## REPORT

ON

## THE SANITARY CONDITION

OF

LEEDS,

FOR THE YEAR 1871,



BY M. K. ROBINSON, M.D.,

MEDICAL OFFICER OF HEALTH FOR THE BOROUGH OF LEEDS.

LEEDS:

Printed by Charles Goodall, Park Lane. 1872.

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#### Members of Committee.

JOHN BARRAN (MAYOR)

ALDERMEN.

EDMUND STEAD
ROBERT MEEK CARTER
JOHN DARNTON LUCCOCK
HENRY ROWLAND MARSDEN
GEORGE TATHAM

#### COUNCILLORS.

JOHN WALES SMITH RICHARD BISSINGTON JAMES MOSLEY Adam Brown GODFREY MARTIN BINGLEY THOMAS COGILL WILLIAM MASON WILLIAM TURTON WILLIAM WRAY (CHAIRMAN) JOHN OATES CLAYTON JOHN CHILD JOHN BLAKEY GEORGE HOBSON CHARLES HUTCHINSON JOHN INGHAM GEORGE SMITH

#### THE

# SANITARY CONDITION OF LEEDS.

To the Sanitary Committee of the Town Council of the Borough of Leeds.

GENTLEMEN,

During the year ending December 31st, 1871, the number of deaths registered in the Borough of Leeds was 6,881, being 452 less than in the preceding year.

The births numbered 10,401, or 38 less than those in 1870, and yielded 3,520 as last year's natural increase of population.

The death-rate for the past year was 26.4 per 1,000, being 1.8 per 1,000 less than that of 1870. The average ratio of the last five years has equalled 26.8 per 1,000 per annum, contrasted with 31.3, the average rate of the previous five years, so that if we compare the latter half with the former of the decenniad 1862-1871, it is manifest that a great improvement has taken place, which vantage ground gained,

however, should only stimulate to renewed effort in order to obtain a still further reduction in our annual mortality, for it cannot be denied that there is scope for still greater achievement in this direction.

Of males the number of deaths registered was 3,573, that of females being 3,308. By reference to the age columns in the general table it will be seen that the mortality was as usual, largely made up of children's deaths, in fact 47.3 per cent. of the total deaths occurred under five years of age, the proportion under one being 31.2 per cent. The weekly death wave ranged from 95 in the 26th and 27th weeks, each respectively, with a rate of 19.0 per 1,000, to 213 in the 37th week, or a rate equal to 42.6 per 1,000 per annum.

The third quarter was the most fatal one of the year, more than 26 per cent. of the deaths during that period being caused by diarrheea.

The deaths occurred in the following districts of the Borough:--

DISTRICTS.	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	TOTALS	Death- rate per 1000.
Leeds Worth West South Hunslet Holbeck Wortley Kirkstall Bramley Chapeltown Hamlets	227 239 155 169 77 37	348 349 160 235 110 161 73 43 30	524 420 263 318 123 178 79 56 25 2	409 378 184 226 110 215 74 52 33 1	1657 1533 834 1018 498 723 303 188 123 4	33·2 25·1 28·6 27·0 24·9 23·0 21·5 18·8 16·6 10·2
Вопоиси	1702	1509	1988	1682	6881	26.4

The Leeds Workhouse and the House of Recovery, both of which institutions are in the North Registration District, contributed 258 deaths, and if this number be omitted the rate for the district would be reduced to 28.0, and again deducting the 210 deaths, which occurred in the Infirmary, the reduced rate for the West District would be represented by 21.7.

The following table shews the number of deaths referred to zymotic diseases during the last six years.

DISEASES.	1866	1867	1868	1869	1870	1871
Small Pox Measles Scarlatina	59 219 98	46 28 71	17 95 181	42 26 337	9 179 339	41 92 108
Diptheria Croup Whooping Cough. Fever, including Typhus, Enterie,	/	28 71 168	28 81 79	18 49 75	23 44 187	20 38 146
Relapsing, and Continued Fever Diarrhea		257 407 81	739 97	237 414 92	345 657 106	341 663 89
Totals	1745	1157	1631	1290	1889	1538

Small pox, which has never been entirely absent for a whole year since my official connexion with Leeds, has been lately a cause of considerable anxiety on account of the epidemic prevalence of the disease in so many large towns. During last year, 47 out of the 289 cases which came under notice were imported from other towns, and if active sanitary measures had not been adopted by your Committee in these cases, it is reasonable to presume that the epidemic would have assumed far more formidable proportions than it has hitherto done in Leeds, as, notwithstanding the praiseworthy exertions of the Poor Law Guardians, it is quite certain that careful vaccination, and re-vaccination require to be more vigorously practised in order that the protective power resulting from this operation may be extended to the entire It is no argument to say because persons conpopulation. tract the disease after vaccination has been resorted to that vaccination is no protection, for it must be remembered that the exception sometimes proves the rule, and even small pox may occur a second time in the same individual, yet no one doubts the immunity begotten by a first attack against a second one; and again, allowance must also be made for faulty or careless vaccination. The numerous statistics and reports already published have sufficiently established the value of vaccination, but it is instructive to note that of the 41 persons killed by small pox last year in Leeds, 31 had not been vaccinated, 3 imperfectly so, in one instance it was not ascertained whether the operation had been performed or not, whilst in the remaining six, vaccination was believed to have been performed. It is lamentable to have to report how the disease was spread either by the ignorant or careless exposure of persons suffering from the malady, or through the medium of infected clothing. It is not always an easy matter to trace the connexion of one case with the other, but in 225 instances of persons suffering from the malady, the history of communication with previously infected sources was completely established.

