	..
IV.—CONSTITUTIONAL DISEASES ..	4·3	5·6	4·3	3·2	7·6	11·0	8·6	5·6	4·4	1·9	4·6	6·5
V.—DEVELOPMENTAL DISEASES	1·7	1·5	1·2	0·9	4·6	4·4	3·4	4·2	21·3	17·6	14·3	7·9
VI.—LOCAL DISEASES.												
1.—Disease of Nervous System ..	3·3	4·2	2·8	1·9	10·8	14·7	8·7	5·9	14·7	20·7	15·3	12·4
2.—Disease of Circulatory System	1·0	1·3	1·2	1·0	0·4	0·2	0·4	0·3	5·9	7·1	6·9	9·8
3.—Dis. of Respiratory System..	5·7	6·9	4·4	3·4	18·0	21·5	14·0	10·7	26·6	30·4	22·7	22·4
4.—Disease of Digestive System..	1·1	1·3	0·8	0·8	2·9	2·8	2·5	1·2	3·2	2·6	2·3	5·2
5.—Other Local Diseases	0·5	0·8	0·4	0·7	0·5	0·7	0·4	1·0	2·6	3·2	1·9	2·6
VII.—VIOLENCE	0·8	0·5	0·4	0·3	1·3	0·9	0·4	0·8	2·1	1·3	0·9	0·7
VIII.—ILL-DEFINED CAUSES	1·8	1·8	1·2	0·7	9·6	9·2	5·7	3·8	2·3	2·6	2·3	2·6

		Regent Road.	Greengate.	Pendleton.	Broughton.
Estimated Population, { middle of 1883	All Ages	75,470	30,889	47,551	36,545
	Under 5 Years	11,236	4,354	7,126	5,214
	Under 60 Years	3,416	1,545	2,162	1,528

SECTION VI. of the whole. Next in order stand Constitutional Diseases, with a percentage of 19·1, which is an increase on the proportion of past years; whilst Zymotic Diseases have decreased considerably,—occupying the third place only in order of prevalence, instead of the second as heretofore. The small Developmental class—consisting mainly of deaths due to old age and to immaturity of birth—coming last, with a percentage of 6·1 on the total deaths.

I.—SPECIFIC FEBRILE OR ZYMOTIC DISEASES.

Common infectious diseases.

1. **Miasmatic Diseases.**—The six more familiar infectious diseases which constitute this order are smallpox, measles, scarlet fever, whooping cough, diphtheria, and continued fever; the latter term including under it the three forms known as typhus, enteric or typhoid, and simple or ill-defined continued fever.

Reported cases of infectious diseases.

Infectious Cases reported under the Notification Act.—The undermentioned cases of infectious disease have been reported at this office under the Compulsory Notification Act during the year 1883. Every case of sickness here recorded has either been certified under the Act by a medical practitioner, or has been otherwise medically verified; and every effort has been made to render the list as complete and free from error as possible.

Districts.	Small Pox.	Scarlet Fever.	Diph- theria.	Typhus Fever.	Enteric Fever.	Puer- peral Fever.	
Regent Road	— ..	356 ..	11 ..	5 ..	112 ..	12	
Greengate	— ..	109 ..	14 ..	5 ..	34 ..	4	
Pendleton	— ..	246 ..	26 ..	4 ..	85 ..	3	
Broughton	6 ..	94 ..	30 ..	— ..	62 ..	2	
Boro' Total	Reported						
	Cases	6 ..	805 ..	81 ..	14 ..	293 ..	21
	Rate per 1,000 living	— ..	4'2 ..	0'4 ..	0'01 ..	1'5 ..	0'1
	Per- centage Fatality	— ..	9'9 ..	29'6 ..	21'4 ..	20'4 ..	33'3

With respect to the percentage fatality indicated in the bottom line of the above table, it should be mentioned that these figures represent the *true proportional fatality* incidental to the sick cases enumerated in the line immediately above. It would obviously have been easier to give the percentage of registered deaths to cases notified within the same period, but a little consideration will shew that such a rate would have been fallacious; for, on the one hand, some of the deaths registered during the 52 weeks of the year may have originated in sickness which had been registered before the commencement of January;

and on the other, many of the attacks recorded towards the end of the year had certainly not been completed at its close. SECTION VI.

The following figures show the seasonal prevalence of infectious diseases, and the fatality incidental to the reported cases, in the 12 months ending December, 1883:—

Seasonal prevalence of infectious sickness and fatality.

	Small Pox.		Scarlet Fever.		Diphtheria.		Typhus Fever.		Enteric Fever.		Puerp. Fever.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Year	6	0	805	80	81	24	14	3	293	67	21	7
January	1	0	70	2	9	2	1	0	37	10	1	0
February	—	—	48	6	2	3*	2	0	24	6	4	2
March	—	—	42	5	5	1	1	0	21	4	2	0
April	2	0	43	3	1	0	1	0	17	3	—	—
May	2	0	50	1	5	1	—	—	10	4	2	1
June	1	0	73	1	5	2	—	—	22	4	1	0
July	—	—	55	7	3	1	—	—	16	2	1	0
August	—	—	62	7	6	1	—	—	11	5	2	1
September ..	—	—	69	11	15	3	4	1	32	14	1	0
October	—	—	88	13	10	3	—	—	37	4	—	—
November ..	—	—	99	13	10	7	3	1	19	3	1	1
December	—	—	106	11	10	0	2	1	47	8	6	2

It would have been instructive, had it been practicable, to compare the prevalence of infectious complaints in other protected towns with that which obtains in Salford. In attempting this, however, it is found that, although in most of the towns referred to returns are made of medical certificates received under the local Acts; there is, nevertheless, little uniformity in the import of the figures thus obtained. Thus, for instance, to take the case of that regulation so commonly in force, which requires the giving of one certificate only for the same house within a specified time. It is obviously essential to know whether the returns of a given town refer only to "first cases," for it would be absurd to compare the sickness rate of such a town with that recorded in a place where the register contains particulars of subsequent as well as of first cases occurring in an infected house. For the above, as well as other similar reasons, no comparison of the kind here indicated is at present practicable.

Impracticability of comparing rate of sickness in Salford with that obtaining in other protected towns.

There are now not less than thirty-nine great English towns where the notification of infectious disease is compulsory, and yet the valuable information thus available remains unused except for local purposes.

Waste of Statistical Material as to infectious disease

The Manchester and Salford Sanitary Association, feeling that a national advantage would result from the systematic collection and publication of these scattered returns, have memorialised the Local Government Board on the subject, and they entertain the reasonable hope that the Medical Department of that Board will find it possible to comply with their request, and thus inaugurate a trustworthy system of infectious

* One of these patients was sent to hospital as a case of Scarlatina, but she died of Diphtheria. Hence the discrepancy.

SECTION VI.

Proportional prevalence and fatality of notified infectious cases at the various ages.

disease registration, which cannot fail to be of great assistance to the public health.