The epidemic, still prevalent, has been widely distributed throughout the Borough, the North Registration District as yet, furnishing the largest number of cases; here it has prevailed chiefly in the streets bounded by Quarry Hill, Burmantofts Street, Green Road, and Mabgate, also the streets bounded by Beckett Street, Cardigan Street, Cherry Row, and Green Road, in Arthur Street, Arthur Terrace, Brown Square, Cross Templar Street, Galway Street, Gough Street, Grey Street, High Street, Hope Street, Lumb Square, Mushroom Street, Nelson Street, Nippet Street, Pilot Street, Shakespeare Street, Saville Green, Templar Street, and York Street. Cases also occurred at Bath Street, Catherine Street, Cookson Street, East Street, Joy Fold, Courts and Yards in Meadow Lane, Providence Street, Richmond Road, Richmond Street, Woodman Terrace, and Zion Street in the South-East District; at Back Barrack Street, Blenheim Terrace, Briggate, Burley Street, Carlton Cross Street, England Street, Glover Street, Meanwood Road, Primrose Street, Park Lane, Portland Crescent, Reuben Street, Wellington Street, and Woodhouse Street in the West District; at Anchor Street, Ebony Street, Garr Street, Hunslet Road, Jack Lane, and Pottery Field in Hunslet District; at Frost Fold in Holbeck; at Bradley Yard, Stanningley, and Grammathorpe in Bramley District; at Cardigan Place, Eddison's Buildings, and Spring Grove Avenue in Kirkstall; and at Smith's Buildings, Chapel-Allerton.

Scarlatina, one of childhood's special enemies, was less fatal during 1871 than it has been for many years, the deaths registered numbering 108. The history of 85 of the subjects of these deaths revealed the contagious link in the connecting chain of one case with another.

The following table shews the deaths registered under the different forms of fever during the last six years, and by reference to the map in the Appendix it will be seen where the cases of fever which came under notice last year were discributed.

	1866	1867	1868	1869	1870	1871
Typhus	407	221	170	134 100	131 182	101 205
Relapsing Continued	6		140	1 1	13 13	11
Remittent Puerperal		3	1		3	21 3
TOTAL	490	255	314	237	345	341

The above table exhibits the still further decline of typhus, but at the same time it will be seen that enteric, or filth fever, has increased; in 138 instances of the persons who succumbed to the disease the drainage of the houses where the victims had lived was found defective, and in 81 other cases privies adjoined the houses. These facts will help to strengthen the hands of the Committee in the work they have undertaken of filling up the middensteads (sepulchres of filth) which have so long required extinction. The arrears of defective drainage are seriously increasing, and it is becoming a matter of the first importance to obtain a removal or relaxation of the Chancery Injunction.

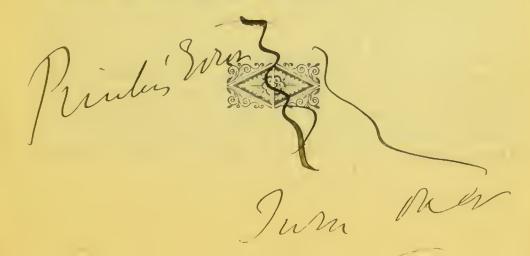
In 26 of the deaths from typhus the subjects of them were imported into Leeds from other towns, and 95 had previously held communication with infected sources. In addition to the

341 deaths registered, 511 persons suffering from fever were reported; 246 of these lived where the drainage was found defective, 158 dwelt next to privies, 61 had been exposed to contagion, 16 came from other towns, and 13 were the occupants of cellar dwellings.

The following were the localities visited by fever, viz.:— In the North Registration District, the streets bounded by Accommodation Road, Burmantoft's Street, and York Road; streets bounded by Duke Street, Marsh Lane, and Quarry Hill; streets bounded by Burmantofts Street, Green Road, Mabgate, and Quarry Hill; streets bounded by Kirkgate, Lady Lane, Vicar Lane, and York Street; together with Alan Terrace, Arthur Street, Back Nile Street, Bertie Street, Cambridge Street, Hope Street, Lower Templar Street, Pollard Street, Primrose Street, Regent Street, and Stamford In the South-East District, Bath Street, Lawrence Street, Mayor Street, Morpeth Street, Providence Street, Richmond Road, Rodney Street, Shannon Street, Saxon Lane, Upper Cross Street, Vincent Street, Woodman Terrace, and Weaver Square. In the West District, Baker Street, Benns Square, Bingley Street, Calvert Court, Corporation Street, Clarence Street, Dover Street. Forrest Street, Institution Street, Portland Street, Sackville Street, Stanhope Street, and Well's Yard. In Hunslet, the streets off Dewsbury Road, streets and yards in Pottery Field, streets and yards out of Waterloo Road, along with Alton Street, Branston Street, Coupland Street, Grape Street, Holdsworth Street, Low Road, Nevin Street, and Vine Street. In Holbeck, Ashley Place, Catherall Street, Charlotte Street, Derby Street, Isles Lane, Moor Side, and Provost Street. In Wortlev, at Atkinson Place, Baptist Street, Bruce Street, Copley Hill, Langham Street, New Street, Wellington Road, Upper and Lower Wortley. In Armley, at Botany Bay, Canal Road, Far Fold, Main Road, Moor Side, Station Road, and Winker Green. In Faruley, at School Close. In Bramley, at Bradley Hill, Dickenson's Hill, Elm Row, Elswick Terrace, High Street, Hough End, Lumb Row, Smith Row, White Cote, and Waterslacks. In Kirkstall, at Alexandra Terrace, Ash Terrace, Cross Church Street, Commercial Street, Lloyd Street, Owen's Houses, St. Stephen's Terrace, St.