The following table shows the age-distribution of the attacks, and fatal cases of three of the most common zymotic diseases notified during the year 1883:—

AGES.	SCARLET FEVER.		DIPHTHERIA.		TYPHUS FEVER.		ENTERIC FEVER.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Under 1 Year..	23	5	1	1	..	..	..	..
1 to 2 ..	65	15	4	2	..	..	3	1
2 to 3 ..	70	8	7	6	..	..	6	2
3 to 4 ..	96	12	5	3	..	..	11	4
4 to 5 ..	98	14	7	2	..	..	14	2
5 to 6 ..	91	11	14	6	..	..	14	4
6 to 7 ..	76	5	8	2	..	..	11	3
7 to 8 ..	51	5	1	..	1	..	17	1
8 to 9 ..	51	1	1	..	..	..	15	1
9 to 10 ..	39	2	4	..	1	..	12	2
10 to 11 ..	30	..	4	..	..	..	10	2
11 to 12 ..	12	..	1	..	..	..	4	1
12 to 13 ..	18	1	1	..	3	..	13	..
13 to 14 ..	13	..	..	..	..	..	10	3
14 to 15 ..	5	..	1	..	1	..	14	..
15 to 20 ..	21	..	5	1	..	..	41	9
20 to 30 ..	28	1	12	..	2	1	48	11
30 to 40 ..	15	..	4	1	3	1	29	7
Over 40 ..	3	..	1	..	3	1	21	14
All Ages ..	805	80	81	24	14	3	293	67

Infectious Mortality.

The rate of mortality during the year 1883 caused by miasmatic diseases was 2·3 per 1,000; the rate attributable to the *zymotic class* of diseases, of which miasmatics form an *order*, being equal to 3·9 per 1,000. With one exception, that of the year 1881, this is the lowest miasmatic rate ever recorded in Salford and is in defect of the decennial average by nearly 40 per cent.

Comparison of, in 20 great English towns.

The Registrar-General's Returns furnish the means of comparing the Salford rates of mortality from the six* principal infectious diseases, with those obtaining in other parts of England and Wales. The following figures have been deduced from these returns:—

	1873-82.	1882-3.	Decrease in 1883.
England and Wales	2·20	1·64	25·5 per cent.
20 great English Towns..	2·67	1·88	29·6 „
Salford	3·84	2·31	39·8 „
50 other Towns, 1882....	2·17	1·80	17·1 „
Rural Districts, 1882	1·59	1·37	13·8 „

* These are smallpox, measles, scarlet fever, diphtheria, whooping cough and continued fever.

TABLE H.

ANNUAL RATE OF MORTALITY IN SALFORD DURING THE YEAR 1883, AND THE AVERAGE RATE DURING THE PREVIOUS DECADE, FROM EIGHT CLASSES, AND FROM CERTAIN SUB-CLASSES OF DISEASE, AT FIVE GROUPS OF AGES, PER 1000 PERSONS ESTIMATED TO BE LIVING AT THOSE AGE-GROUPS, RESPECTIVELY.

YEAR ENDING DECEMBER 29TH, 1883.

	All Ages.	0-5 Years.	5-20 Years.	20-40 Years.	40-60 Years.	60 and upwards
ALL CAUSES	22.5	71.1	5.7	8.7	23.6	80.6
I.—SPEC: FEB: DIS: OR ZYMOTICS						
1.—Miasmatic Diseases	2.3	11.6	1.3	0.4	0.4	0.1
2.—Diarrhoeal Diseases	1.1	6.9	..	0.1	0.1	1.0
3.—Other Zymotics	0.5	2.3	0.1	0.3	0.3	0.9
II.—PARASITIC DISEASES	..	0.1	..	..	..	..
III.—DIETIC DISEASES	0.1	..	..	0.1	0.4	..
IV.—CONSTITUTIONAL DISEASES	4.3	8.0	2.0	4.1	5.6	4.4
V.—DEVELOPMENTAL DISEASES	1.4	4.2	..	..	..	16.5
VI.—LOCAL DISEASES.						
1.—Diseases of Nervous System	3.0	10.0	0.5	0.6	3.0	15.5
2.—Diseases of Circulatory System	1.1	0.4	0.3	0.9	2.2	7.1
3.—Diseases of Respiratory System ..	5.1	16.2	0.7	1.0	6.8	25.6
4.—Diseases of Digestive System	1.0	2.5	0.2	0.4	2.1	3.2
5.—Other Local Diseases	0.6	0.6	0.2	0.4	0.9	2.5
VII.—VARIOUS FORMS OF VIOLENCE	0.6	0.9	0.3	0.3	0.9	1.4
VIII.—ILL-DEFINED CAUSES	1.4	7.4	0.1	0.1	0.2	2.4
AVERAGE RATES FOR THE TEN YEARS 1873-82.						
ALL CAUSES	26.8	90.4	6.1	10.5	26.4	86.6
I.—SPEC: FEB: DIS: OR ZYMOTICS						
1.—Miasmatic Diseases	3.8	18.4	2.0	0.9	0.7	0.8
2.—Diarrhoeal Diseases	1.7	10.6	0.1	0.1	0.2	1.8
3.—Other Zymotics	0.6	2.5	0.1	0.3	0.4	0.7
II.—PARASITIC DISEASES	..	..	..	..	..	..
III.—DIETIC DISEASES	0.1	..	..	0.1	0.4	0.3
IV.—CONSTITUTIONAL DISEASES	4.4	7.5	1.5	4.6	6.4	6.1
V.—DEVELOPMENTAL DISEASES	1.4	4.0	..	..	0.1	17.8
VI.—LOCAL DISEASES.						
1.—Diseases of Nervous System	3.3	13.3	0.5	0.6	2.8	12.1
2.—Diseases of Circulatory System	1.1	0.2	0.3	0.7	2.6	6.7
3.—Diseases of Respiratory System ..	5.9	18.6	0.6	1.2	7.8	28.5
4.—Diseases of Digestive System	1.0	2.2	0.2	0.5	1.9	4.5
5.—Other Local Diseases	0.7	0.4	0.2	0.8	1.2	2.2
VII.—VARIOUS FORMS OF VIOLENCE	0.7	1.4	0.4	0.4	0.9	1.9
VIII.—ILL-DEFINED CAUSES	2.1	11.3	0.2	0.3	1.0	3.2

SECTION VI.

Infectious mortality decreasing in Salford.

Although the Salford miasmatic rate, in the year 1883 not less than in the previous decade, was considerably in excess of the average rate obtaining in the great towns, and indeed in other parts of the country, it is satisfactory to note that the rate is *decreasing* in Salford more rapidly than elsewhere. In the third column of the above table the rate of decrease in 1883 is shown to have been equal to 39·8 per cent., whereas it did not exceed 29·6 in any other of the localities specified.

Sporadic occurrence of smallpox in 1883.

Smallpox.—Six cases of smallpox were reported in the Borough during the year 1883, as compared with 72 in the preceding year. All the cases occurred in the Broughton district within the first six months of the year, and of these none proved fatal. The first case was reported on the 2nd of January. The patient, a lady residing in Great Cheetham Street, probably caught the infection in the act of overhauling some wearing apparel which a person recently returned from abroad had worn only two months previously, whilst convalescing from smallpox. The case was a slight one, and the patient recovered without communicating the disease to others. The second case (A. S.) occurred at 6, Burland Street, on April 9th, and was removed on the following day to Monsall Hospital. The patient probably took the disease from an acquaintance (S. S.), whom I personally detected in the adjoining house, barely convalescing from the disease. This latter patient, a Manchester office-cleaner, who had only been confined to her house a day or two with what she considered merely a cold, was quite unaware of her being the subject of smallpox even at the time of my visit. The last three cases of smallpox occurred in Marlborough Road. The children, aged respectively 10 years, 9, and 7, had the disease in a modified form, and recovered rapidly without spreading infection in the neighbourhood. The origin of infection in the first case occurring at this address has not been traced. In view of the fact that smallpox has been very prevalent throughout the year in London, Liverpool, and Sheffield, it is matter for thankfulness that Salford has not suffered more severely than she has done from smallpox invasion, especially when we consider how constant is the inter-communication between these towns and our own borough, and how large is the proportion of unvaccinated children in Salford. See page 42.

Seasonal distribution of measles fatality.

Measles.—156 deaths were referred to this disease during 1883, as compared with 167 in the immediately preceding year. This latter number differs little from the corrected average.* The following figures† indicate the seasonal incidence of measles fatality in 1883, and also, for comparison with it, the corrected‡ average numbers dying from this disease, in the corresponding quarters of the decade 1873-1882.

* See Table F, Col. 1 on Page 50.

† These are the deaths, not the "death rates."

‡ That is the quarterly average numbers corrected for increase of population, so as to be comparable with the numbers registered in 1883.

Year.	March Quarter.	June Quarter.	September Quarter.	December Quarter.	SECTION VI.
1883	10 ..	14 ..	48 ..	84 ..	
Corrected average } 1873-82.	43 ..	52 ..	25 ..	44 ..	

It thus appears that this disease, which did comparatively little damage in the first two quarters of the year, became fatally prevalent towards its close. The following figures show the local incidence* of measles mortality in various parts of the country during the last 11 years:—

	1873-82.	1883.	Decrease in 1883. Per cent.	Its local distribution.
England and Wales.....	0·38	0·34	10·5	
20 Great English Towns ..	0·50	0·36	28·0	
Salford	0·87	0·82	5·7	
50 other Towns, 1882.....	0·48	0·41	14·6	
Rural Districts, 1882	0·37	0·23	37·8	

Although the prevalence of measles over the same areas fluctuates widely from year to year, yet its local prevalence, or at least its fatality, appears to vary almost exactly as the density, or proximity of child to child; which is, of course, highest in the great centres of population.

Scarlet Fever.—Of all the scourges which imperil the lives of children in our great centres of population, undoubtedly the most terrible is scarlet fever. Ever present in our midst, it stealthily works its deadly havoc amongst our little ones, and where it does not actually destroy, too frequently embitters with life-long suffering the existence of its numerous victims.

Recent experience under our Notification Act has shown, not only that the attacks of scarlet fever are ordinarily far more numerous than those referred to all other infectious fevers in the aggregate, but it has emphasized the fact, long since familiar to sanitarians, that in populations like our own the due limitation of scarlatinal poison to persons and places primarily infected taxes to the uttermost the administrative resources of the Health Department. Under these circumstances it may be well to consider somewhat carefully the present and past history of this disease in Salford, with especial reference to its behaviour under recent efforts for its suppression.

Reliable statistics in sufficient detail are not available for periods anterior to the year 1861, but from that date onwards I have been able to procure trustworthy particulars of scarlatinal prevalence, as represented by its fatality, in each month of the 23 years since elapsed. With a view, therefore, of affording graphic expression to the effect upon scarlet fever prevalence (1) of the "forcing" process obtaining between 1861 and 1876, when infection was permitted to thrive unchecked by isolation, and (2) of the opposite process of extermination which the possession of a fever hospital has enabled us more recently to inaugurate, I have plotted on the accompanying diagram a

Chart showing fluctuation in mortality from scarlet fever, diphtheria, and croup in each month of the last 23 years.

* That is the annual rate of mortality per 1,000 of the population.

SECTION VI. series of perpendicular columns representing, in annual rates per 1,000 living, the fluctuation in the Salford mortality from scarlet fever* in each month of the last 23 years. We are thus furnished with a standard, which, whilst showing the normal curve of scarlatinal fatality in Salford, will in future years afford a valuable means of gauging the effect on its prevalence of our recently-acquired notification powers, and other measures complementary to these, for the suppression of infectious disease.

Scarlet fever attacks notified during this year.

During the year 1883 the Health Department received medical notification of the occurrence of 805 cases of scarlet fever, as compared with 154, the number *voluntarily* reported in 1882, during which year the Notification Act had not yet come into full operation. Of these 805 cases, 80 terminated fatally, the ratio of fatal cases to attacks being therefore equal to nearly 10 per cent. The following figures show the relative prevalence and fatality of the reported attacks, and also the proportion of scarlet fever patients removed to hospital in each quarter of the year:—

	March Quarter.	June Quarter.	September Quarter.	December Quarter.
Reported attacks	160	166	186	293
Rate per 1,000 living	4.71	3.52	5.17	2.57
Percentage fatality	6.3	4.2	11.8	14.0
Percentage of Hospital admissions	20.0	30.7	21.5	28.0

Seasonal variation of scarlet fever seizures and mortality.

Relatively to population, the seizures appear to have been most numerous in the Pendleton district, where they were equal to a rate of 5.2 per 1,000 of the population; whilst in Broughton the proportion did not exceed 2.6. The proportional fatality, however, was highest in Broughton, where the deaths reached 14.9 per cent. of the attacks; the lowest proportion being 8.1 per cent., in the district of Pendleton.

The subjoined figures show the actual and relative distribution of scarlet fever cases, and also their percentage fatality, in the several Registration Districts of the Borough:—

	Regent Road.	Green- gate.	Pendle- ton.	Broughton.
Reported attacks	356	109	246	94
Rate per 1,000 living.	4.71	3.52	5.17	2.57
Percentage fatality ..	9.6	11.9	8.1	14.9

Local variation of scarlatinal seizures and mortality.

Comparing now the incidence of scarlet fever—as represented by its fatality—in other parts of the kingdom, with that which has obtained with us, we find that not only was the Salford rate of death from scarlet fever, in 1883, considerably below that in the great centres of English population, but it was actually lower than the mean death rate obtaining during that year in the 50 smaller towns, and only slightly in excess of the rate obtaining in the rural districts. The following figures show this—they indicate the scarlet fever rates of mortality per 1,000 of the population:—

* For fluctuation in mortality from Diphtheria, Croup, Measles, Whooping Cough, and "Fever," see Charts.

	1873-82.	1883.	Decrease in 1883. Per cent.	SECTION VI.
England and Wales	0.69	0.46	33.3	
20 Great English Towns	0.89	0.51	42.7	
London	0.62	0.51	17.8	
Salford	1.06	0.43	59.4	
50 other English Towns, 1882..	0.64	0.55	14.1	
Rural Districts, 1882	0.46	0.39	15.2	

Diphtheria.—During the year 1883 the Health Department received notification of the occurrence of 81 cases of diphtheria, 24 of which terminated fatally. The corrected annual deaths from this disease in the preceding ten years averaged 20. There is, however, reason to fear that these figures but very imperfectly express the mischief actually caused by this treacherous disorder. Table F, on page 50, shows that, in addition to the 24 deaths actually referred to "*diphtheria*"—by which term is probably meant, in most cases, the pharyngeal form of the disease—there are recorded under the head of *true or membranous croup* not less than 54 other fatal cases, which, in the interest of public health, should certainly have been notified during life as attacks of diphtheritic disease. Membranous or true croup does not differ essentially from diphtheria, and the mere fact that in croup the larynx is mainly implicated forms no good reason why, in dealing with the disease prophylactically, its diphtheritic character should not receive the emphasis which it demands. It is scarcely necessary to insist that cases of *false croup*, or *laryngismus stridulus*, have nothing to do with the disease under present consideration. The following figures show the distribution of mortality from diphtheria throughout the country:—

	1873-82.	1883.	Difference in 1883. Per cent.
England and Wales.....	0.12	0.15	+ 25.0
20 Great English Towns..	0.10	0.11	+ 10.0
Salford	0.11	0.13	+ 15.4
50 other Towns, 1882....	0.08	0.08	nil.
Rural Districts, 1882	0.14	0.15	+ 7.1

It thus appears that diphtheria has been generally more prevalent in 1883 than in the previous ten years. The chart at page 64 shows the fluctuation in the mortality from diphtheria and croup, as well as from scarlet fever.