Ann's Row, Springfield Place, Tordoff Terrace, White Row, and Wellburn Yard. In Chapel-Allerton District, at Cowper Street, Henconner Lane, Moortown, Newton Grove, Union Place, and York Terrace.

Diarrhea was again the principal zymotic of the year, killing more than any other one disease excepting bronchitis. Defective : unitary arrangements existed in 525 instances at the dwellings where these cases occurred consisting of either faulty drainage or improper excrement disposal. 451 of the deaths from diarrhea occurred in children under one year of age, and 317 were not nursed by their mothers, but brought up by hand feeding. The parents of 27 of the children were intemperate in their habits, of 17 they were destitute, and of 18 both intemperate and destitute. Causes instrumental in the development of typhoid fever, have long been considered by sanitarians capable of producing diarrhea under different circumstances, as such may be favourable to the production of one or the other disease. It is well known that a certain temperature is essential before this summer visitant can exert its fatal force on infant life. Just as the fungi spores lay dormant and concealed a greater part of the year, until under the influence of genial heat, the green sod becomes clothed with the white caps of the parent plant, so this annual epidemic casts its white shroud over infant existence in the sunny days of summer. The fact that the history of 525 cases last year points to the relationship of filth with this malady suggests the importance of removing all sources of impurity from contiguity to human habitations. The effect of rain is to wash the atmosphere, cleanse the streets and sewers, &c., and thus check the prevalence of diseases like diarrhœa, which probably depend on impurities (at any rate as a pabulum) for their existence.



The following table shews the weekly deaths from Diarrhea, together with the temperature and rainfall during the third quarter:—

WEEK ENDING	Deaths from Diarrhœa	Mean Temperature	Amount of Rainfall
,, 15th 22nd 29th 29th 12th 12th 19th 26th 5eptember 2nd 9th 16th 23rd	6 23 24 41 68 76 59 59 78	56·9 59·2 61·3 56·9 56·6 66·1 63·7 58·9 60·6 56·9 57·7 48·4	1:59 0:83 0:30 0:66 0:15 0:09 0:54 0:45 0:56 1:39 0:13 0:04 3:53

The total deaths from zymotic diseases numbered 1,538, or 22.4 per cent. of the total deaths; affections of the respiratory organs, excluding phthisis, amounted to 1,210; of uncertain seat, 214; tubercular diseases, 886; affections of the brain and spinal ctord, 814; diseases of the eirculatory system, 330; of the stomach, liver, &e., 250; of the kidneys, 107; ehild-birth and diseases of the uterus, 61; diseases of the skin, eellular tissue, &e., 23; debility, atrophy, and marasmus, 408; developmental diseases, 227; old age, 247; inquests, deaths from violence, and sudden deaths, 295; and the remainder, 271, from eauses not specified.

The foregoing is a summary of the different causes of deaths in the register for 1871. Typhoid fever figures far too largely in the record, and contagious diseases were spread to a fearful extent on account of the defective powers for procuring isolation in these eases, the waste of life in consequence is a question deserving the serious consideration of our legislators. As the law exists at present, the Town Clerk is of opinion that the Council have power to build hospitals, but none to supply medicine and attendance, &c., nor has the Council power of compulsory removal to such hospitals,

except the sufferers are without proper lodging or accommodation, or members of more than one family; therefore, for the purpose of securing isolation, the law on this subject is defective, except in the ease of such as would probably come under the head of paupers. In the event of an Epidemic Hospital being built for all elasses, as contemplated by your Committee, the suggestion of Dr. Eddison, that an arrangement be made to permit medical gentlemen to attend their own patients when removed to such institution, would render it more generally available, as there is often a natural indisposition on the part of persons to lose the services of their own medical advisers.

It would occupy too much space in this report to give a detailed account of the devastations produced from the extension of infectious diseases through the ignorance or recklessness of persons having charge of the sick. Previous emmunication with infected sources was discovered to have existed in 95 out of the 341 deaths from all forms of fever, in 74 out of the 92 deaths from measles, in 85 out of the 108 deaths from scarlatina, and in 30 out of the 41 deaths from small pox registered last year in Leeds.

Two or three instances taken from my notes of the history of the present epidemic of small pox will illustrate the general mischief occasioned by disregard to the communicability of the disease. A woman proceeded from Leeds to Wakefield to nurse a man suffering from small pox, this man died, and the woman brought the bed home with her, on which the man had laid, to Duce Square, Wortley, and on it placed the child of a man who was lodging with her; this ehild very soon suffered from small pox, and two other men and a woman, frequenters of this house, subsequently siekened from the disease. Another woman, living in Pollard Street, whose two ehildren had been afflicted with small pox, gave the bed on which they had laid to three boys; these boys, all members of different families, carried the bed to the top of Mabgate, and there made a bonfire of it. Each of these boys eontracted small pox, and subsequently it was communicated to several members of their respective families. Woodhouse visited at a house in Primrose Street, where a convivial gathering was being held; the man having imbibed rather freely, fell asleep, when the mistress of the house took a pillow, upon which a child, afflicted with small pox, was reclining, and placed it under the head of the slumbering man. This man soon contracted the disease, and subsequently a brother, who slept with him, also suffered.

It is gratifying to turn from the catalogue of deaths to a review of the sanitary work accomplished in 1871, otherwise an impression might be created that the enemies to human life had been quietly allowed to take the citadel whilst its defenders slept.

The following return shews that the duties of the Committee performed in the administration of the Nuisances Removal and Sanitary Acts, have been neither few nor trivial.

Notices and Letter							17,137
Cottage houses visi	ited wit	h the	object of	of imp	roving t	their	
sanitary conditio			• • •	_			20,314
Houses limewashed	2						19,978
Houses disinfected							1,635
Articles disinfected							5,023
Overcrowded house					•••		. 97
Offensive midden s					•••		75
Privies converted i						• • • •	156
Miscellaneous nuis						•••	16,642
Diseased beasts de				4**	•••		3
			***	•••	• •	•••	
unsound rabbits	,,	• • •	***		***		8
Unsound rabbits	"	• • •	• •	***	• • •		190
e i							Tons Cwts.
,, fish	2.2	• • •	1		* * *	***	
Summonses issued				• • •	***		60
Orders made by M	lagistra	tes			• • •		49
Penalties inflicted	***	• • •	• • •	•••		£7.	3 16 6

Foremost in magnitude as a sanitary undertaking, and one which will render the year 1871 memorable in the sanitary annals of Leeds, was the determination by your Committee to purchase and destroy that whole block of unwholesome dwellings situated off Kirkgate, in one of the most densely populated, and unhealthy districts of the Borough, containing 10 cellar dwellings, and comprising 93 houses, followed by a like decision to demolish property of an equally objectionable character, situated between Back George Street, Nelson Street, and Millgarth Street, containing 20 courts, 46 cellar dwellings, and comprising 200 houses.

A work of no less importance was commenced when the reeking midden received its formal condemnation, and your Committee undertook to enforce the extinction of all ashpits in the East Ward, a project long needed in the whole Borough, but none the less welcome to all enlightened sanitarians.

Last year witnessed also the erection of a new and spacious disinfecting apparatus, where sufficient heat is generated, and additional disinfectants can be applied. The Committee have also had under their consideration the subject of providing public baths and washhouses, together with the erection of a permanent Epidemic Hospital to be adapted for all classes of patients.

The Streets and Sewerage Committee has recently been animated to renewed exertions in prosecuting the work of ventilating the sewers, and if the Building Clauses Committee could be induced to expunge the bye-law which permits the building of back to back houses, still further sanitary progress would be made.

The following is a return respecting lodging houses, obtained for the Lodging House Committee, for 1871:—

Number of common lodging-houses under the Act, 1851 Number of lodging-houses under the Sanitary Act, 1866	
Тотац	132
Number of lodgers the houses are registered to accom-	
modate per night	7 407
Average per house	11
Average number of lodgers per night	1,187
Total number of lodgers per year	9
Total number of lodgers per year	433,255
Number of visits paid to the houses by the Committee	177
Number of visits paid to the houses by the Officers. Day	33,009
Number of visits paid to the houses by the Officers. Night	
TOTAL	49,203
Number of persons suffering from infectious disorders	
removed to the Fever Hospital	14.
Number of deaths from all causes at the houses	26
Fresh houses registered last year	21
Registers withdrawn	2
Lodging house-keepers cautioned for breaches of the	
regulations	19
Lodging house-keepers summoned	9

A great number of these houses are totally unfit for occupation as such, and there is ample scope for the development of a company for the purpose of building Model Lodging Houses to be constructed on sound sanitary principles. The Social Improvement Society, which has done so much good as a truly philanthropic association, might take this matter up, and if no actual commercial profit could be realised, a real benevolent work might be developed without much risk or loss.

The following is a return of the number of observations and summonses issued by Inspector Sands, together with the convictions, &c., obtained by the Town Clerk under the Smoke Prevention Clauses of the Improvement Act, 1866:—

Observa-	60 minutes' Observations.	Total Summonses Issued.	Convictions Obtained.	Summonses Dismissed or Withdrawn.	Amount of Penalties imposed by Justices.
1025	88	28	24	4	£53 0 0

The accompanying tables and maps, being each designated, need no explanation.

I am,

Gentlemen,

Your obedient Servant,

M. K. ROBINSON, M.D., &c.,

Officer of Health.

January 14th, 1872.

# MONTHLY METEOROLOGICAL TABLE FOR THE YEAR ENDING DECEMBER 31st, 1871,

Taken at the Philosophical Hall, by

#### LOUIS C. MIALL, ESQ.

M O N T H	Mean Readings of Barometer	Mean Tempera- ture of the Air	Mean Tempera- ture Dew Point	Most Prevalent Wind	Amount of Rainfall
January	29.618	33 ·4	29·1	N.W.	0.66
February	29.769	42·1	39.2	N.W.	1.09
March	29.832	45.3	38.4	N.W.	0.43
April	29.620	45.9	40.8	N.E.	3.15
May	29.938	52.8	43.2	N.W.	1.00
June	29.795	54.5	51.0	N.E.	4.08
				:	
July	29.632	60.0	55.7	S.W.	3 22
August	29.820	63.5	53.8	S.W.	0.99
September	29.757	54.9	50.8	N.W.	5.57
October	29.763	49.8	44.2	S.W.	2.95
November	29.863	39.0	32.7	N.W.	0.75
December	29.873	40.2	34.7	S.W.	1.21

CHARLES GOODALL, PRINTER, PARK LANE, LEEDS.