Whooping Cough.—105 deaths were attributed by the Registrars to this disease in the year 1883, as compared with 152 in the immediately preceding year, and 160 in 1881, the corrected decennial average being 167. The following figures show the variation of whooping cough fatality with the season of the year:—

Year.	March Quarter.	June Quarter.	Sept. Quarter.	Dec. Quarter.
1883	41	21	18	25
Corrected average, 1873-1882	47	39	23	31

Diphtheritic
attacks reported
under the Act.

Relation of true
Croup to
Diphtheria.

Local prevalence
of Diphtheria.

Mortality from
Whooping Cough

SECTION VI. The rates of mortality from whooping cough in various parts of the country during the year 1882 and 1883 were as follows:—

Local distribution of Whooping Cough fatality.	1873-82.		1883.		Decrease in 1883 per cent.
England and Wales.....	0.51	....	0.37	....	27.5
20 great English Towns..	0.63	....	0.49	....	22.2
Salford	0.87	....	0.55	....	36.8
50 other Towns (1882) ..	0.48	....	0.37	....	22.9
Rural Districts (1882) ..	0.37	....	0.32	....	13.5

As in the case of measles, so in that of this disease, density of the population is the factor which, as far as can be judged from the fatality, appears to regulate its local prevalence. Thus, the rate of whooping cough mortality did not exceed 32 per 100,000 living in the country districts during 1883, whereas it was equal to 55 in Salford in that year; and the decennial rates in the first column show even greater variation. Taking the country as a whole, the disease appears to have shown a far heavier rate of mortality in the decade 1873-82 than in the year 1883.

Continued fevers **Continued Fever.***—Three principal forms of pyrexial disease find a place under this heading—typhus, enteric or typhoid, and simple or ill-defined continued fever.

Prevalence of Typhus in Spring and in Autumn of 1883.

Typhus Fever has been reported during 1883 to have occurred in 14 instances, the attacks being distributed over the back slums of Salford and Pendleton. The following are the particulars as to the sequence of the cases, and the dates of their occurrence:—

- Jan. 2 .. 11, Back Hodson Street—Lodger, isolated case.
- „ 23 .. 2, Fletcher's Place, Oldfield Road—Family poor, and out of work.
- Feb. 15 .. 14, Whit Lane—Patient neglected and bed-ridden.
- „ 28 .. 11, Chief Street—Infection carried from 2, Fletcher's Place.
- April 16 .. 16, Brassington Street—Patient travelling musician on tramp.
- Sept. 7 & 8 .. 8, St. Simon Street—Two cases, recently arrived from Manchester.
- „ 27 .. 36, Borough Street—Isolated case.
- Nov. 2 .. 42, Brighton Street—Lodger, out of work.
- „ 3 .. 54, Brighton Street—(2 cases)—Infection from 42, Brighton Street.
- „ 15 .. Wilton Hospital (nurse)—Caught infection from last patient.
- „ 18 .. 57, Queen Street—Dyer, out of work—isolated case.
- „ 29 .. 29, Albany Street—Case turned out to be one of pneumonia.

* For fluctuation in fever fatality 1861-83, see Chart.

It thus appears that the typhus attacks notified during the year were distributed over the spring and autumn months. They were all promptly removed to hospital, and consequently the disease never assumed an epidemic character. Little further comment is needed on the above cases, except to record the melancholy death of a valuable nurse at the hospital, who contracted typhus whilst nursing one of the patients.

Enteric or Typhoid Fever.—During the year under notice 289 fresh cases of enteric fever, with 59 deaths, were brought under the notice of the Health Department.

Enteric attacks reported under the Act.

The proportional fatality, therefore, was equal to 20·4 per cent. of the reported attacks. This disease is entirely preventable, and together with diarrhoea and diphtheria constitutes a group of diseases having their origin in conditions which it is the prime duty of the sanitarian to remove; and it is for this reason that the prevalence or the absence of these diseases in any district forms a favourite test of the efficiency of local sanitary administration. The following figures show the actual and relative distribution of enteric cases, together with their percentage fatality, in the four districts of the borough:—

	Regent Road.	Green-gate.	Pendle-ton.	Broughton.	
Sick cases reported	111	33	84	61	
Rate per 1,000 living . .	1·47	1·06	1·76	1·66	
Percentage fatality	24·3	24·2	16·6	16·4	Local and seasonal distribution of Enteric sickness and fatality.

Enteric fever would thus appear to have been relatively most prevalent in Pendleton and Broughton, but it has certainly been most fatal in the other two districts of the borough. The seasonal prevalence of enteric fever is shown by the following statement, which also gives the percentage fatality incidental to the attacks in each quarter, and also the proportion of patients removed to the Wilton Hospital:—

	Year.	March Quarter.	June Quarter.	Sept. Quarter.	Dec. Quarter.
Cases notified in 1883	289	79	48	59	103
Percentage of cases. { Fatal	22·1	24·1	20·8	28·8	17·5
{ Rem. to Hospital } 32·2		29·1	29·2	32·2	35·9

Simple or Ill-defined Continued Fever.—It is satisfactory to find that very few deaths* are now included under this unsatisfactory heading. Recent improvements in diagnosis having led to a more accurate differentiation of the varieties of fever, most of the deaths formerly returned as continued fever, or “fever” merely, would now find a more appropriate designation under the title of “enteric fever.”

Ill-defined or simple continued fever.

The annual reports of the Registrar-General furnish the means of comparing the prevalence of “fever” fatality in

“Fever” fatality in great English towns.

* Only 6 in the year 1883.

SECTION VI. Salford with that obtaining in other great centres of English industry through a long series of years. The following excerpts from these documents will serve to show not only the proportional prevalence of fever fatality in the various English towns, but also the reduction in the local rates of mortality which has been brought about by recent sanitary operations:—

	1873-82.	1883.	Decrease in 1883
England and Wales....	0.42 ..	0.29 ..	31.0 per cent.
20 great English Towns	0.47 ..	0.35 ..	25.5 „
Salford	0.60 ..	0.38 ..	36.7 „
50 other Towns (1882)	0.33 ..	0.32 ..	3.0 „
Rural Districts (1882) ..	0.26 ..	0.26 ..	Nil.

Sanitary import
of decrease in
fever fatality.

There is no more noticeable feature in the sanitary literature of the country, than the marked diminution in fever mortality which has always followed the execution of well-devised measures for the improvement of the public health. The above statistics show that the position which Salford occupies in this respect amongst the sanitary authorities of the country is one of which the Health Committee have no reason to be ashamed.

Table I, on the opposite page, shows the Salford rate of mortality per 1,000 of the population from this and other diseases of the zymotic class in each year of the last 28.

Distribution of
Diarrhœal
mortality.

Diarrhœal Diseases.—210 deaths were referred to diarrhœal disorders during the year under notice. Of these 137 were under one year old. The diarrhœal rate of mortality, at all ages, which in the previous ten years had averaged 1.7 per 1,000, fell to 1.1 in the year 1883. Locally, the rate varied extremely, and the variation was especially marked amongst children under five years of age. Thus, in Broughton the infantile rate from diarrhœa was equal to only 3.8 per 1,000, whilst in Greengate it amounted to 11.5.

IV.—CONSTITUTIONAL DISEASES.

Constitutional
diseases.

815 deaths, or 19.1 per cent. of the total mortality, were referred to this class of diseases in the year 1883. The rate of mortality at all ages was, therefore, equal to 4.3 per 1,000, which scarcely differs from the average rate (4.4) prevailing in the preceding decade. With respect to phthisis, by far the largest contributor to this section of the death roll, it is disappointing to notice that, although the rate of mortality from all causes in 1883 has shown a decline on the decennial rates* exceeding 15 per cent., the deaths referred to this disease, in that year, scarcely differ from the corrected annual average. It is satisfactory, however, to record that the deaths from cancer, which in the previous ten years had averaged 90 per annum, fell last year to 73†.

Continued exces-
sive fatality from
Phthisis.

* *i.e.*, the average rate prevailing in the ten years 1873-1882.

† Table F, page 50.

ANNUAL RATE OF MORTALITY PER 1000 OF THE SALFORD POPULATION,
FROM CERTAIN ZYMOTIC DISEASES IN EACH OF THE TWENTY-EIGHT
YEARS 1856-1883.

YEARS.	Small Pox.	Measles.	Scarlet Fever.	Diph- theria.	Whoop- ing Cough.	Fever.	Six Miasmatics	Diar- rhoea.
1856-65	0.19	0.70	1.54	0.22	0.98	0.94	4.50	2.15
1866-75	0.30	0.82	1.17	0.13	0.91	1.15	4.48	2.33
1876-82	0.44	0.72	0.98	0.11	0.91	0.53	3.70	1.58
1856	0.56	0.49	1.03	..	0.86	0.75	3.68	2.36
1857	0.17	0.06	1.65	..	1.10	0.83	3.82	2.70
1858	0.14	0.97	5.57	..	1.03	0.76	8.47	2.22
1859	0.10	0.14	1.38	0.20	0.88	0.91	3.61	2.46
1860	0.05	1.48	0.34	0.13	0.69	0.81	3.49	1.13
1861	0.03	0.75	0.23	0.08	0.64	1.06	2.78	2.51
1862	0.05	1.04	0.19	0.28	2.17	0.91	4.62	1.44
1863	0.32	0.85	1.72	0.51	0.84	0.77	5.02	2.14
1864	0.28	0.35	2.51	0.19	0.73	0.86	4.92	1.49
1865	0.22	0.83	0.79	0.13	0.90	1.70	4.57	3.04
1866	0.05	0.39	0.66	0.11	1.13	2.23	4.57	2.14
1867	0.01	0.87	0.55	0.18	1.15	1.18	3.94	2.47
1868	0.03	0.63	3.42	0.32	0.69	2.05	7.14	3.10
1869	0.22	1.06	1.35	0.11	0.66	1.37	4.77	2.04
1870	0.29	0.06	0.81	0.09	1.04	1.04	3.33	2.66
1871	1.80	1.27	0.48	0.09	0.90	0.68	5.22	2.85
1872	0.32	0.18	0.60	0.08	1.31	0.66	3.15	1.91
1873	0.03	1.75	0.94	0.06	0.36	0.65	3.79	2.06
1874	0.03	0.99	1.12	0.10	0.95	0.89	4.08	2.12
1875	0.22	0.96	1.74	0.17	0.98	0.77	4.84	1.95
1876	2.32	0.97	1.19	0.06	1.04	0.50	6.08	1.76
1877	0.60	0.89	0.77	0.08	0.66	0.71	3.71	1.34
1878	0.01	0.47	1.16	0.12	0.82	0.72	3.29	2.12
1879	0.00	0.84	1.22	0.14	0.87	0.37	3.44	0.84
1880	0.00	0.78	1.63	0.13	1.27	0.76	4.57	2.78
1881	0.04	0.21	0.47	0.12	0.90	0.33	2.07	0.90
1882	0.10	0.90	0.44	0.10	0.83	0.34	2.71	1.30
1883	0.00	0.82	0.43	0.13	0.55	0.38	2.31	1.10

SECTION VI.

V.—DEVELOPMENTAL DISEASES.

Developmental diseases.

261 deaths, or 6·1 per cent. of the total mortality, were attributed to the diseases forming this small class, which relates mainly to two causes of death—premature birth and decay of nature. The rate of mortality due to this class of diseases during the year 1883 was identical with the average rate in the preceding ten years, viz., 1·4 per 1,000.

VI.—LOCAL DISEASES.

Local diseases.

The 2,066 deaths referred in 1883 to one or other of the causes included in this important class were equal to the large ratio of 48·1 per cent. of the total mortality, and to an annual rate of 10·8 per 1,000 of the population, the average rate in the ten years immediately preceding being 12·0 per 1,000. It is satisfactory to notice a decrease, however small, under the head of nervous diseases—a sub-section of this class—and the fact indicated in Table H,* that this decrease has mainly occurred amongst young children, will, *quantum valeat*, be an interesting one to those who are engaged in the promotion of education among the masses.

Their import as tests of sanitary condition.

The circumstance that, in spite of the exceptionally mild weather, the deaths from respiratory diseases during 1883 were fewer by only 0·8 per 1,000 than the average rate of the preceding ten years, is one for which it appears, at first sight, difficult to account. It has, however, been explained in previous reports that pulmonary fatality, especially among children, has a much closer relation than is commonly admitted, to what is called general sanitary condition.

Reference to Table G† will show that amongst children under five years of age the rate of respiratory mortality—which in Broughton did not exceed 10·7 per 1,000 living at that age—actually amounted to double that proportion, or 21·5 per 1,000, in the district of Greengate, where the houses are old and health conditions generally are less favourable.

VII.—VIOLENT DEATHS.

Deaths from violence.

The deaths returned under this class are only very indirectly amenable to sanitary control, but the fact is nevertheless an acceptable one that in 1883 the violent deaths in Salford have been somewhat less numerous than the average (See Table H, on page 55.)

* Page 55.

† Page 51.

DIAGRAM 1.—SCARLET FEVER, DIPHTHERIA and CROUP, in Salford, 1861-1883. The black columns represent Annual Rates of Mortality per 1000 of the Population in each month of the 23 years.