### WEEKLY REGISTER OF DEATHS IN THE BOROUGH OF LEEDS FOR 1871.

CAUSES OF DEATH.	1 2 3 4 5 6 7 8 9 10 11 12 13	14 10 18 17 18 19 20 21 22 23 24 25 20 20 21 18 19 20 21 22 23 24 25 25 27 20 21 18 19 20 25 25 27 20 20 21 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20	Doc. 2 Doc. 2 n. 9 n. 10 n. 10 n. 20
CLASS I. Small Pox	9 0 4 2 4 1 4 1 4 2 1 1 1 2 2 8 0 4 4 7 8 4 6 2 2	4 1 1 4 2 2 2 3 1 1 3 1 1 2 4 2 7 1 1 2 1 1 2 3 1 10 1 1 1 1 1 1 1 1 1 1 1 1	6 47 48 49 50 51 52 2 2 2 41 1 1 6 3 4 2 2 2 2 4 1 2
Whooping Cough Croup Diarrinea Dysentry Choiera, English	9 0 4 2 4 1 4 1 4 2 1 1 1 1 2 8 0 4 4 7 8 4 6 2 2 2 1 8 6 4 4 3 2 2 4 8 1 3 2 2 2 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1 2 2 3 1 1 3 79 858 146 15 1 2 2 3 1 1 3 79 853 10 1
Influenza Typhus Erystpolas Synhilis	0 0 3 0 0 1 4 8 6 8 6 7 5	10 6 4 5 0 9 1 5 5 2 5 4 5 3 65 1 4 3 2 5 10 12 3 15 5 12 12 13 366 12 12 13 13 16 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 16 12 12 13 13 13 16 12 12 13 13 13 16 12 12 13 13 16 12 12 13 13 13 16 12 12 13 13 13 16 12 12 13 13 13 16 12 12 13 13 13 16 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13	1 9 0 3 7 2 7 105 847
Dyphtheria Quilsey Rhomatile Fever Excessive Drinking Aphtha	2 1 2 2 3 2 1 2 2 3 2 1 2 2 3 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 2 2 2 2 1 2 2 1 2		1 2 4 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Drysomania  II. Dropsy Cancer Gangrono Absense	. 3 1 1 1 3 7 2 1 2 1 4 2 1 1 2 2 3 2 3 2 3 1 1 1 1 1 2	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1 2 2 2 2 2 2 2 3 15 15 15 15 15 15 15 15 15 15 15 15 15
Gout Purpurn Rhoumatism Diabetes	1 1 1 1 1 1 1 1	7 1	
III. Scrofula Tabes Mesonterica Phtblist Hydrocophalus IV. Inflammation of Brain, &c	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22 1 2 2 2 4 4 1 1 3 1 2 1 24 2 2 1 2 3 6 1 3 1 1 2 23 3 1 2 2 1	1, 1 1 2 1 13 56 2 i 2 1 1 2 1 30 106 8 10 10 10 10 18 12 12 131 638 1 2 1 17 86
Apoplexy Paralysis Epilepsy Convuisions Disease of Brain, &c.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3 4 4 1 1, 2 22 118 3 4 1 3 2 4 1, 29 324 4 1 3 4 1 3 2 24 102 , 5 15 4 3 3 2 6 11 8 65 292 2 3 2, 3 4 2 36 128
Disease of Spine Chores	1 1	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 6 20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Hemorrhago Angertam Syncopo Disoaso of Blood Vessels VI. Bronchitis	. 49 20 25 17 26 21 16 10 18 18 10 16 11 1 9 7 0 4 2 6 10 4 0 3 4 2	3 1 1 2 1 1 1 2 1 1 1 2 1	1 1 1 1 2 1 2 2 2 2 1 16 2 3 2 4 16 2 4 0 8 14
VI. Bronchitts Pneumonia Asthum Disease of Lungs, &c. Laryugith Flourity Hydronora Control Control	49 29 25 17 26 21 16 10 18 18 18 10 16 11 1 9 7 0 4 2 6 10 4 0 3 4 2 1 1 1 1 2 7 0 4 2 6 10 4 0 3 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23 1 2 1 2 1 2 1 1 1 2 2 2 1 1 1 1 1 2 2 2 1 1 1 2 2 2 1 1 1 1	0 29 24 16 23 24 16 240 884 5 0 9 3 4 3 7 70 900 13 1 1 1 1 6 13 14 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
VII. Inflammation of Stomach	1 1 1		1 1 3 3 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4
Peritonitis Disease of Stomach, &c Disease of Liver Henatitis	3 8 2 1 1 2 3 2 1 3 1 4 1 1 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4 1 2 21 .77 1 1 1 1 11 2 16 1 4 1 1 2 20 84 1 2 14 1 1 2 10 14
Hernin Sore Thront Stricture of the Æsopbagus VIII. Discuss of Kidneys, &c. Discuss of Bladder	4 2 2 1 1 2 2 1 3 2 6 1 1 2	25 3 2 2 1 1 1 1 1 3 5 2 21 1 1 2 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 2 2 1 3 15 70 1 6 31
IX. Childbirth Disease of the Uterus.  X. Disease of Skin, Ccilular Tissue, &		16 1	2 2 1 2 1 3 1 17 44 17
Eczema Pemphigus Carbuncio Cancrum Oris Opthalmia Pycmia			1 4 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6
XI. Debility Atrophy Marasmus. XII. Promature Birth		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Mallormation Teething XIII. Old Ago	1 1 1 2 1 1 2 3 1 2	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1 3 2 3 2 36 151 1 1 1 1 1 1 1 5 21 1 1 5 56 7 5 1 0 6 4 56 217
XIV. (Accidently Choked Saffocated Saffocated Saffocated Saffocated Scalded Injured Willed			
"Killed" "Poleoned" "Run Over Drowned Apoplexy "Broughlits Congaction of Lungs		6	1 2 16 1 1 8
Heart Disease Convalsions Fover Peritonitis			1 1
Fit Hydrophobia Brain Discaso Inflammation of Bowels Fig. 1. Facture			1
Concussion of Brain  Tangulation  Rupture of Blood Vessels  Bowols  Laceration of Arm  Knee	2		1 1 2 6 1 1 1 2 1
Found Drowned Dead Manslaughter Murder Sulolde, Run Over			1
Hanging Hanging Drowning Gut Throat Sorgical Operations Violent Deaths			3 t1 1 8 1 8 6 6 1 1 3 8
	9 11 3 4 5 6 4 4 7 5 2 2 5 170 183 135 122 442 130 124 122 110 123 124 119 113	67 3 4 4 6 3 8 9 4 2 5 4 8 3 62 8 4 3 8 2 8 7 11 5 6 6 7 7 7 7 8 2 4 8 10 3 7 17 17 17 17 17 17 18 2 10 11 17 17 17 18 2 11 11 18 18 18 18 18 18 18 18 18 18 18	
		272 15 15 17 27 16 29 21 10 10 18 15 20 16 223 10 14 18 30 30 67 87 88 24 27 97 06 61 706 88 52 31 7 22 20 21 60 3 3 7 7 4 2 6 2 5 6 3 3 3 61 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	17 23 20 20 20 31 332 1538 5 4 4 4 2 2 43 214 11 17 12 20 10 14 211 896
L Zymotic Discrete control of the Co	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	272 15 16 17 27 16 20 21 10 10 18 16 20 18 228 10 14 18 32 30 67 87 88 84 74 77 97 64 64 70 64 81 25 23 17 22 20 21 68 21 33 77 7 4 2 6 2 5 6 3 3 3 6 1 3 3 6 1 3 8 8 2 2 7 1 22 20 21 18 21 13 14 14 18 22 34 13 18 18 10 10 10 22 20 12 10 14 14 18 22 14 13 18 18 10 10 10 22 20 12 10 14 14 18 22 14 13 18 18 10 10 10 10 10 10 10 10 10 10 10 10 10	7
X. Chindren, Disease of the Dierus, X. Disease of Skin, Celluin Tissue, XI. Debilty, Atrophy, and Marasmus, XII. Developmental Disease XIII. Old Age XIV. Inquests and Deaths from Visionec, XV. Causes not specified.	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 7 3 3 8 8 6 4 200 3 2 3 2 3 3 2 0 107 2 1 2 1 3 2 2 1 01 15 8 10 5 6 5 103 408 7 7 7 7 6 6 4 6 227 9 9 5 0 0 3 83 295 6 10 5 10 3 4 76 271
XV. Causes not specified	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	000 3 3 3 7 7 4 2 6 6 2 3 6 3 3 3 6 6 3 8 6 8 6 7 6 2 8 6 0 3 4 4 6 5 6 6 7 6 6 4 0 2 7 1  1001 21 68 243 0 9 9 18 18 18 18 3 1 12 9 11 17 4 18 18 18 18 2 9 2 8 18 18 18 18 18 18 18 18 18 18 18 18 1	9 9 5 5 5 3 83 295 6 10 5 10 8 4 75 271 79 84 65 80 62 67 909 3573 64 70 62 60 67 62 773 8308
TOTAL DEATH RATE	176 163 135 122 142 139 124 122 110 123 124 119 119 133 300 0 205 239 276 272 243 239 215 241 243 234 234	1702 102 124 137 150 113 118 120 118 120 118 125 115 23 110 25 115 23 110 25 1500 25 27 104 103 115 143 183 200 137 182 213 151 170 108 165 124 125 26 118 105 123 257 250 250 250 250 250 250 250 250 250 250	
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## DEATHS REGISTERED IN THE BOROUGH OF LEEDS