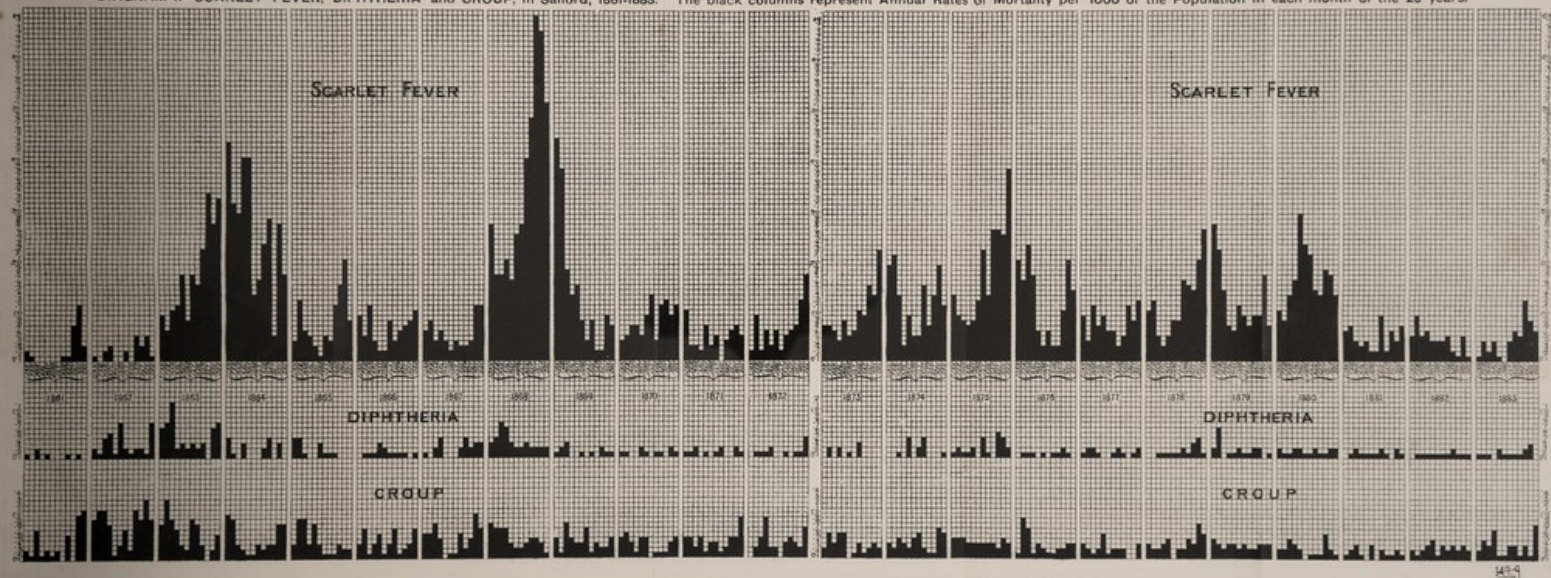
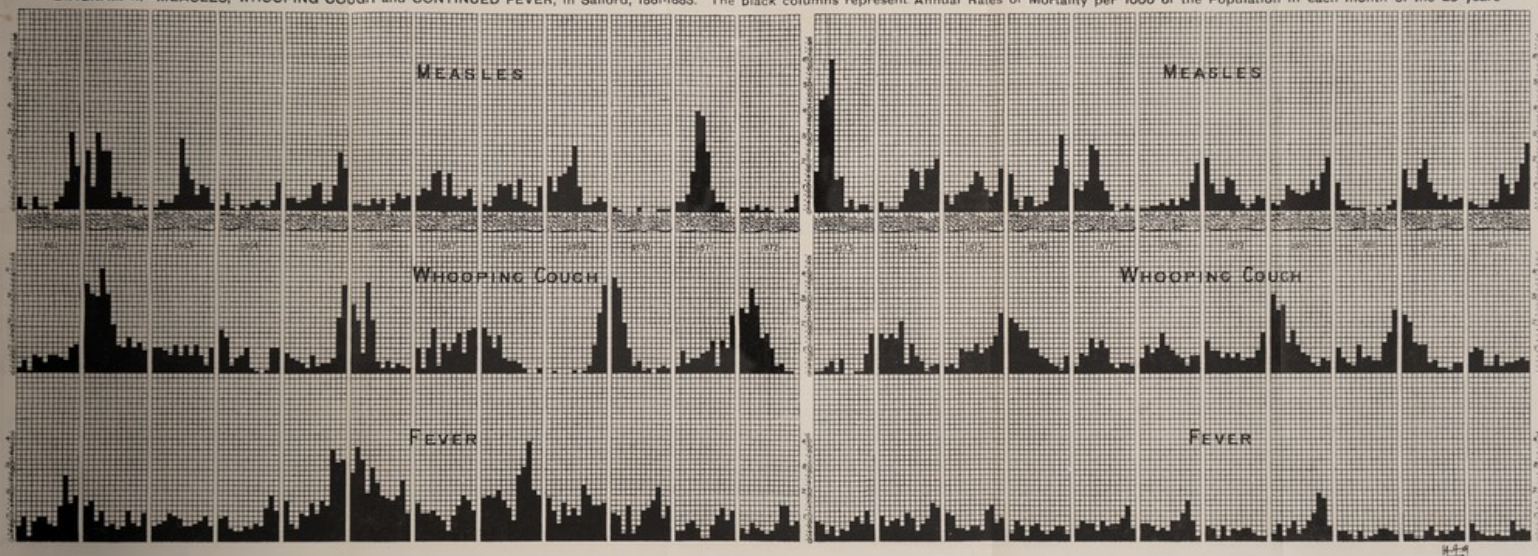


DIAGRAM II.—MEASLES, WHOOPING COUGH and CONTINUED FEVER, in Salford, 1861-1883. The black columns represent Annual Rates of Mortality per 1000 of the Population in each month of the 23 years



SECTION VI.

VIII.—DEATHS FROM ILL-DEFINED CAUSES.

It is a satisfactory feature in the statistics of this year that a great reduction has at last been effected in the number of deaths referred to this objectionable class. The deaths included here are those which have been returned as due to such indefinite causes as "Dropsy," "Atrophy," "Debility," "Inanition," "Mortification," "Tumour," "Abscess," "Hæmorrhage," &c., most if not all of which deaths are easily referrible to definite and useful positions under one or other of the headings in the new table.

Ill-defined deaths, which in the ten years ending 1882 had equalled an average rate of 2·1 per 1,000, fell in 1883 to 1·4, and Table H, on page 55, shows that this reduction has mainly occurred in the case of deaths of children under five years old.

VII.—APPENDIX.

YEAR 1883.

METEOROLOGY, BIRTHS, DEATHS, AND MORTALITY FROM CERTAIN PREVALENT DISEASES
IN EACH WEEK OF THE YEAR 1883.

Week.		Temperature of the Air.			Air Pres- sure.	Horizontal Movement of Air in Miles.	Mean Humidity, Complete Saturation, = 100.	Rainfall in Inches.	Births.	Deaths at all Ages.			Deaths from									
Progressive Number.	Date of ending.	Highest during the week.	Lowest during the week.	Mean Temperature.	Extreme range of Barometric changes.					All Ages.	Under 1 year.	1 to 5 years.	Over 60.	Smallpox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Fever.	Diarrhoea.	Respiratory Diseases.	Phthisis.
1	Jan. 6	54.8	36.0	45.1	.909	1.2	87	.912	124	75	17	11	13	..	1	1	1	2	2	1	25	9
2	" 13	44.3	30.8	38.3	1.146	1.1	87	.250	144	97	20	13	26	..	..	..	..	3	1	2	21	12
3	" 20	52.0	33.3	43.0	.913	1.6	87	.744	145	107	35	13	21	..	2	..	..	4	3	1	28	15
4	" 27	46.3	34.0	39.5	1.602	4.0	85	1.040	132	95	24	16	21	..	1	1	1	3	2	5	21	11
5	Feb. 3	53.2	30.2	40.5	1.078	2.4	84	1.490	144	80	21	13	16	..	2	..	..	2	4	1	30	6
6	" 10	50.0	36.0	43.2	.779	2.8	83	.607	139	98	21	18	16	..	3	2	1	3	2	..	24	11
7	" 17	52.8	36.0	43.9	1.187	4.7	87	.446	137	78	21	11	12	..	..	2	..	3	3	1	24	9
8	" 24	57.3	34.8	44.6	.808	2.2	85	.152	151	70	23	13	6	..	..	1	1	5	..	..	16	7
9	Mar. 3	54.3	36.7	44.9	.291	0.8	79	.098	146	77	23	9	8	..	..	1	..	3	1	1	18	11
10	" 10	55.8	22.0	35.0	.810	2.1	78	.115	130	73	19	13	14	..	1	..	2	3	..	1	22	12
11	" 17	42.6	24.3	34.8	.566	1.6	76	.208	144	69	17	10	11	..	..	..	..	3	2	1	15	11
12	" 24	43.8	25.2	34.8	.773	2.8	83	.405	113	75	24	12	13	..	..	2	..	2	1	1	21	4
13	" 31	51.8	26.0	38.9	.929	2.8	78	.108	147	98	19	14	29	..	..	1	..	5	1	2	27	8
14	April 7	62.5	32.4	48.6	.592	1.3	75	..	155	66	13	16	18	..	1	2	..	3	..	1	22	5
15	" 14	60.8	36.0	47.2	.715	1.1	73	..	129	87	21	12	17	..	..	2	..	..	3	..	18	13
16	" 21	60.8	38.2	47.8	.933	3.3	75	.205	112	75	15	15	16	..	1	1	..	2	..	1	19	8
17	" 28	62.0	33.8	46.0	.878	2.3	74	1.022	126	87	20	14	11	..	..	1	..	..	..	1	19	12
18	May 5	59.1	35.4	45.9	.501	2.3	71	.220	123	79	21	10	11	..	..	..	..	2	1	2	11	16
19	" 12	62.8	38.0	45.7	.424	3.3	74	.610	136	73	13	8	14	..	1	1	..	..	..	..	19	13
20	" 19	70.0	46.3	55.5	.611	2.1	76	.028	100	77	23	10	11	..	3	..	..	2	1	..	15	7
21	" 26	71.7	48.2	56.1	.513	1.1	75	.088	164	98	25	19	14	..	3	..	1	1	1	1	22	16
22	June 2	70.0	44.2	56.6	.266	2.5	68	.244	127	63	17	18	6	..	1	..	1	1	1	2	10	10
23	" 9	72.6	45.8	57.7	.503	1.8	59	1.287	120	67	20	6	11	..	3	..	..	1	..	..	10	12
24	" 16	72.6	44.2	56.5	.560	1.4	73	.772	140	69	13	12	13	..	..	..	..	3	1	1	16	12
25	" 23	72.6	46.1	54.0	.144	1.7	71	.247	168	64	18	8	11	..	1	..	..	3	..	..	13	5
26	" 30	79.0	50.8	61.6	.329	2.3	77	1.829	131	76	21	12	12	..	..	..	1	3	3	5	14	10
27	July 7	77.5	54.2	63.4	.263	2.6	72	.337	141	60	17	13	11	..	2	..	..	..	1	3	7	8
28	" 14	76.8	49.0	60.6	.413	2.8	72	.599	100	65	14	13	13	..	8	1	..	2	..	1	17	12
29	" 21	62.6	47.9	54.8	.529	2.2	74	1.060	113	78	28	16	12	..	3	2	1	1	2	6	13	11
30	" 28	69.9	47.2	55.7	.484	1.7	74	.262	126	62	17	13	12	..	8	3	1	1	..	5	9	6
31	Aug. 4	72.4	52.0	58.7	.662	1.1	82	.025	136	72	17	15	9	..	4	3	..	1	..	7	8	9
32	" 11	65.5	49.6	55.8	.630	1.5	86	2.837	116	86	24	19	13	..	5	2	..	4	1	11	13	9
33	" 18	74.8	49.2	58.9	.651	2.0	79	.380	154	85	31	14	14	..	2	4	..	2	1	15	11	6
34	" 25	76.9	49.7	61.0	.175	0.8	69	.050	125	79	24	23	7	..	2	1	1	..	..	14	6	10
35	Sept. 1	73.3	51.0	59.4	.637	2.7	78	.540	123	91	31	19	13	..	6	..	..	1	2	26	9	8
36	" 8	63.9	46.3	54.9	1.132	2.3	77	1.154	127	84	36	16	10	..	1	..	..	1	2	27	12	6
37	" 15	70.4	48.4	57.0	.443	0.8	77	.516	128	95	34	18	12	..	4	3	..	4	2	18	12	7
38	" 22	77.3	51.0	59.5	.478	0.4	79	.410	111	79	30	12	12	..	3	2	..	..	3	10	10	6
39	" 29	65.1	49.7	56.5	.825	3.2	82	2.788	138	69	25	7	13	..	..	1	2	1	5	8	11	8
40	Oct. 6	57.1	40.0	48.3	.778	1.9	73	.700	125	74	21	15	9	..	3	4	..	..	3	6	11	9
41	" 13	61.0	42.0	53.2	.668	1.2	87	.238	146	98	22	23	13	..	2	3	..	3	2	6	17	15
42	" 20	60.3	40.5	49.9	.613	3.9	86	3.579	142	91	25	17	18	..	6	3	1	1	..	3	18	8
43	" 27	58.4	34.0	48.2	.483	2.1	83	.995	132	105	42	20	13	..	7	4	1	1	1	7	24	7
44	Nov. 3	59.0	37.8	47.8	.461	0.7	88	.120	130	110	29	31	12	..	2	7	2	4	2	..	28	11
45	" 10	50.6	36.0	44.0	.553	2.5	84	1.166	125	81	20	26	12	..	6	3	1	..	1	2	20	4
46	" 17	46.8	26.8	36.7	.664	0.6	91	.305	126	102	25	23	12	..	3	5	2	2	1	1	38	7
47	" 24	53.0	35.1	42.1	.569	3.5	85	.598	110	102	25	21	20	..	8	1	1	6	2	..	33	8
48	Dec. 1	57.8	39.7	47.0	1.516	2.8	81	.520	117	92	27	20	12	..	9	3	..	1	3	1	29	8
49	" 8	50.8	28.2	38.8	.714	1.9	85	.452	112	63	12	20	10	..	7	2	..	1	1	..	19	10
50	" 15	54.5	33.8	44.5	.717	4.4	85	1.797	130	98	20	25	14	..	15	1	..	2	3	..	18	10
51	" 22	50.8	33.6	41.9	.737	3.4	82	.727	129	99	21	27	17	..	10	5	..	3	1	1	16	16
52	" 29	50.2	36.8	42.7	.400	0.4	88	.038	89	60	15	21	11	..	6	..	..	1	1	..	15	4

PRICES OF COAL, FLOUR, POTATOES, AND BUTCHER'S MEAT, AND THE
NUMBER OF PAUPERS RELIEVED IN SALFORD—1871 TO 1883.