During the Year ending December 31st, 1871.

	Sex	s at.			-			_		012 2	EI CIT	_	_		_			_		-		-	_	1 0			_			Lou		
CAUSES OF DEATH.	-		2	5	1 1	0	16	20	-	GE BI	ELOW 40	_	50	60	Τ.	. 1					Distri	ila let,	District.	J-trict. Beestop	Dis	rtley trict,	Kir	kstali strict.	Hstrict.	Chapel Afferto Distric	t.	al of the
	Males,	W. Females	F. M.	F. M. 1	F. M.	F. 3	I. F.	м.	F, M.	F.	м. і		-	M. F.	м.	F. A	80 1. F.	90 M. F	-1-	100	West.	South	Tunsfet I	olbeck A	Wortley,	arniey.	Headingle	Barley. Kirkstall,	otatoy E	Chapel- Allerton, Potter-	mleta,	arly Tot.
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Dyghtherla Quinsey Croup Whooping Cough	22	16 8	4 5	4 0 25 11 1	1 12 3 1	11.5	i		:::			i									33 35 3 6 1		14 19 4	2I 5 2	2	3	2 .	2 5	. 1	i :::		108 20 1
Group Whooping Cough Typins, Typina, and Typinia. Eryslocias Metri Dyscutry	152 1		8 2	0 21 1			4 17	18	21 38	30 1	29 2	2 1 1 f	15	δ 4 2 3	0	1 1	3 2	i i		1	42 28 36 51 8 4	30 27	1A 40 4	18	1 8 6 16 11 3 2	2 1	4	5 15	3 7 2	2 7		39 146 31: 28
Cholera	350 8	118 2M2 1		72 7 1	i i		i	3	1	1	2	6	2	5 2	10	12 8	7	1 2		1	1 2 77 91		125	41	i5 (	4	6	20	13	4 1	i	663
Rheumatle Syphilis Aphthe. Alcoholism Dyssymmid Excessive Drinking	6 11	9 6 18 10		i	ī		1 1	2	1	1	2 :	2		i							4 7 5		1. 	1	3 2 2 1			i i		i		13 15 21
II. Dronay	1	20	1	3	1				. 4	2	2										i	****										i
Cancer Gangrene Abscess Gout	12	69 3 10 8	1	1	i		i	1	1		4 8	6 6 2 1	6 5 17 0 2 8 1 4	21	6 1	9 12 1 3 2	6	1 1		i	23 19 11 28 5 6 4 7	7	8 9	8	6 0	. 3 I		3 1 1	7	i		57 93 15 27
Gout Purpura Rheumatisu Diabetes	2 -1 1	1 16 1			1		1			1	i	i	2 1	2		8	2				1 1		1		i)			. 'i'				27 3 8 14 2
HI, Serofula Tabes Mesenterica Phiblists Hydrocephalus	323 83	28 8 53 85 3 15 8 35 21 1	1 4 .	4 7 3	8 1 10	3 6 9 2 8 9	2 2 10	2 31 4		1	72 69		1	21	2	3 1 5 1		. 1		1 3	0 14 5 26	10	9.		3		2 2	5 5 1	8 3			56 106
IV. Inflammation of Brain, &c	74 62	98) 24 1 14 26 1 73		7 0 7	7	3 2	4				0	2	1	2	1					153	17	77 9	- 1	7 57 7 19	6 1	i	10	9 6	21 4	10 6 2 I		638 86
Apoplexy Paralysis Convidsions Epilepsy Disease of Brain, &c.	151 13 10 78 8	6		1 1	i 1	1 1 1 2	1 	1	. 1	1	1 1	8 1	13 19 5 12 1 2 6 7	12	18 2 17 1	11		3 2 4		56	19 76	11 29 6	62 1 1	11 8 13 2	9 7 8 8 0 9	3	8 8 4	3 2	2 4 9	5 1 8 3 1	i 	135 102 292 15
Hy-teria Neuraigin Dison-o of Spino Chorea	9 1	2 1 1 2	3		1.71	1 i	2	i	1	1	1		3	3 .		0			1	28	10	8	18	8 1	5	3	2 1	1		i ( i (		128
V. Disease of Heart	197 18 9 1	2 2 2	3		2	3 1	6	5 4	10 I	14 15		20 2	1 33	30	30 4	14	16 1	1		43		58 6	28 1 4	0	0	1	2 6		17	3 3		2 294 21
Disease of Blood Vessels VI. Bronchitis	1 420 42 137 12	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 46 5/	16 32	4	3 3	4	1		6 19	:::::	36 2		1		-					i		i	ı i								10 2 3
A thua	7 45 6	6	5 19 21 5 2	2 1 2 1	2	3 3 1		2 1 8 2	3 .	2 9	8	16	11 2 1 11	19 10 1	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	47 5 1 2	89 13 7 1	12	1	2 239 59 5	162 1 58 4	10 11 27	17 5: 49 1: 2 28 1:	1   1	7	4	5 15 5 1 1	1	17 7	i i		814 260 13 61
Laryogltis Pteurley Hydrothorax Catarrh Asphyxla	3 2 2 3	1 1		1		1			2		1	2 1					1	i.		8 1 1	1	1	1	1 1	í							61 11 6 3
VII. Inflammation of Stomach	8 44 3 9 2	S 1	7 4	1 2	1	1		1	1	1	1	1 2 2	2	1 4	1		i	· · · · ·		1 8			2 1 2 19 15	1			1		2	1		8
Perlionitie Disease of Stomach, &c. Disease of Liver Heraia Sore Threat Bepatits	8 41 4 9 1 6	7	1	2 1		2 		i	4	3 4 2	1 3	1 2 8 11	10		7 6	3	2 1			10 8 16		3 1 14 1	1 1		2 .		i 3	:::::	1 1			36 15 84 14
Deputitis Stricture of the Assophagus VIII. Disease of Kidneys, &c.	13 3	8							2	**		3	2		i i		1				8		6 2						i			3 14 1
Bladder Disease  IX. Childbirth  Disease of the Uterus	28 4	4		1	2	i		1 2	1 2		10	8 8	8 2	δ 1 1 1	0 1	5.	2 1			15 2	26 18	6 1 2 1	1 2	4 2	i .	1	. 1	==	2 1	2		76 31
X. Diseases of Skin Celiniar Tissue &c	2 8	1		1						1 1			1				1			7 1	1 1	2 1	8 1	]	i :				1	1		44 17
Carbundo Pyœmla Cauxrum Orls Eccemu Pemphigus	i,	5		3					1			1	1							1	3	1		1			1		i			8 8 1
Opthalmia  XI. Debility Atrophy Marasmus	84 7 34 2 109 8	71 70	2 1	1	1	1					1	1	1	1 7	1		2			12	41	7 14	6	11	1	3 1	1	1	3 1	2		160
XII. Premature Birth	88 6 12	8 87 60	1 1	6 5	3									2		1					27 26 28 11 8 12 15	48	25 12	13	4	8	0	ž	5 1	8		69 189
XIII. Old Age	28 2 120 12		13 11	1									3	20	10	58 7	0 37	33 9	5		12 13 53 29	1	2 25	1 12	13	1 1	5	1 2	1 5	4	- 1	21 55
XIV. (Accidentally Ch. ked	11	2 2	2 2	5 4 2 3	2 1		i .	1	i ::	1		1		1	1					5	1	3		1	::::			1	i	i		2 0 18
Pol-oued	1		i	i i					1	1			1					1		1	3	1		3								6 2 1
Apoplexy Hroi cultis Congestion of Lungs	15	2		1					: 'i 'i ::;	3		1 1	3 8 9	i	1 2					1	2	3	1	3			i					5 8 2
Heart Disease	7 1:	7 11	i							1	1		" i	2 4		2					9 3	2		2 8	1	1	2	1 1			1	2 14 29 1
Fover  Peritonitia  Drojey  Fit Hydrophobia  By Brain Disease  Inflammation of Dowels  Fracture	7 10	1 2	i i		T		1		2	2	ii.			i i i :::				1			S 4	2	2	2	1			i			1	1 7 3
Fracture	1 1 1 52 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	::: :::	2		1		i i		13	. 10			G 2	i	1 1	2	i	i		1.	10 2 1 1		8 2	1	1	1		i i			8	
23 Locaration of Arm	5 1			1			1		1 -	1 1	1				l l.	1					3	2	1		1						6	
Found Downed Downed Man-langhter Murdor Suldde, Run Over. Polsonling	2 1	2 1							::: i	1	1	ī	1							1	1	2 1								i	8 3 2	
Suicide, Run Over Polsoning Hanging Drowning	8 5						. 1			2	1 1		1 2	1 2	1	1					2 1		1		i			î	1		11	ı
Sulcide, Run Over.  ) Polsonling ) Hanging ) Hanging ) Drowning Cut Threat  Sargical Operations  Violent Deatys	7 1	1		1	1	2			i	1 1			1	1						1	2 1					ï.			1		8 5	
XV. Causes not specified	136 135 57. 0808	93 73				3	2 4		6	3	3 :	5	6	6	7	2 5	3	2		85 <b>4</b> 1657 153	3 331	_	-	19 68 20	7 1 7 49	70 1	1	188	4 70 L	7 4	271 d8H1	
11. Piseases of Uncertain or Variable Seat-	786 752 87 127 157 429	831 276 2 5 75 56 165 138	121 140 1 3 51 27 33 29	97 110 1 1 15 1 31 30 1	17 46 3 23 19 23 15 8 2 4	22 2 1 17 1	20 3 1 4 36 0 5 6 5 6 5 2 2	23 50 4 5 1 4 2	6 11 5 1 81 98	35 10 72	27 15 10 10 68 50	17 28 46	11 3 19 3 81 2	9 21 1 16 1 12	19 21 8	9 12 7 14 2 2	2	3 2 1 6 1		152 24 47 6 217 19	9 217 7 11 4 101	236 10 22 1 123 2	01   5 14   1 71   5	08   13 16   21	5 6 7 4 6 5	13 4 4 15 1	\$1 29 6 6 16 11	30 10 30	10 10 1 12 12	1	1508 211 886	
V. Diseases of the Heart and Blood Vessels VI. Diseases of the Lungs, Sc. VII. Diseases of the Stomach, Liver, Sc	137 277 157 173 525 595 123 125 71 36	165 138 0 8 161 115 33 22	69 80 9 4	35 56 1	9 23 8 2 4 10 10 2 1	22 1 17 1 5 1 5 2 1	6 5 5 2	5 1	60 11 5 I 81 98 5 8 12 14 19 0 13 8 2 4	35 10 72 17 28 34 14	27   16 10   10 68   50 9   20 19   21 25   64 10   12 5   10	17 28 46 25 26 36 23	11 3 19 3 81 2 48 13 24 3 71 61 17 25 10 0	9 21 16 1 12 5 53 4 80 1 80 1 12 3 12 3 12 3 12	19 21 8 39 45 69 17 8 3	9 12 7 14 2 2 31 27 11 16 55 68 5 5	8 1 13 1	6 1 1 15 1	2	173 21 40 9 319 24 43 6	0 87 3 66 5 1-14 9 27	118 6 30 2 191 6 50 2 11 1	01 5 14 1 71 5 61 4 20 5 82 8 75 1	08 13 16 21 19 21 10 40 15 6 16 1	9 1 9 1 1 11	15 1 18 1 8 6 2 3	6 6 16 11 11 11 6 5 11 13 5 3	21 17 26 8	12   6 3   6 13   6 2   1 1   5	2	211 886 811 330 1210 250	
IX. Childbirth, Disease of the Uterus, &c. X. Diseases of Skin, Cellular Tissue, &c. XI. Debility, Atrophy, and Marastaus XII. Developmental Diseases	10 1. 227 181	1 8 187 110 114 85	16 25 14 12			i .			1 1 1	á.	1	1 1	2	10	3 1	1 3	1			17 4 8 17 4 5 111 75	4 8 7 4 4 3 4 4 2 4 2 4 2			1 1		iii	1	2 2 15	ï!		260 197 61 23 408 227 217 295 271	
XIII. Old Age XIV. Impuests and Deaths from Violence, &c. 2 XV. Causes not specified	120 127 209 66 136 135	15 16 93 73	1 6 9 14		3 1 1 2 1 4	8	3 9	4 g	7 7	34 3	6 87	6 6	28 10 6 6	20	19 10 7	58 70 6 4 2 9		3 2 8 2	6	152 24 47 6 217 19- 173 21 173 21 173 21 40 9 319 24 43 64 17 44 4 5 111 75 29 45 60 88 87 126 85 43	31 25 27 35	78 3 37 1 25 2 33 1 40 2	1 2 4 3 5 1 5 2	0 0 2 13 7 6 9 7	1 1	3 2 2	8 4 0 2 5 2 6 8	11 1 7 8	5 3 5 4 4 2 4 2	1	227 247 295 271	
Malos	3308	1181 963	3-10	241	105	66 7	97	96	1238	261	205	2	83 251	300	-1-	233	00	37														
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TOTAL MALE THE STATE OF THE STA											1				1					13-2 25-1	25 6 2	7-0124	9	20-4	0	21	5	18'8	16'6	10.2 2	34	



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CROSSES REPRESENT THE PLACES WHERE CASES SMALL POX OCCURRED DURING 1871 BURLEY PUS BY WERIERLEY, 2 BOND OF LEEDS, ACENT TO THE