	AVERAGE PRICES OF FOOD AND FUEL.				PAUPERISM.		
	Coal, per ton.	Flour, per stone.	Potatoes, per load.	Butchr's Meat, per lb.	Weekly Average of Paupers Relieved.		
					Indoor.	Outdoor	Proportion to Population
	£ s. d.	£ s. d.	£ s. d.	d.			
1871	0 7 5½	0 2 0	0 8 8¼	6¾	791	2343	1 in 40
1872	0 10 0¼	0 2 1¼	0 4 6¾	6½	764	1839	1 in 50
1873	0 15 9¾	0 2 3	0 13 0¼	7¾	817	1711	1 in 53
1874	0 16 1¾	0 2 2	0 11 4	7½	853	1842	1 in 52
1875	0 12 4	0 1 7½	0 10 6¾	7½	872	1652	1 in 57
1876	0 11 6	0 1 9¼	0 10 7½	7½	944	1409	1 in 64
1877	0 10 5	0 2 1½	Various.	7¼	1037	1662	1 in 57
1878	0 9 10	0 1 7½	Various.	7¾	1146	2326	1 in 46
1879	0 7 5	0 1 11½	0 14 0	6¾	1442	4023	1 in 30
1880	0 7 11	0 2 5¾	0 10 0	7½	1559	3488	1 in 34
1881	0 7 8	0 1 8¾	0 10 0	7¼	1640	3039	1 in 38
1882	0 7 7	0 1 7¼	0 12 0	7½	1379	2300	1 in 56
1883	0 7 7½	0 1 6¾	0 7 0	6¾	1690	2237	1 in 49

INDEX.

	PAGE.		PAGE.
Abattoirs Public	29	Elevation above Sea Level	39
Adulteration of Food	30	English Life Table, New	46
Advice of Medical Officer	10, 19	Enteric Fever	61
Age at Death	44	Epidemic Disease	11
Age Distribution of Infectious Sickness	54	Estimate of Population	39
Analysis of Food	30		
Analysis of Mortality	43	Factory Smoke	33
Appendix	67	Factories and Workshops	36
Area of Borough	39	Female Factory Labour	21
Atmospheric Impurity	33	Fever Hospital	16
		Fever, Diagram	64
Bakeries, Public	34	Fever, Typhus	60
Baths for the People	9	Fever, Enteric	61
Births and Birth Rates	42	Fever Hospital Extension	9
Blacksmiths' Forges	34	Fever Mortality, Decrease of	62
Boilers and Furnaces	33	Food Adulteration	30
Brick-burning Nuisance	36	Fordham, Inspector	29
Brain Disease	50, 64	Food, Unwholesome	29
Bye-laws, Sanitary	24		
		Gas Works, Nuisance from	36
Certification of Death	20		
Cholera, Defences against	11	Health Department Work	25
Classification of Causes of Death	49	Health of Salford	8
Constitution of Borough	7	Hospital Fever Report	16
Cost of Hospital Maintenance	17	Hospital Expenditure	17
Conditions Injurious to Health	19	Humphreys, Mr. Life Table	46
Cow Sheds, Regulation of	27		
Continued Fever	60	Ill-defined Causes of Death	65
Condemned Meat	29	Illegitimacy	21
Constitutional Diseases	62	Injury by Preventable Sickness	12
Coroner's Inquests	19	Infectious Sickness in Schools	15
Croup, Membranous	59	Infantile Neglect	21
Croup and Diphtheria Chart	64	Inhabited Houses	39
		Increase of Population	39
Dairies' Order, Extension of	28	Infantile Mortality	44
Dairies and Milk Shops	27	Infectious Disease Notification	13, 52
Day Nurseries	21	Insurance, Infantile	23
Deaths	42	Inquests	19
Destructor	9	Intercepting Sewer	9
Developmental Diseases	64	Isolation of Infectious Cases	16
Density of Population	39		
Defences against Epidemics	11	Lady Visitors amongst the Poor	19
Destruction of Infected Clothing	17	Life Saving in 1883	8, 49
Distribution of Infectious Sickness	11	Life Table, New	46
Disinfection of Houses	25	Lodging-house Regulations	24
Diphtheria, Diagram	64	Local Government Board, Petition to	53
Diarrhoea	62	Local Diseases	64
Disinfectant, New	9	Local Government Return	66
Drainage	11	Local Variation of Mortality	44
		Lung Diseases	64

	PAGE.		PAGE.
Magisterial Proceedings	35	Sanitary Condition of Salford	7
Map, Sanitary	11	„ Progress	9
Manholes, Untrapped	12	„ Supervision	14
Marriages	39	„ Advice	14
Meat, Unwholesome	29	„ Condition, Tests of	7
Measles, Diagram	64	„ Survey and Map	11
„ at Weaste	11	„ Education	14
Medical Officer, Reports of	24	„ Inspection	15
Medical Aid in Sickness	19	Saving of Life	8, 49
Meteorology	8, 69	Sewage Works	9
Miasmatic Mortality	52, 54	Seasonal Mortality	44
Milk, Adulteration of	30	Scarlet Fever Prevalence	58
Milk Shops, Regulation of	27	„ Diagram	64
Milk—Pollution	28	„ at Weaste	12
Mortality, Male and Female	46	Scavenging, Improvement of	9
„ Causes of	49	Schools, Closure of	12
„ at various ages	50	Sick Clubs and Infantile Mortality ..	23
„ Normal Rate of	46	Slaughter Houses, Private	29
„ Analysis of	43	Smallpox	42, 56
„ Infantile	44	Smoke Nuisance	33
Nervous Diseases	64	Still-born Infants, Burial of	23
Nightsoil Removal	11	Steam Boilers	33
Normal Rate of Mortality	46	State of Public Health	8
Notification of Disease	13, 52	Statistics, Vital	39
Nuisance Abatement	23	State Registration of Disease	13
Offensive Trades	36	Sublet Houses	26
Parks, Public	10	Suggestions for Future Sanitation ..	10
Pauperism	70	Systematic Inspection	23
Phthisis, Fatality of	62	Temperature (Meteorology)	8, 69
Playground, Public	10	Tests of Sanitary Condition	7
Population	39	Tips, Abolition of	9
Private Slaughter Houses	29	Typhus Fever	12, 60
Preventive Measures	14	Typhoid (Enteric) Fever	61
Prevalence of Infectious Diseases ..	11	Unclassified Deaths	65
Prices of Food	70	Uncertified Deaths	20
Preventable Diseases	12	Untrapped Manholes	12
Progress, Sanitary	9	Unwholesome Food	29
Public Baths, Extension of	9	Unvaccinated Infants	42
Public Health in 1883	8	Vaccinations	42
Public Health Nuisances	23	Value, Rateable	39
Public Abattoirs	29	Visitation of the Poor	19
Public Analyst	30	Violent Deaths	64
Rainfall (Meteorology)	8, 69	Vital Statistics	39
Ratable Value	39	Want of Medical Aid in Sickness ..	19
Registration of Milk Shops	27	Warning <i>re</i> Smallpox	42
„ Lodging Houses	24	Whooping Cough (diagram)	64
„ Cause of Death	46	Work of Health Department	25
„ Infectious Sickness ..	13, 52	Zymotic Diseases	52
Reports of Medical Officer	24		